

# CANADIAN MINING JOURNAL

VOL. XL.

May 28, 1919.

No. 21

## COST CONTROL

Never in the World's history were minutes as valuable as they are to-day. Never in the history of business was the necessity of cost control greater than it is to-day, because

1. Overhead expense is continually growing larger.
- 2.—Employees' disputes and demands are becoming more frequent.
3. Competent help is always hard to get and to keep.
4. The wage bill keeps piling up.

How your men occupy their time AFTER they reach their work—how much of their time is Productive and how much Non-Productive, is shown you by the

### INTERNATIONAL COST RECORDER

Suppose you have 40 men in a department and the purchased labor for the week is 1,000 hours. Suppose a foreman finds out that it was only 900 hours. Can he force a balance to bury this leakage?

**NOT** if the time records are **PRINTED** on International Job Cards.

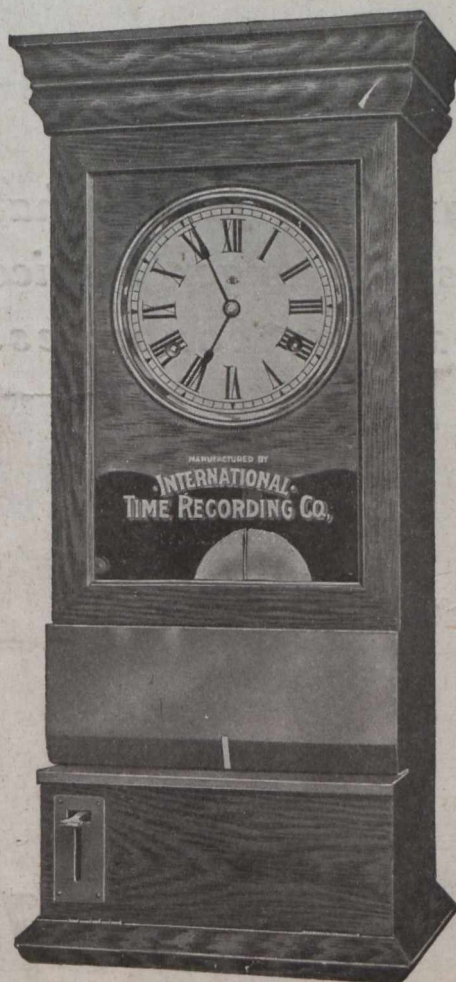
That's the kind of question that implies success or failure for your business.

*Let us send you our latest folders.*

**International Business Machines Co., Limited**  
(TIME RECORDER DIVISION)

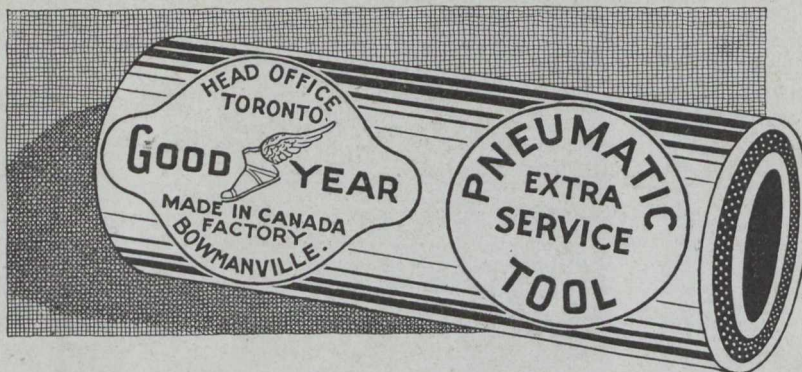
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*(Also makers of Dayton Computing Scales and Hollerith Electric Tabulators)*



International Cost Recorder.  
MADE IN CANADA.

Outside



## Protection for Pneumatic Tool Hose

**P**NEUMATIC tool hose is important enough to deserve our preferred attention—and yours. So we studied pneumatic tool hose performance to develop a hose that would give longer and better service; that would make the specifying of this hose a matter of importance to you.

Goodyear Extra Service Pneumatic Tool Hose was the result—A hose that is doubly protected.

The inner tube is made of specially prepared rubber to resist air pressure effectively. Even after long use, this hose remains elastic, active, unified.

The smooth white cover is made of extra tough rubber—rubber as tough as the tread of a tire. No wire winding,—easily handled and light in weight. Rough usage, knocks, abrasion—the things that make ordinary pneumatic tool hose a steady item of expense—are slow to impair the efficiency of Goodyear Extra Service Pneumatic Tool Hose.

Its different and better construction insures longer service and real economy.

A hose purchase may come up in your concern any day. Write or telephone the nearest Goodyear branch for a hose man to call with samples. No obligation—you are not expected to order. We just want you to know all about this **BETTER** hose when you need hose.

*--an outer jacket that ensures longer service and big economies.*

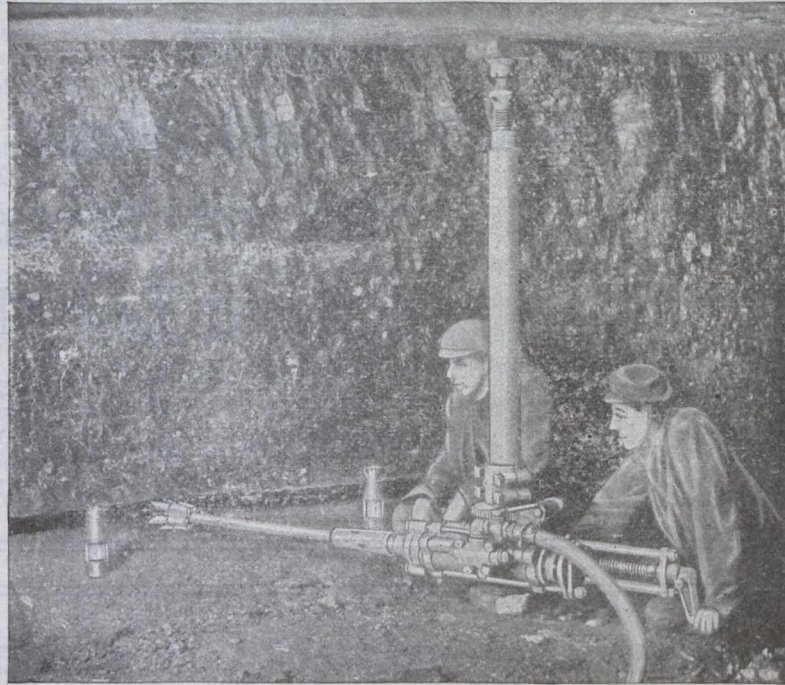
**GOOD YEAR**  
MADE IN CANADA  
**PNEUMATIC TOOL HOSE**



# THE CIRCO PAGE



Illustrating Compressed Air Machinery, Tools and Appliances



200 "47" Radial Coal-Cutters are in use in one mine in Eastern Canada—the average cost of repair has been found by the Company's own officials to be \$1.35 per month.

## The "47" Radial Coal-Cutter

Portable  
 Low First Cost  
 Low Operating Cost  
 Built to Last

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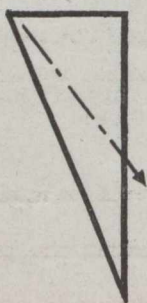
“STELLITE” High Speed Tool Metal

Head Office and Works - - - - DELORO, Ont.  
 Branch Offices - - - - 200 King Street West, Toronto  
 315 Craig Street West, Montreal

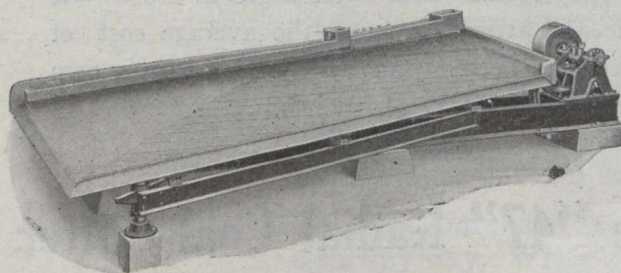
## Deister-Overstrom Diagonal Deck Concentrating Tables

Which has the greater area, one triangle or two ?

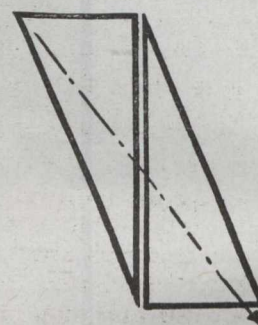
The arrows represent direction of pulp flow. Note the greater length of travel, and the greater percentage of table surface utilized on Deister-Overstrom Diagonal Deck Tables.



This route good as far  
as it goes



BUT



Is this not better ?

**PRACTICALLY ALL OF THE TABLE SURFACE IS USED EFFECTIVELY**

The deck area of a Deister-Overstrom table is so disposed as to take the greatest possible advantage of the oblique pulp flow. Shallower riffles can therefore

be used, thus permitting a freer inter-movement of the particles, a better stratification, and consequently a better separation of the mineral from the gangue.

### NET RESULTS

A higher extraction of values  
A higher grade concentrate

Greater capacity  
Minimum percentage of middlings

Write for Bulletin No. 3 illustrating our Deister-Overstrom Diagonal Deck Tables

**THE  
DEISTER CONCENTRATOR COMPANY**

Manufacturers of Deister and Deister-Overstrom Tables

MAIN OFFICE, FACTORY AND TEST PLANT—FORT WAYNE, IND.

CABLE ADDRESS “RETSIED”

# The Minerals of Nova Scotia

## THE MINERAL PROVINCE OF EASTERN CANADA

COAL, IRON, COPPER, GOLD, LEAD, SILVER, MANGANESE, GYPSUM, BARYTES, TUNGSTEN, ANTIMONY, GRAPHITE, ARSENIC, MINERAL PIGMENTS, DIATOMACEOUS EARTH.

Nova Scotia possesses extensive areas of mineral lands and offers a great field for those desirous of investment.

**Coal** Over six million tons of coal were produced in the province during 1916, making Nova Scotia by far the leader among the coal producing provinces of the Dominion.

**Iron** The province contains numerous districts in which occur various varieties of iron ore, practically at tide water and in touch with vast bodies of fluxes. Deposits of particularly high grade manganese ore occur at a number of different locations.

**Gold** Marked development has taken place in this industry the past several years. The gold fields of the province cover an area approximately 3,500 square miles. The gold is free milling and is from 870 to 970 fine.

**Gypsum** Enormous beds of gypsum of a very pure quality and frequently 100 feet thickness, are situated at the water's edge.

High grade cement making materials have been discovered in favorable situations for shipping.

Government core-drills can be had from the department for boring operations.

The available streams of Nova Scotia can supply at least 500,000 h.p. for industrial purposes.

Prospecting and Mining Rights are granted direct from the Crown on very favorable terms.

Copies of the Mining Law, Mines Reports, Maps and other Literature may be had free on application to

HON. E. H. ARMSTRONG, - HALIFAX, N.S.

*Commissioner of Public Works and Mines*



## PROVINCE OF QUEBEC MINES BRANCH

Department of Colonization, Mines and Fisheries

*The chief minerals of the Province of Quebec are Asbestos, Chromite, Copper, Iron, Gold, Molybdenite, Phosphate, Mica, Graphite, Ornamental and Building Stone, Clays, etc*

**The Mining Law gives absolute security of Title and is very favourable to the Prospector.**

**MINERS' CERTIFICATES.** First of all, obtain a miner's certificate, from the Department in Quebec or from the nearest agent. The price of this certificate is \$10.00, and it is valid until the first of January following. This certificate gives the right to prospect on public lands and on private lands, on which the mineral rights belong to the Crown.

The holder of the certificate may stake mining claims to the extent of 200 acres.

**WORKING CONDITIONS.** During the first six months following the staking of the claim, work on it must be performed to the extent of at least twenty-five days of eight hours.

**SIX MONTHS AFTER STAKING.** At the expiration of six months from the date of the staking, the prospector, to retain his rights, must take out a mining license.

**MINING LICENSE.** The mining license may cover 40 to 200 acres in unsurveyed territory. The price of this license is Fifty Cents an acre per year, and a fee of \$10.00 on issue. It is valid for one year and is renewable on the same terms, on producing an affidavit that during the year work has been performed to the extent of at least twenty-five days labour on each forty acres.

**MINING CONCESSION.** Notwithstanding the above, a mining concession may be acquired at any time at the rate of \$5 an acre for SUPERIOR METALS, and \$3 an acre for INFERIOR MINERALS

The attention of prospectors is specially called to the territory in the North-Western part of the Province of Quebec, north of the height of land, where important mineralized belts are known to exist.

**PROVINCIAL LABORATORY.** Special arrangements have been made with POLYTECHNIC SCHOOL of LAVAL UNIVERSITY, 228 ST. DENIS STREET, MONTREAL, for the determination, assays and analysis of minerals at very reduced rates for the benefit of miners and prospectors in the Province of Quebec. The well equipped laboratories of this institution and its trained chemists ensure results of undoubted integrity and reliability.

The Bureau of Mines at Quebec will give all the information desired in connection with the mines and mineral resources of the Province, on application addressed to

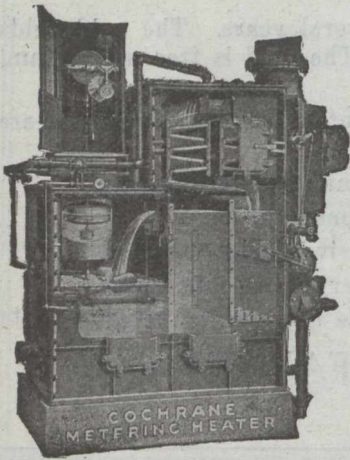
HONOURABLE HONORE MERCIER,  
MINISTER OF COLONIZATION, MINES AND FISHERIES, QUEBEC.

# Why Waste Coal When It Costs So Much?

THE COCHRANE METERING HEATER TELLS HOW  
MUCH YOU ARE GETTING FOR YOUR MONEY.

How many pounds of coal do you use to produce a thousand pounds of steam? 200, 150, 100 or less.

A Cochrane Metering Heater will tell how many pounds of water are evaporated per pound of coal, and it will instantly show any improvement in evaporation due to better fuel, better methods of firing, better condition of heating surfaces (removal of soot and scale), better condition of boiler setting (stopping up air leaks), etc.



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Examination and Exploration of Mineral Lands  
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## Nova Scotia Steel and Coal Co., Limited

Proprietors, Miners and Shippers of SYDNEY MINES BITUMINOUS COAL. Unexcelled Fuel for Steamships and Locomotives, Manufactories, Rolling Mills, Forges, Glass Works, Brick and Lime Burning, Coke, Gas Works, and for the Manufacture of Steel, Iron, Etc. COLLIERIES AT SYDNEY MINES, CAPE BRETON.

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Pit Rails, T Rails, Edge Rails, Fish Plates, Bevelled Steel Screen Bars, Forged Steel Stamper Shoes and Dies. Blued Machinery Steel 3-8" to 1-4" Diameter, Steel Tub. Axles Cut to Length, Crow Bar Steel, Wedge Steel, Hammer Steel, Pick Steel, Draw Bar Steel, Forging of all kinds, Bright Compressed Shafting 5-8" to 5" true to 2/1000 part of an inch. A full stock of Mild Flat, Rivet Round and Angle Steels always on hand.

SPECIAL ATTENTION PAID TO MINERS' REQUIREMENTS. CORRESPONDENCE SOLICITED.

Steel Works and Head Office: **NEW GLASGOW, NOVA SCOTIA**

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## Secondhand Equipment AND MACHINERY

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### RAILS

New and Relaying from 8 to 100 Lbs.  
SPIKES — TIES — FROGS & SWITCHES —  
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AIR COMPRESSORS AND RECEIVERS  
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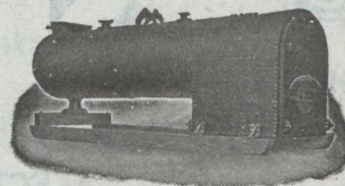
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We manufacture Marine, Horizontal Tubular, Vertical Tubular and Locomotive Type Boilers, also Ore Cars, Ore Buckets, Steel Tanks, Smoke Stacks, and Steel Plate Work of every description.

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Capital Paid Up	\$7,000,000
Reserve Fund	7,000,000

Branches in Northern Ontario at

Cobalt, South Porcupine, Elk Lake,  
Cochrane, New Liskeard, North Bay  
and Timmins.

Branches in Provinces of  
Ontario, Quebec, Manitoba, Saskatch-  
ewan, Alberta and British Columbia.

Money Transfers made in all parts of the  
World. Travellers' Letters of Credit, Drafts,  
heques, etc., negotiated

## MANGANESE STEEL CASTINGS

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All Kinds of MINING MACHINERY,  
CRUSHER JAWS, HAMMERS AND  
HAMMER TIPS, LINERS FOR  
CYCLONE BEATERS  
BUCKET TIPS, STAMPS AND DIES,  
DREDGER POINTS

Mild Steel Castings for all purposes

Electric Process—therefore the BEST

Our Special Quality "HYMANG"  
BALLS FOR BALL MILLS RE-  
DUCE COST OF ORE PER TON  
CRUSHED

**CANADIAN BRAKESHOE CO., LIMITED**  
SHEBROOKE, QUEBEC



# NICKEL

Shot—High and Low carbon

Ingots—Two sizes, 25 lbs., 50 lbs.

**ELECTROLYTIC NICKEL—99.80%**

Prime Metals for the Manufacture of Nickel Steel, German Silver, Anodes and all remelting purposes  
Our Nickel is produced as Rods, Sheets, Strip Stock, Wire and Tubes.

**MONEL**

We are **SOLE PRODUCERS** of this natural, stronger-than-steel, non-corrodible alloy.

**METAL**

Manufactured forms are Rods, Flats, Castings, Tubes, Sheets, Strip Stock and Wire.

(Reg. U.S. Pat. Off.)

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# METALLIC NICKEL

SHOT—High and Low Carbon

INGOTS—Two sizes, 25 lbs. and 50 lbs.

Prime Metals for the Manufacture of  
Nickel Steel, German Silver, Anodes,  
and all Remelting purposes.

*Send Enquiries to*

**THE INTERNATIONAL NICKEL COMPANY OF CANADA, LIMITED**

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*Smelters and Refiners of Cobalt Ores*

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**Selling, Sampling and Assaying Ore,  
Metals and Furnace Products**

Entire charge taken of shipments from the receipt of bill  
of lading to the collection of smelter's return

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**This Trade Mark on Your Belting**



*Guarantees satisfaction under Mining conditions, intense Heat or below ZERO. Wet or Dry, Steady or Intermittent. Will outlast from 4 to 6 Rubber Belts on Bucket elevators.*

We also make Conveyor Belts, any width or thickness,

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Buyers of

Gold, Silver, Lead and Copper Ores.  
Lead Residues and Copper Residues.

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Large Capacity.

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Tanks, Air Receivers, Penstocks, Etc.  
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CONSTANT DEPENDABILITY  CONTINUOUS ECONOMY

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IN its four years use in the metal mines of the world, I.T.P. lamps have rendered a degree of dependability and economy that has merited the heartiest approval of mining men everywhere.

The first I.T.P. put out convinced its user that the "Float feed" made troublesome "hand regulation and raking" unnecessary. 'Twas this that decided us to use  meaning "Its Trouble Proof," as our  trade name.



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# BUILD FOR THE FUTURE! USE STEEL CONSTRUCTION ELEVATED STEEL TANKS.

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# To Manufacturers

Valuable economic minerals, of which the people of this country as a rule have little knowledge, are distributed in various sections served by the Canadian National Railways. The field of utility for these minerals is constantly expanding and entering more and more into the realm of manufacture.

Information on this subject can be obtained by writing:—

The Industrial and Resources  
Department Canadian National  
Railways

TORONTO :: ONTARIO

# CANADA

## DEPARTMENT OF MINES

HON. MARTIN BURRELL, *Minister*

R. G. McCONNELL, *Deputy Minister*

### MINES BRANCH

#### Recent Publications

Iron Ore Occurrences in Canada, Vol. II. Compiled by E. Lindeman, M.E., and L. L. Bolton, M.A., B.Sc. Introductory by A. H. A. Robinson, B.A.Sc.

The Copper Smelting Industry of Canada. Report on, by A. W. G. Wilson, Ph.D.

Building and Ornamental Stones of Canada (British Columbia). Vol. V., by W. A. Parks, Ph.D.

Peat, Lignite and Coal; their value as fuels for the production of gas and power in the by-product, recovery producer. Report on, by B. F. Haanel, B.Sc.

Annual Mineral Production Reports, by J. McLeish, B.A.

The Coal-fields and Coal Industry of Eastern Canada, by F. W. Gray.

Occurrences and Testing of Foundry Moulding Sands. Bulletin No. 21, by L. H. Cole, B.Sc.

Analyses of Canadian Fuels. Parts I to V, by E. Stansfield, M.Sc., and J. H. H. Nicolls, M.Sc.

Clay Resources of Southern Saskatchewan, by N. B. Davis, M.A., B.Sc.

Summary Report of the Mines Branch, 1917.

The Mineral Springs of Canada. Part II., by R. T. Elworthy, B.Sc.

The Mines Branch maintains the following laboratories in which investigations are made with a view to assisting in the development of the general mining industries of Canada:—

Fuel Testing Laboratory.—Testing value of Canadian fuels for steam raising and production of power gas; analyses, and other chemical and physical examinations of solid, liquid and gaseous fuels are also made.

Ore-Dressing Laboratory.—Testing of Canadian ores and minerals, to ascertain most economical methods of treatment.

Chemical Laboratory.—Analysing and assaying of all mineral substances and their manufactured products. Copies of schedules of fees, which are slightly in excess of those charged by private practitioners, may be had on application.

Ceramic Laboratory.—Equipment is such that complete physical tests on clays and shale of the Dominion can be made, to determine their value from an economic standpoint.

Structural Materials Laboratory.—Experimental work on sands, cements and limes is also undertaken.

Applications for reports and particulars relative to having investigations made in the several laboratories should be addressed to The Director, Mines Branch, Department of Mines, Ottawa.

### GEOLOGICAL SURVEY

#### Recent Publications

Summary Report. The annual Summary Report of the Geological Survey is now printed in parts. Applicants should therefore, state what particular geologist's report is required, or what subjects they are interested in.

Memoir 95. Onaping Map-Area, by W. H. Collins.

Memoir 98. Magnesite Deposits of Grenville District, Argen-teuil County, Quebec, by M. E. Wilson.

Memoir. 101. Pleistocene and recent deposits in the vicinity of Ottawa, with a description of the soils, by W. A. Johnston.

Memoir 105. Amisk-Athapapuskow Lake district, by E. L. Bruce.

Memoir 106. Road materials in a portion of Vaudreuil county, Quebec, and along the St. Lawrence river from Quebec boundary to Cardinal, Ontario, by R. H. Picher.

Map 63A. Moncton Sheet, Westmoreland and Albert Counties, New Brunswick. Topography.

Map 132A. Southwestern portion of Rainy River district, Ontario. Soils.

Map 135A. Lower Churchill river, Manitoba. Geology.

Map 145A. Timiskaming county, Quebec. Geology.

Map 154A. Southwestern Yukon.

Map 157A. East Sooke, Vancouver Island, British Columbia. Topography.

Map 165A. Windermere, Kooteney district, B.C. Topography.

Map 174A. Blairmore, Alberta. Topography.

Map 179A. Onaping; Sudbury and Timiskaming districts, Ont. Geology.

Map 183A. Harricanaw-Turgeon basin; Abitibi, Timiskaming and Pontiac, Que. Geology.

Maps 1697 and 1698. Explored routes in a belt traversed by the Canadian Northern Ontario railway,—in two sheets: Sheet 1 Gogama to Missonga, Sudbury district; Sheet 2 Oatland to Penhurst, Algoma district, Ontario.

Map 1690. Whiteburn Gold District, N.S. Geology.

Map 1702. Klotassin, Yukon Territory. Geology.

Map 1710. Bothwell-Thamesville oil region, Kent county, Ontario.

Map 1712. Foothills of Southern Alberta, St. Mary river to Highwood river. Geology.

Map 1714. The Niagara peninsula, Ontario. Geology.

Map 1715. The Ontario peninsula. Geology.

Applicants for publications not listed above should mention the precise area concerning which information is desired.

Maps published within recent years may be had, printed on linen, at the nominal cost of ten cents each.

The Geological Survey will, under certain limitations, give information and advice upon subjects relating to general and economic geology. Mineral and rock specimens, when accompanied by definite statements of localities, will be examined and their nature reported upon.

Communications should be addressed to The Director, Geological Survey, Ottawa.



PROVINCE OF ONTARIO



BUREAU OF MINES

# Ontario's Mining Lands

Ontario, with its 407,262 square miles of area contains many millions of acres in which the geological formations are favorable for the occurrence of minerals, 70 per cent. of the rocks being of pre-Cambrian age. The phenomenally rich silver mines of Cobalt occur in these rocks; so also do the far-famed nickel-copper deposits of Sudbury, the gold of Porcupine and Kirkland Lake, and the iron ore of Helen, Magpie and Moose Mountain mines.

Many other useful minerals, both metallic and non-metallic, are found in Ontario:—actinolite, apatite, arsenic, asbestos, cobalt, corundum, feldspar, fluorspar, graphite, gypsum, iron pyrites, mica, molybdenite, natural gas, palladium, petroleum, platinum, quartz, salt and tale.

Building materials, such as marble, limestone, sandstone, granite, trap, sand and gravel, meet every demand. Lime, Portland cement, brick and tile are manufactured in quantity within the Province.

Ontario in 1917 produced 46 per cent. of the total mineral output of Canada. Returns made to the Ontario Bureau of Mines show the output of the mines and metallurgical works of the Province for the year 1917 to be worth \$72,093,832, of which the metallic production was \$56,831,857.

Dividends and bonuses paid to the end of 1917 amounted to \$11,486,167.45 for gold mining companies, and \$70,821,829.34 for silver mining companies, or a total of \$82,307,996.79.

The prospector can go almost anywhere in the mineral regions in his canoe; the climate is invigorating and healthy, and there is plenty of wood and good water. A miner's license costs \$5.00 per annum, and entitles the holder to stake out in any or every mining division three claims of 40 acres each. After performing 240 days' assessment work on a claim, patent may be obtained from the Crown on payment of \$2.50 or \$3.00 per acre, depending on location in surveyed or unsurveyed territory.

For list of publications, illustrated reports, geological maps and mining laws, apply to

**G. H. FERGUSON,**

MINISTER OF LANDS, FORESTS AND MINES,

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**YOUR  
Fine Ores, Concentrates and Fluedust**

Can be Cheaply and Successfully  
Sintered by the

**DWIGHT & LLOYD  
SYSTEM**

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SIMPLE, EFFICIENT, CONTINUOUS  
LOW COST OF INSTALLATION

Many plants now in dally operation in U.S., Dominion of  
Canada, Republic of Mexico, Australia and European  
Countries. For particulars as to Licenses in Canada,  
Estimates, etc., address

**Dwight & Lloyd Sintering Co., Inc.**

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Cable Address: SINTERER, NEW YORK.

"For information regarding sintering of iron ores and  
iron fue dust, consult special licensee."

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**A Comparative Test:**

No. 3 Casserole Acid Treatment,  
15 hours at 180° C.—

	Loss Grams
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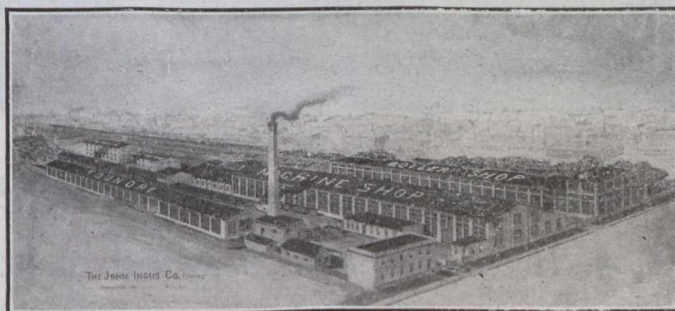
**Crucibles, Dishes, Etc.**

Order now and avoid *Porcelain Troubles*; we  
know you've had them.

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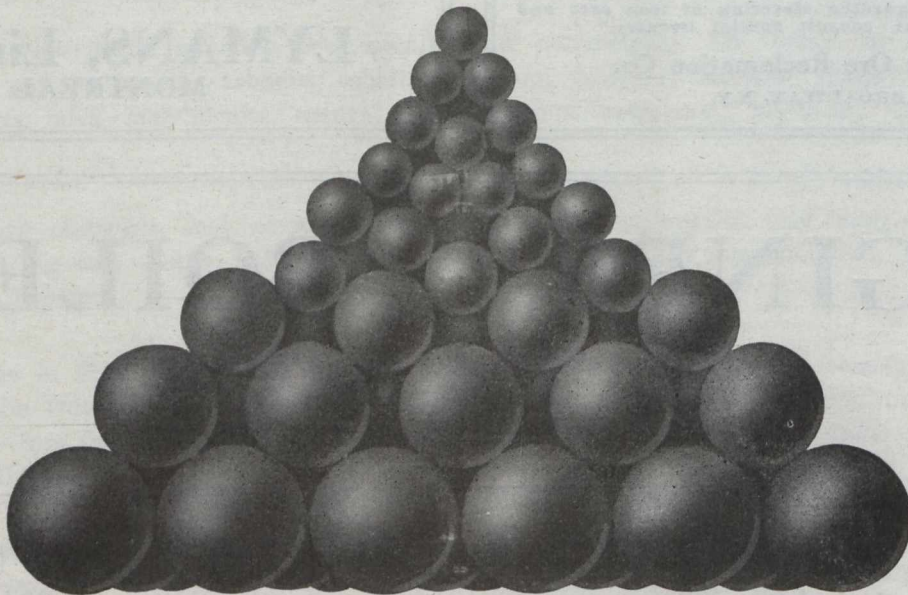
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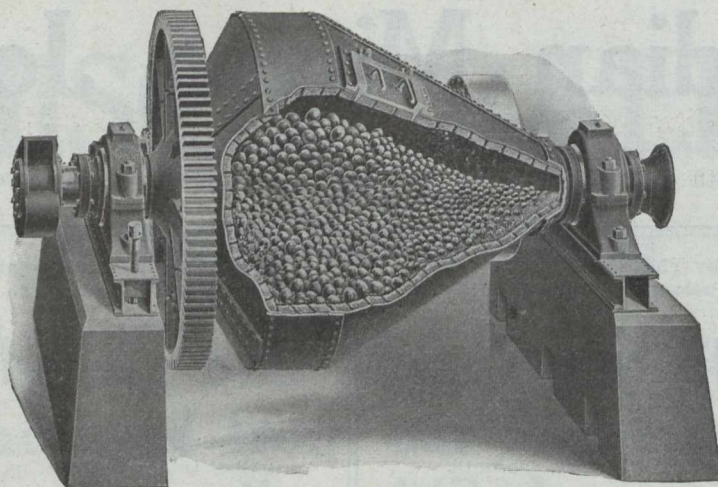
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# EDITORIAL

## WEST SHINING TREE GOLD AREA.

During the past six months a great deal of publicity, much of it of an undesirable character, has been given the West Shining Tree gold area. As we attracted some attention to this area by an article in the Journal after visiting some of the properties last summer, we feel a certain responsibility for developments. While we do not approve of many of the things that are being said about West Shining Tree properties, it is still our opinion that the area is a promising one and worthy of more attention from mining men. We do not recommend it to those who are looking only for sure things, and we are not surprised that some who have looked for mines have been disappointed to find only prospects. There are great chances to be taken by those who would develop gold properties in this area. We do not regard this, however, as a sufficient reason for condemning the area. We are rather inclined to the opinion that there is a great deal of risk involved in developing mineral deposits anywhere.

A recent contribution in the Toronto Globe from a Cobalt correspondent contains much with which we agree. He points out some regrettable features of recent promotions and sounds a note of warning. He says, writing from Cobalt on May 22:

"Mining interests in this part of Northern Ontario are showing considerable interest in the advertising literature being circulated in connection with a number of mining prospects in the West Shining Tree district. It is a well known fact that narrow quartz veins were found seven or eight years ago in that district, but that the deposition of gold proved decidedly patchy, and successful mining companies dropped options which they had acquired and withdrew from the field. The attitude of companies with broad experience has been that while there might be possibilities, after extensive exploration work, or meeting with some measure of success, yet the gamble would be too great. Now comes the advertising campaign on a number of properties in that district, the campaign being conducted by a number of Toronto brokers.

"Summed up, the situation is this: The West Shining Tree district appears to be entirely speculative; behind each of the alleged leading properties are men who appear to be devoting more time to promotion literature than toward mining; the prospective purchaser of mining shares is confronted with the simple task of either placing his 'bets' on the promotions of professional brokers, or looking over the mining fields of the North more carefully, and making a speculative investment in concerns which in some instances are equipped with mining plants, and in some instances with milling plants and backed by large tonnage of "proven ore," and promoted with development work in view as a first consideration.

"There is one other phase to the situation. In the West Shining Tree district there are a number of prospectors who have toiled hard in their effort to succeed in acquiring a reward for their labors. The

discoveries made have been ample to encourage these men to stick to their claims. This being so, it follows that there must also be a gambler's chance for those who would purchase shares in companies operating in the field. Further, in taking a gambler's chance, the odds are heavy, and the utmost caution is advisable.

"The greatest danger lies in the promotions being made on a basis of a large block of promotion stock being held in the hands of the promoters, and a more or less small number of shares being left in the treasury, and while the treasury shares are being sold at a stated price the promoter may also be disposing of his stock at a similar price and thus secure a great deal more cash than the amount going to the treasury of the company. Not only this, but in selling the treasury stock there may also be a rake-off in the form of a large commission to those who sell the shares."

This is a warning that should be heeded. It applies not only to West Shining Tree gold mining companies. In fact, it is not even peculiar to mining companies.

On the other hand we would call attention to the folly of pretending that there are safe and sure ways of making profitable mines out of prospects. The risks have been great and will be so in new fields. There is very little ground for comparison between the hazard of investment in a developed, producing mine and a prospect. Those who are too timid to spend money on prospects can very well be encouraged to invest in developed mines. But the bold adventurer who seeks new fields cannot and should not be persuaded to desist because the risks are great. He should have access to the known facts, however, and be made to realize that chances of success are small. Our disapproval of the statements of many promoters arises largely from their failure to advise buyers of shares concerning the hazardous nature of the enterprise. Some promoters are undoubtedly dishonest and are endeavoring to deceive the public. They sell under false pretences and are properly classed as criminals under the code. From them we can expect nothing good. We can reasonably hope, however, that the better class of promoters will endeavor to give their clients a fair deal. To do so they must be more careful in their statements.

## RE-ORGANIZING BRITISH COLUMBIA BRANCH OF MINING INSTITUTE.

The British Columbia branch of the Canadian Mining Institute is being re-organized by Mr. Mortimer-Lamb, secretary-treasurer of the Institute, who is making a tour of the Province at the present time. It is proposed dividing the existing single provincial organization into four distinct branches, representative of the following sections: Vancouver Island and district; Victoria and district; Nelson and district; Prince Rupert and district. Each will be charged with responsibility in connection with the promotion of the best interests of the mining industry within the limits of its territory. A revival of interest in the Canadian Mining

Institute's work is expected as a result of this arrangement, an outcome much to be desired, as the influence of this important organization, although it has been splendidly maintained in other parts of Canada, has languished in this province. Mr. Lamb states that attention also is being given the matter of the annual Institute meetings, which hitherto have taken place in Eastern Canada. As it has been difficult for many western members to make the transcontinental trip for a meeting of two or three days, it is proposed that there shall be an annual meeting in the west. This, it is hoped, will obviate the inconvenience of the existing condition and lead to closer co-operation, and a more healthy fraternal feeling than has been evidenced. Mr. Lamb, who has travelled across the continent recently, and has paid special attention to mining activity, says that "in every mining centre in Canada there is a revival of interest, and everything points to this great asset of the country being developed to an extent where it will be the greatest medium in paying off the war debt of Canada. Prospectors are returning to the hills, machinery is going to abandoned claims, which are known to be still rich, and capital is being advanced from many sources to help bring out the hidden wealth of the different provinces."

#### THE GOLD MINING INDUSTRY.

While operations are growing daily in the Porcupine district, the manner in which the Kirkland Lake field is developing, and the increasing activity in the Boston Creek district is a guarantee that the premier gold camp of the Dominion will not monopolize attention. The industrial unrest in other parts of the country is not being lost sight of, but the gold mines which are just emerging from the great economic strain caused by the war do not appear to offer an attractive field for labor to make demands which the mines could not bear. The number of mine workers is increasing steadily, and by late summer the gold mining industry in Northern Ontario promises to assume proportions greater than ever before in the country's history.

#### THE SILVER MINING INDUSTRY.

Beyond a few minor complaints, the Industrial Relations Committee which visited Cobalt recently appeared to be presented with no evidence that should cause alarm over the situation in that district. The high price for silver is resulting in a high average wage to the mine workers of Cobalt, on the present profit-sharing system. It is true that considerable controversy centres upon the fact that the mine operators do not recognize the union. However, in view of the expressed willingness of the operators to deal with committees representative of their own employees the danger of any serious development in industrial relations appears to be minimized. During April it is considered probable that the quotations for silver will average perhaps \$1.05 or perhaps \$1.06 per ounce, with some promise of it rising to an average of perhaps upwards of \$1.10 an ounce during June.

#### GOLD TELLURIDES IN NORTHERN ONTARIO.

By A. G. BURROWS.

The Ontario Bureau of Mines has added to its equipment at the Provincial Assay Office a grinding and polishing machine and microscope for examining metallic minerals by reflected light. By means of this equipment, aided by qualitative and quantitative analyses, we have been able to recognize some minerals in ore

from the Tough-Oakes mines not hitherto known to occur there or, in fact, in Canada.

Some time ago rich specimens of gold ore from the Tough-Oakes mine were obtained from Mr. C. A. O'Connell. These showed native gold, calaverite, altaite, and some black metallic minerals. These latter minerals were determined to be a telluride of gold, silver and mercury, and a telluride of mercury, homogeneous minerals under the microscope. The former telluride was analyzed by W. K. McNeill and found to contain 20.40 per cent au., 31.1 per cent ag. and 10.2 per cent hg., which corresponds closely to the formula for kalgoorlite, a precious telluride, first recognized in gold ore at Kalgoorlie in West Australia. The mercury telluride gave strong reactions for mercury and tellurium, but contains no gold or silver, and is the mineral "coloradoite." The presence of this group of tellurides associated with gold is of scientific interest in its relation to the genesis of the ore deposit, temperature and pressure of formation of deposit, etc.

While the precious tellurides are probably rare in Kirkland lake ore, there is always the possibility of obtaining them in rich bunches in the veins. The precious tellurides in the material examined are in appreciable quantities. Tellurides of gold, without preliminary roasting, would pass into the tailing in the ordinary cyanide treatment.

Tellurides occur over considerable area along the line of the T. & N. O. railway, there having been recognized, in addition to those mentioned above—tetradymite (bismuth telluride) in Beatty township, calaverite and tetradymite at Boston Creek, petzite in Maisonville and Benoit townships, and hessite in Deloro township.

#### DIVIDENDS FROM B. C. MINES.

British Columbia mines have distributed nearly a million dollars in dividends for the first quarter of 1919, as follows:

	Rate for Quarter.	Amount.
Granby Cons. M. S. & P. Co.	2½	\$375,010.50
Consolidated M. & S. Co. ....	2½	261,936.00
Belmont Surf Inlet . . . . .	5	125,000.00
Howe Sound Co. (Britannia)	5	99,207.00
Florence Silver Mining Co. ..	3	34,746.00
Surf Inlet Gold Mining Co. . .	2½	24,689.90
Hedley Gold Mining Co. . . . .	2	24,000.00
Rambler-Cariboo . . . . .	1	17,500.00
Total . . . . .		\$962,089.40

#### PERSONALS.

Mr. J. P. Hubbell, of the American Cyanamid Company is in this district, having visited Cobalt early in the week, and spending the latter half of the week in the Porcupine district.

Mr. Frank L. Culver, president of the Beaver Consolidated has returned to Toronto after having spent a few days at the company's Kirkland Lake gold mines.

Mr. G. W. Dixon, of the Buffalo Mines, is making satisfactory recovery from his recent illness.

Mr. Neill, of the Cassel Cyanide Company, Glasgow, Scotland, is expected to arrive in Cobalt to-day, accompanied by W. E. Simpson.

Mr. L. N. Goodwin, of New York, was in Toronto last week, and is now at West Shiring Tree.

## Renewed Activity in British Columbia Silver Areas

The strong demand for silver, and the bright prospects as to prices, are having their effect in British Columbia. In the Kootenays, the Boundary and the Portland Canal Districts properties carrying silver values are receiving attention. Prospectors are going to the hills in larger numbers than for many years. In the Eastern mining sections of the Province preparations are being made in not a few instances to re-open silver bearing properties which have been inactive. Arrangements are being made to continue work on others still in the development stage, and practically all producing mines of this character are expected to be worked to capacity this summer. In the Portland Canal mineral zone the outlook is particularly promising. The next few months are likely to see a revival in this part of Northern British Columbia, in respect of mining that will remind old timers of the old days when the town of Stewart was a flourishing mining camp, being the centre and distributing point of a district of many active mines, and with a bright future. There are those who assert that Stewart is destined to come into her own again, that this time a permanent community with an assured future will be developed, and some foundation is given this belief by the number of engineers who are going into the country, by the glowing reports being spread of certain Salmon River properties and last, and perhaps not the least, by the fact that Stewart again has a newspaper, the first issue of the "Cassiar News," "issued in the interests of Salmon River, Portland Canal, Alice Arm and Anyox Mining Districts," having come from the press a few days ago.

One of the concrete evidences of the increasing interest in silver mining properties is the announcement of the sale of the Reco Mine at Sandon, B.C., to the James Dunsmuir interests, the sum involved being reported to be \$250,000. This property is located on Payne Mountain, adjoining the Noble Five Group, which is owned by Mr. Dunsmuir and associates. With the Reno Mine, which has been operated for years and has made good returns, goes a number of contiguous claims which are, for the most part, undeveloped. The new owners, therefore, now have possession of a large area which, it is understood, will be extensively developed without loss of time.

F. A. Starkey, of the Eastern British Columbia Mining Association, discussing the foregoing and other indications of interest in the silver minerals of the provincial interior, says:

"It is also known that Clarence Cunningham has taken over the Elkhorn property, which ore will be treated at his mill, newly erected at Alamo. There is estimated to be a large tonnage of milling ore at the Elkhorn, which will be of great assistance in supplying the large tonnage necessary to keep the Cunningham mill running steadily.

"Outside of these actual sales of properties we have to record the preparations for a more vigorously conducted policy of development of several properties, all of which are located in the Slocan District. The Franz Brothers, Wallace, Idaho, have just arrived to instal a full equipment of machinery for the development of their property on Ten-Mile Creek,

Slocan Lake. This property is situated some five miles above the Enterprise mine, and is known as the Richmond Group, which is a dry silver property, the ore of which in its returns runs into big figures.

"James Melley, Spokane, who with his brother, Edward, owns the Blackburn Group, situated at the head of Ten Mile and the South Fork of Kaslo Creek, has left for the Slocan with the intention of opening their property, which they have owned for some 18 years. Their mine is but partially developed, but they believe it is most promising. They see the wisdom of further work in view of the present demand for silver, and hope that the property shortly will be a producer. No. 1 Tunnel on the main vein has been driven 700 feet and they have run a second tunnel some distance on the main vein with a view to striking the ore body at depth. Other veins on the property have received attention, through open cuts and general surface work. Assays taken from a stringer in the main tunnel gave values as follows: Silver, 763 oz. lead, 62 per cent. Other assays of samples taken from different points on the main vein and from surface openings have given 100 to 200 oz. in silver, 40 to 55 per cent lead, and 8 per cent zinc.

"On account of the price of silver it is most probable that the present season will see all the properties lying between Slocan Lake and Kaslo, especially such properties as those lying on Ten Mile Creek, and through to the territory covered by the South Fork of Kaslo Creek exceptionally active. Some of the properties in this section which carry high silver values are, Enterprise, Bondholder, Neepawa, Smuggler, Chief, Richmond, Blackburn, Index, Gibson, Silver Bell, Utica and Arlington."

### Pumping Out Providence Mine.

The old workings of the Providence Mine at Greenwood are being pumped out, a full crew of men being at work.

### Workmen's Compensation.

Special efforts are being made by the members of the Workmen's Compensation Board of British Columbia to acquaint the miners with the terms of the legislation under which they are acting. There has been considerable misapprehension as to the scope of the Statute in regard to the payment of workmen for injuries received in their employment, the belief in many quarters being that men were entitled to financial help when becoming incapacitated through ordinary illness. This matter was before the Provincial Legislature at the last session, when the extent of the authority of the Commissioners under the Workmen's Compensation Board was explained and it was promised that some form of relief to those unable to maintain their positions because of illness, old age, etc., would be placed before the legislators in 1920. In the meantime, as stated, the Commissioners are touring the Province and explaining just what their duties are, a meeting having taken place recently between them and the miners of the Britannia Mining & Smelting Company.

## Western Coal Operators Ask for Independent Board to Control Coal Industries

The Western Coal Operators' Association of Canada presented a memorandum to the Industrial Relations Commission, which is taking evidence throughout the Dominion of Canada with regard to the relations between employer and employee, advocating the appointment of an independent board to take control of the coal industry in Western Canada. "Such a Board," the memorandum states, "should, in our opinion, be made up of one man thoroughly familiar with the problems of the operators; one man familiar with the problems of the workmen; and a third with such qualifications and experience as would commend him to all as a reliable chairman. The industry has reached a point where, although permission is granted to sell coal at a given figure, it is impossible to do so on account of competition from other fields, chiefly American."

Discussion and consideration of the position of the coal industry occupied practically the whole time of the Commission on the afternoon of Saturday, May 3rd, and the operators appeared to be one in the opinion that joint councils of the employers and employed could not bring harmony to the industry at the present time because most of the miners—85 per cent of them, according to a Drumheller operator—were foreigners whose ignorance made them a prey to agitators. It might be different were the proportion of English-speaking miners large, but that was not so, and was not to be looked for as most of such had enlisted, and many of those returning were not fit to go back to their former work. The Board of Control which the operators recommended, it was thought, should have the same power as was given W. H. Armstrong, the war-time director of coal operations in District 18, U.M.W. of A. (Eastern British Columbia and the Province of Alberta.)

W. F. McNeill, secretary of the Operators' Association; John Shanks, manager of the Brazeau Collieries; Jesse Couge, operator; and W. S. Henderson, operator and Drumheller, represented the organization indicated.

After the presentation of the coal operators' memorandum, the discussion referred to took place. W. F. McNeill stated that two mines were on strike against the order issued by the director of coal operations, but he admitted that the strikes were unauthorized by the union officials. Discussing housing conditions, witness said there were no complaints from the permanent camps, but only from new camps where bunk houses had to be used.

The markets of the British Columbia mines were in Montana and Washington, and those of the Alberta mines in Alberta, Manitoba and Saskatchewan. Freight rates hampered the operators in competing with American hard coal in Manitoba.

John Shanks, manager of the Brazeau collieries, described in detail the arrangements made between his company and employees. They were situated 120 miles west of Red Deer and six miles from the nearest village. The government leased land to the miners through the company, which erected four-room houses at a cost of about \$900, and rented to the employees at \$10 a month, five-room houses at \$15 a month. A subsidiary

company ran a store in the mining village. The desire for better working conditions was one of the primary causes of discontent, which had become acute since the war began in 1914. "Blanket men," who brought their own blankets and slept in bunkhouses formerly, now were not content with such conditions. A hospital charge of \$2 a month was made, and for this a doctor was engaged, and he paid a nurse and the staff of the institution.

Men in the mines, said the witness, are not disposed to slack or neglect their work, but they have become very independent. The "labor turnover" was very large, because many young men were employed, and when they had earned a considerable sum they went away to the cities and towns.

Two operators from Drumheller gave evidence, John Henry Gouge and W. S. Henderson. Mr. Gouge declared that the cost of getting out coal was \$2.53 for labor alone, exclusive of the cost of management and overhead charges. He did not think that any operator would be opposed to joint councils, but they would be unworkable, because the employees, mostly foreigners, would not co-operate with them.

Mr. Henderson employed 150 men, but had practically shut down his mine since April 1. The price of coal was high, he said, because wages had been boosted to such a level as was unfair to the operator, to the general public and to the miners themselves. "If coal can be marketed at \$1 a ton less, we can compete with the hard coal in Manitoba," he declared.

Mr. Henderson stated that there were 22 mines in the Drumheller district, each of which had its own small system of lighting and its own water supply. This is expensive business, and he suggested that the government should take over the mines, install a central lighting and central water system, and thus cheapen the cost of running the undertaking. Enough slack coal, not worth shipping, was wasted in the vicinity of the mines, to supply fuel for a power station for all the mines. Housing conditions caused improvement, but the small mines could not carry out the work required. Attempts to run the mines amicably had been made, but "foreign-born agitators had upset the whole thing by Bolsheviki talk."

E. Mart, General Manager of the Canadian Coal Company collieries, the first witness at the meeting on Monday (May 5), made a distinction between usual labor unrest characterized as a natural social reform and the radical agitators, to whom he attributed present conditions of undue unrest to some extent.

So far as cost of living was concerned in his industry, calculations showed that the advance in wages had more than compensated for the advanced cost of living. He referred to the agitator whose responsibilities were not those of the ordinary British subject, but who earned from \$10 to \$20 a day as one of the chief causes of undue discontent. The radicals were largely left behind when the others went to war, and found a large and fertile field among new men of foreign birth not acquainted with British government. A census of their

workmen had shown 56 per cent to be Austrians, Slavonians of the smaller nationalities and Russians.

The witness was inclined to agree, however, that the high cost of living in other lines had caused some of the discontent. Another element was the placing in strange new trades of men and women taking the places of the soldiers. Still another was the psychological condition of mind of those who had relations, fathers, sons and brothers, killed at the front. He himself had been for years and was now a member of a labor union, and he felt that one cause of trouble was the desire of men to gain authority without accompanying responsibility. The only solution was a complete understanding of both parties. The proposed industrial councils, he thought, might be a help toward educating workmen for responsibility, as well as authority to prove to them that capital is not the enemy of labor but co-relative. He had every confidence that a means could be found whereby the employees could be induced to co-operate in solving the problem. It might be difficult, but he was optimistic.

#### PLACER GOLD MINING IN CARIBOO DISTRICT

Reporting on his geological survey work in the Cariboo District of British Columbia last summer, R. B. MacKay, of the Geological Survey Branch, Ottawa, asserts that over 4,000 feet of the old channel of Lowhoo Creek remains to be worked.

His observations are summed up as follows:

On Mosquito Creek exceptionally high values have been obtained from the old channels, which Mr. Hopp works by hydraulicking. The gold is coarse, with portions of the original quart matrix attached. The bedrock is cut by numerous quartz veins, from which the gold was probably derived.

The Waverly, on Grouse Creek, was recently taken up by Messrs. J. G. McLaren and C. W. Moore, of Vancouver, and will be actively worked by them this summer, rich returns being expected. On Slough Creek hydraulic plants are operated by Messrs. Hopp and Joseph Wendell. On Dragon Creek Mr. L. Muller is drifting on the old channel and obtaining favorable results. Messrs. John Bell and W. Thompson will operate on Mustang Creek. The Lightning Creek Gold Gravels and Drainage Company of New York has holdings on Lightning Creek, where drilling has shown high values in coarse gold, the water problem being the difficulty. On Perkins Gulch a rich gold deposit has been found by Messrs. L. L. Felker and W. S. Sparkes, \$5,000 having been recovered from a piece of ground 100 feet by 150 feet. Mr. J. A. McPherson is prospecting for the old channel of Chisholm Creek by drilling. Mr. J. F. Williams is working Boulder Creek.

At Cottonwood Canyon, on the Fraser River, the Tertiary Mining Company of Chicago is working auriferous cement by milling. At Quesnel Mr. S. J. Marsh has taken up dredging ground on Marsh Creek and has done extensive prospecting. He is arranging to install a plant. A notable result of his work was the amount of fine gold and platinum recovered. The Quesnel Hydraulic Gold Mining and Developing Company has been operating at Twenty Mile Creek, where it has installed one of the most up-to-date hydraulic plants in the province. Arrangements are being made to save the black sand and concentrates, about 1,500 pounds of concentrate carrying gold and platinum being saved daily while the plant is running. On Keithley Creek Messrs. Harrison and

Worth are working an old channel, which has given rich returns, \$18,000 being obtained from 10,000 square feet. The International Dredging and Drainage Co. is operating on Horsefly River. The Western Mines Exploration Syndicate of Vancouver have been drilling on Black Creek.

Mr. McKay concludes that there is a possibility of an increase in mining deep ground, and that much of the area is suitable for dredging the extension of the P. G. E. Railway into Cariboo, greatly reducing the cost of installing plants. He considers the development of a large hydro-electric power plant would do much to solve present difficulties.

#### EVIDENCES OF OIL NEAR VANCOUVER CITY.

Dealing with the evidences of oil near Vancouver City, Charles Camsell, of the Geological Survey Branch, Ottawa, says:

"The whole of the low-lying country on both sides of the Fraser River is supposed to be underlain by sedimentary rocks of Eocene age, though at Sumas Mountain Cretaceous rocks project through them. These Eocene rocks, which are made up of conglomerates, sandstones and some shale, are the possible oil-bearing strata, and the rocks from which the seepages of oil have arisen. There is, therefore, very little structural evidence in the district itself on which to base conclusions as to the presence or absence of commercial bodies of oil in these rocks, though it is only to be expected that the anticlinal structure, which obtains in these beds south of the international boundary line will be found in the beds of the Fraser River district. As far as the lithology of the beds is concerned there are great thicknesses of porous sandstones capable of acting as reservoirs for oil, but so far as is yet known there are relatively few beds sufficiently thick or impervious to constitute a cover capable of preventing the escape of oil to the surface."

Mr. Camsell's conclusions are that information obtained from natural exposures and drill cores does not yet indicate that the Eocene beds contain sufficient organic material to have produced commercial deposits of oil. He does not consider there is a reasonable possibility of the oil being derived from older sedimentary rocks, as at Sumas Mountain the Eocene rests on volcanic rocks, and on the north side of the Fraser on granitic rocks, neither of which is a possible source of oil.

Thin coal seams occur in sedimentaries of the Fraser Valley, and he quotes Tyrell's opinion that oil may be distilled from coal seams that have been intruded by dykes of igneous rocks, adding: "If this theory of origin is correct the seepages have no particular significance, and a commercial oil field is not to be expected. The evidence bearing on the original source of the oil seepages, and whether or not they denote commercial bodies of oil underground, is so scanty that definite opinions can not be expressed regarding the occurrence of an oil field in this district."

#### Sheep Creek.

Harold Lakes, superintendent, reports that about 200 feet a month are being driven on the new cross-cut tunnel on the Consolidated, Motherlode, and Nugget properties, Sheep Creek. It is estimated that the tunnel will have to go between 2,700 and 2,800 feet before it strikes the vein. It now is in about 250 feet.

## Restaking of Mining Claims in Ontario

### THE KNOX CASE.

A case of considerable interest to prospectors was recently tried by the Mining Commissioner of Ontario, Mr. T. E. Godson. Some extracts from the decision are printed here. Two disputes involving the same issue were tried together. Mr. J. A. Knox was disputant and Mr. Peter T. Graham and Mr. C. B. Stevenson respondents.

On the 23rd of October, 1918, Stevenson staked and on the 24th, filed his application for Mining Claims 18605-18606, 18607 and 18608, the first property being recorded in the name of Peter T. Graham and the others in his own name.

On the 13th of the same month the same properties had been staked by J. A. Knox on behalf of himself and L. T. Ieach. He made application to record the claims within the time allowed by the Mining Act, but subsequent to the time the applications of Graham and Stevenson had been recorded.

The disputes were filed by Knox against the claims on the 29th of October and the Recorder transferred them to the Mining Commissioner for adjudication under Section 132 of the Mining Act.

It is admitted Knox had propriety of discovery and staking, but it is contended by the Respondents that the land was open for staking on the 23rd of October and that Knox had, for the purpose of his staking, improperly removed used and defaced stakes placed upon the properties by previous stakers and that the claims were invalid having been staked on Sunday.

If Knox's staking is valid, having priority, he would be entitled to the claims. The whole issue is can a Licensee use and adopt abandoned stakes placed on a claim by a prior staker and remark and place them for the purpose of his staking or must he make and fashion new stakes, and is a claim staked on Sunday valid.

#### Certain Old Posts Can be Used. But New Ones Better.

These properties had been staked many times and been abandoned or cancelled upon forfeiture occurring. As many as twelve old posts were seen by Knox at one corner on one of the claims. With few exceptions Knox removed or remarked posts found at the corners of the claims and adopted them as his own. He knew from Alex P. Campbell the last recorded holder of one of the claims that the properties were to be abandoned and that the necessary working conditions would not be performed and suggested in his evidence that this was the reason he used posts that were upon the properties. Knox was not able to say he had used any of Campbell's posts. It would appear from the evidence he felt satisfied that such posts as he used, squared or faced and remarked were those which had been erected by the previous holders whose interests had been forfeited and whose rights to the claims had been cancelled. His examination of the posts was made at midnight with the use of what is commonly called a "bug" which consists of a candle inside an empty can, and it was necessarily a cursory one, but he was prepared to swear that any posts so re-faced, squared and inscribed were posts upon which the inscription had been obliterated by long exposure or were illegible and indicated they had been

standing for a considerable length of time. From the evidence it would appear that Knox did not interfere with posts standing upon a subsisting claim, but that he might have done so or have removed a post on a claim which abutted the claims he was staking was a danger he was exposed to, but fortunately avoided. I am satisfied the posts he used were properly placed, squared and inscribed. His use of old markings under the circumstances of his case I think valid. I do not commend the practice or encourage its adoption, but I am unable to see that it violates any provision of the Mining Act. I see no distinction between the remarking of a post formerly used and the adoption by the staker of posts used by other holders, but upon abandoned claims. The four corner posts are evidence of the adoption of a parcel of land upon which a discovery had been made. If the claim appropriated had been allowed to be cancelled or forfeiture had occurred through non-performance of working conditions or other essential requirements of the Act, then the posts ceased to have any value and their usefulness passed with abandonment or forfeiture. The posts would no longer be the property of the holder of the forfeited interest or cancelled claim and remained only as the mute testimony of a disappointed Licensee. That the remarking of such posts is a dangerous practice is not to be denied and it behooves all licensees to stake their claims that all possibility of attack upon the ground of defective staking is not left open. The procedure required by the Mining Act is simple and uninvolved and the right way is always the best and cheapest in the end. Profitable reference may be made to *Reichen v. Thompson*, M.C.C., Vol. 1., page 99.

In other respects I find there has been substantial compliance by Knox with the requirements of staking.

#### Sunday Staking.

Knox knew from a search made at the Recording Office when the work should be done and filed and knowing that it had not been performed went to the properties on Saturday, the 12th of October, with the intention of staking the claims early Sunday morning, the 13th.

Stevenson, in his evidence, said he understood the claims were not open for staking until the 23rd of October, the day he staked, but did not state how he arrived at that conclusion. Upon the hearing his Counsel took the objection that as Knox had staked on Sunday his staking was abortive and the lands were consequently open when his client staked on the 23rd of October. I was not given any authorities upholding Counsel's objection other than a reference to chapter 104 of the Consolidated Statutes for Upper Canada, an Act to prevent the profanation of the Lord's Day in Upper Canada, now to be found in R. S. O. (1914), page 2962, and the Lord's Day Act, R. S. C., Cap. 153, Sec. 5.

I am unable to find any direct cases upon the point. It does not appear to have been raised before by predecessor in office Mr. Price, and has not been in issue in the Province of British Columbia, as the Mining Act there provides that "Any location made upon Sunday or any public holiday shall not for that reason be in-

valid, any law or Statute to the contrary notwithstanding, and a similar clause is to be found in the regulations for the disposal of Quartz mining claims on Dominion lands in Manitoba, Saskatchewan, Alberta, Northwest Territories and the Yukon.

Generally the common law does not prohibit the doing on a Sunday of any act which otherwise is lawful or render void the act so done and unless it can be said the act of staking is within the words and contemplation of either the Upper Canada Statutes or the Dominion Lord's Day Act and makes void such an Act a claim staked on Sunday would otherwise be lawful. . . . .

Knox styled himself by the occupation a Prospector. A Prospector might be said to be one who searches for valuable mineral and when found appropriates it by the Act of staking. He also is a vendor and purchaser of mineral claims and his duties may include that of a performing assessment work upon the claims staked. He requires a general knowledge of mining and the Mining Acts that govern in the territory prospected. The Act of staking is scientific, based upon a knowledge of and in compliance with the governing Mining Laws.

The Act of Upper Canada being penal in its nature should be construed strictly and no violence should be done to its language in order to bring people within it, but rather care must be taken that no one is brought within it who is not within its express language. A prospector or one who discovers and stakes a Mining Claim does not in my opinion come within the classes prohibited by this Statute. He is not within them any more than a Lawyer or Surveyor could be said to be and he is not in my opinion a workman or laborer in the sense intended by this enactment.

Section 5 of the Dominion Act is in the words as follows:

"It shall not be lawful for any person on the Lord's day except as provided herein, or in any Provincial Act or law now or hereafter in force, to sell or offer for sale or purchase any goods, chattels or other personal property, or any real estate, or to carry on or transact any business of his ordinary calling, or in connection with such calling, or for gain to do, or employ any other person to do, on that day any work business, or labor."

This Section is much wider than that contained in the Upper Canada Statute. It includes "any person." There is no class distinction. Then can it be said Knox as a prospector having made discoveries and staked the claims on Sunday did an unlawful act within the meaning of this Act? The foundation of a Mining Claim is a discovery and without it a staking would be abortive. The discoveries in these cases were made without work or labor. They were known to exist. In other cases they are stumbled upon by accident, again they are made after diligent search and labor, but I am treating this concrete case and as I have said no work or labor was involved in the act of discovery.

A staking follows discovery. It is imperative under the Mining Act and its effect is an appropriation of the lands on which the discovery is said to exist. Then follows an obligation to perform certain working conditions and after their completion, if the holder has maintained his Miner's License in force, a patent or lease will issue. All of the different steps leading up to patent or lease are progressive and each require-

ment, which is automatic, must be in compliance with the Act or a forfeiture of the rights of the holder occurs. Until a patent or lease issues, a holder is a mere licensee or tenant at will of the Crown.

By Section 78 of the Act certain periods of time are fixed for the completion of assessment work. For the first period three months from the time of recording is allowed, and for each subsequent period a full year is given. Sundays or holidays are not excluded by the Act; each day of the respective periods count against the time allowed the holder.

A Miner's License is in force for twelve months from the 1st day of April in each year. The holder is a licensee from the Crown and while such may prospect for minerals and stake out mining claims on any Crown lands open for that purpose. During the duration of the license the licensee is unrestricted as to day or time.

By the operation of the Mining Act the work on the claims in question was required to be performed not later than Saturday the 12th day of October, 1918. Failing its performance, under Section 85, a forfeiture ipso facto occurred. The lands then became open for prospecting and staking and a licensee had the privilege at the instance of the Crown to go upon the lands for the purpose of effecting or making a discovery and its adoption by staking. The next day in this case was Sunday. The property was undoubtedly Crown lands and open for staking and there was no prohibition in the license from the Crown restraining or prohibiting such an act on Sunday. There is no stay on account of Sundays or holidays with respect to working conditions and the holder is entitled to every day of each of the fixed periods of time.

There is then, in my opinion, an implied right under the Mining Act of Ontario to prospect for minerals and stake mining on Sunday. By reasonable intentment and implication the right exists under the Act and its machinery operates towards that contingency. That is the intent, I take it, of the Legislature passing the Act.

The Dominion Act contains this proviso. "Except as provided herein or in any Provincial Act or law now or hereafter in force." . . . .

The Mining Act of Ontario is an Act or law in force, and while there is no express enactment such as is contained in the British Columbia Mining Act and in the Dominion Quartz mining regulations allowing a valid staking on Sunday, there is, in my opinion, an implied intent to be assumed from the operation of the requirements of the Act that such can be done. The act of staking is a link in the chain of the different requirements that leads to title by patent or lease. . . . .

I do not express an opinion whether the staking of a mining claim is within the words, "for gain to do on that day any work, business or labor." I prefer to place the onus upon the present Mining Act of impliedly granting such a permission and with that right I feel the Lord's Day Act cannot interfere.

A Prospector who separates himself from the comforts and protection of society; blazes a trail into unknown mineral zones and discovers mineral of value is serving not only himself but the public at large, and no unnecessary restraint should be placed upon his activities. I can appreciate one such who from absence of contact for an extended period being excusably forgetful of the day of the week. I can also understand the necessity for haste when the grub-

stake is running low and the distance between the Prospector and point of supply many miles away. If the adoption of a discovery under such circumstances should result, through the operation of the Lord's Day Act, in an invalidity and loss of a supposed right, undoubtedly it would be a distinct hardship and a rather serious interference with the work of a bona fide Prospector who had gone far afield and was entitled to the fruits of his labor. On the other hand the act of one who goes to a property with the avowed object of staking it on a Sunday is not to be encouraged, but you cannot separate the rights obtained by endorsing the one and condemning the other. The Statute if it applies embraces each staking. I confess a desire to obtain from finding that to stake a mining claim on Sunday creates an invalidity through the operation of the Lord's Day Act and yet I wish to be understood that Sunday should be observed as a day of rest and calm when the mind can be dissociated from worldly tasks. Nature, however, has its own quietening influence and it provides "Books in the running brooks; sermons in stones; good in everything."

If the Dominion Statute applies then the act of staking was not "lawful" which judicially interpreted means "illegal" without authority of law in violation of duty or enjoined by law.

In Stephenson's affidavit of staking he made the following deposition "That at the time of such staking out, there was nothing upon the said lands to indicate that they were not open to be staked out as a Mining Claim and I verily believe that they were so open and that the staking out is valid and should be recorded." He knew when he swore to the affidavit that Knox had staked and was in that sense in possession of the property and there were indications that the land was not open for staking. His explanation is that while he knew Knox had staked and would record his application he understood or was advised that Knox had not staked in compliance with the Act and the lands were consequently open on the 23rd of October. The affidavit unexplained was untrue, but it could not be said to be fraudulent. Stevenson should have filed his applications and disputed after Knox had recorded. In this way any rights Stevenson had would have been protected. He no doubt honestly believed Knox's staking defective and there was no intention to deceive and no one was misled. If otherwise entitled to the Claims, Stevenson's right would not in my opinion be precluded by the affidavit of staking filed.

### NEW SULLIVAN STOPPING DRILLS.

Drill engineers and manufacturers have appreciated for a good many years the fact that one type of drill could not be efficiently applied to all conditions of drilling. The old two-man piston drill is now used in a relatively small percentage of conditions. One-man piston drills, water hammer drills for drifting, rotating hand feed hammer drills for sinking, and air feed stopping drills for upper holes are some of the developments of the past fifteen years.

In each department of drilling, too, specialization has been found necessary with increasing competition and with the adaptation of new drills to work previously done by other means with less efficiency. The first air feed stopping drills brought out were practically all of one type, consisting of the drill cylinder proper, mounted on a reverse air feed cylinder, in which the feed

cylinder remained stationary, and the air pressure carried the drill up to its work, supported on a piston rod between the drill proper and the feed cylinder. The feed cylinder was clamped in a trunnion on a column arm, or on a bar. These machines were offered for hard, medium and soft ground and for all conditions in drilling upper holes.

The Sullivan Machinery Company was the first to introduce in this country that type of pneumatic feed in which the feed cylinder is attached directly to the pneumatic hammer, the feed piston rod acting against an abutment. This type of pneumatic feed held supremacy for many years, and in fact is considered as the standard for non-rotating machines at the present time.

Modifications of this pattern made by the Sullivan Machinery Company included hard hitting stopers for solid ground conditions, light hitting stopers for soft ground and feed cylinders of different diameters to provide a lighter or a stronger holding power against the rock.

All of the earlier types of stopping drills were rotated by hand. Demands of the past few years from the field for a successful stopping drill include the following variety:—

- (1) Light weight and small size to permit easy handling in high stopes.
- (2) Automatic Rotation to relieve the drill runner of the incessant labor of turning the drill bit by hand, particularly in hot stopes.
- (3) Satisfactory regulation of the strength of the feed.
- (4) A water jet for laying the dust when drilling in sulphur bearing ores, or other formations in which dust is injurious to the health of the miner.
- (5) Automatic lubrication.

These are general, outstanding features, to which must be added in the design of a successful stoper, the usual features of convenience in handling, cutting speed, air power economy, simplicity of construction, accessibility for repairs, staunchness, and ability to resist wear and hard service.

The first four of these elements need not necessarily all be combined in the same machine, but represent varying conditions called for by different fields. The last mentioned features are essential to success in any satisfactory stopping drills.

New Sullivan Design—For the past three or four years, the drill designers of the Sullivan Machinery Company have been studying conditions and developing new features with the object of producing stopping drills to more nearly meet these varying factors of the field. That their efforts have met with success in the types quite recently introduced may be judged from the encouraging reports received as to performance and popularity with operators in many of the characteristic mining districts of the country.

Two of these new standard Sullivan stopers are shown in the accompanying illustrations. Figure No. 1 illustrates the Sullivan Class DT-44 Light-Weight Hand Rotation machine and Figure No. 2 illustrates the Sullivan Class DT-42 Stoper with Automatic Rotation and Water Attachment.

The ingenuity of the designers and the flexibility of the interchangeable part system, which is a vital element in all Sullivan Drill design permits the following combination and arrangements to suit different field conditions: :

DT-44 Light-Weight Stoper, hand rotation, direct feed, dry, solid steel.



DT-44 Light-Weight Stoper, hand rotation, direct feed, with water attachment and hollow steel.

DT-44 Light-Weight Stoper, hand rotation, with reverse feed, either dry or water type, for solid or hollow steel.

DT-42 Rotating Stoper with Reserve Feed and solid steel, dry.

DT-42 Rotating Stoper with reserve feed, hollow steel and water attachment.

DT-42 Rotating Stoper with direct feed and solid steel, dry.

DT-42 Rotating Stoper with direct feed and water attachment, hollow steel.

It will thus be seen that it is possible to furnish a stoper for practically any field conditions, as to character of ground, nature of working or class of labor, which may be encountered. The Light-Weight Stoper is, as its name implies, a small, short machine, much lighter than any other stoper ever placed on the market. Its net weight is 66 pounds, and with the feed piston drawn in, it is only 48 inches long over all. This shortness permits convenient use in the most confined stopes to direct holes at any desired point, while its low weight enables one man to carry it into narrow working places or up ladders with the least possible difficulty.

The DT-42 Self-Rotating Stoper is available for hot stopes or other locations in which the demand is for a labor-saving machine. This is the first time that a self-rotating stoping drill of satisfactory design has been placed on the market. The difficulty with rotating stopers has been of two kinds. (1) To provide a compact, positive means of rotation and (2) to furnish some practical means of retarding the feed, so that in starting a hole or in fitchery ground the feed may be controlled, positively and immediately. The difficulty with previously designed rotating stopers has been that in these two classes of work, the forward action of the feed, combined with the rotation of the steel, would throw the bit off the inclined surface of the rock, or into the seam or vug, so that a stuck steel or a crooked hole was almost sure to result, with equally sure results in loss of time and labor and frequent damage to the drill itself.

In the Sullivan Rotating Stoper, the rotating mechanism is of the same type, which has proved so successful in Sullivan DP-33 Rotator Hammer Drills and in the Sullivan DR-6 mounted water hammer drills. In this design, an extension bar, forming an integral part of the piston proper at the front end of the drill, is milled with alternate straight and spiral flutes or grooves, which engage a ratchet collar and a retaining bushing, the latter being screwed into the chuck bushing and transmitting the rotating movement to the drill steel on the return stroke of the piston.

The piston delivers a free blow on the drill shank, the ratchet turning with it. It will be noted that the parts comprising the rotation are all at the front end of the tool. There is no separate rifle bar and the piston is not weakened by a hole bored in the rear end to receive that part, as is necessary with rifle bar rotation. Experience with these new stopers, as well as with the standard hammer drills referred to above, has demonstrated that this form of rotation is substantial, positive and reliable.

The builders state that in their experiments with independent rotating motors mounted at the front end of the machine, it was found that the increased weight at this point caused the machine to be very unwieldy, due to improper balance. The present standard arrange-

ment while it lengthens the machine, permits a good balance to be maintained, which enables it to be handled a great deal easier than would be the case if the extreme front end were over-weighted by a bulky mass of metal.

The second element in the satisfactory rotating stoper, namely, control of the feed, has been the result of much study and experiment and is provided in these machines by means of a hand retarder or brake.

#### THE MERCURY DEPOSIT AT SAVONNA.

Discussing the mercury deposits at Savonna, British Columbia, Charles Camsell, representative in British Columbia of the Geological Survey Branch, Mines Department, Ottawa, states in his annual report that these deposits occur at intervals along a belt 25 miles in length extending from the west end of Kamloops Lake northward to Criss Creek and southward to Tunkwa Lake.

The British Columbia Cinabar Company, operating in 1896, produced 10,557 lbs. of mercury from 150 tons of picked ore. The company expended over \$100,000 in development, mining and retort plant for high-grade ore, followed later by a plant to treat the lower-grade ore. The latter was not a success, due to the losses in the furnace and not to the low grade of the ore. Mr. Camsell was of opinion that these deposits could have been profitably worked on the high prices for mercury ruling during the war. The grade of these deposits compares favorably with the mercury deposits of California, so that there is a prospect of the industry being revived and quicksilver added to the list of metals entering into the annual mineral production.

Mr. Camsell notes other localities where mercurial ores have been discovered, as Silver Peak, near Hope; Sechart, on Barclay Sound; the Kicking Horse River at Field and Golden; Boston Bar, on the Fraser River; Homatheo River, at the head of the Bute Inlet; Lillooet. Dr. V. Dolmage, of the Vancouver office of the geological survey, examined the Sechart deposit last summer, and reports finding considerable metallic mercury in the old dump, but none in freshly-collected specimens. The mineral occurs in a shear zone 20 to 50 feet wide, and Dr. Dolmage states that "with properly conducted prospecting an orebody of economic value might possibly be developed."

#### THE GUN CREEK COPPER DEPOSITS.

In his report on the Gun Creek, Copper Mountain, deposits, Charles Camsell, Dominion Geologist, makes some interesting observations relative to this property which, it is reported, has been bonded and is likely to be extensively developed. In regard to transportation he states that a railway following the valleys of Bridge River and Gun Creek would be eighty miles in length.

Copper Mountain has an altitude of 8,000 feet, and the valley bottom above the 6,000 contour line shows the bedrock well exposed. The ore-bearing formation is grano-diorite, with inclusions of stratified rocks. The grano-diorite is intruded by a grey diorite porphyry. The greatest amount of mineralization is in a fractured zone traceable up the mountain for a distance of 1,000 feet or more, and with a width of from 500 to 600 feet. This zone is traversed by numerous porphyry dykes. The fracture lines are filled with narrow seams of quartz and calcite, carrying pyrite, chalcopyrite and sometimes magnetite. Other zones

of fracture showing similar mineralization occur both north and south of the main zone. Samples indicate that the silver is an important constituent.

Mr. Camsell notes that owing to the geological conditions, other deposits of metallic ores may occur in the neighborhood, stating: "The deposits are situated on the eastern border of the great coast range granodiorite batholith, where this batholith is in contact with stratified rocks of both sedimentary and volcanic origin, and experience has already shown that it is under such geological conditions that a great many of the deposits of metallic ores of the North American continent occur." Of the Gun Creek Copper Mountain deposits Mr. Camsell concludes: "The nature of the deposits and the large area over which sulphide mineralization extends would suggest the possibility that a large low-grade copper deposit might be developed which could stand the heavy expenses which must be incurred before the stage of actual production is reached."

#### OVAL-SHAPED ELECTRIC FURNACE.

Electrical furnaces were first placed in commercial operation in this country 11 years ago, and since then many types have been designed. Among recent types to be developed is the Vom Baur furnace, which is manufactured by the T. W. Price Engineering Co., New York. The shell is made of steel and is lined with firebrick, the periphery of which assumes horizontally an approximately oval shape of such dimensions that an equal heat gradient is obtained at the intersection of the slag line and furnace hearth. The arched roof is reinforced with steel girders through which the carbon electrodes enter the furnace.

Two counter-weighted doors with water-cooled frames are provided. The furnace proper is fastened to two heavy cast-steel rockers which roll on horizontal bed-plate castings anchored to the foundations. One side of the rockers is geared and engages a rack in the bed-plate casting to insure non-slipping and an even tilting motion. The tilting motion of 29 degrees in one direction for pouring and 5 degrees in the other direction for removing the slag is applied by means of rocker arms fastened to heavy-steel wheels. Power is applied to the latter through spur and self-locking worn gearing which is actuated by means of a variable-speed motor equipped with a sole-noid brake.

#### How the Heat is Produced.

The electric heat is produced in the furnace by means of arcs at the ends of the electrodes, the in-moving the electrodes up or down, thereby lengthening or shortening the arcs. The centre electrode is larger and carries approximately 41 per cent more electrical heat than either end electrode. The high-tension power line is connected to the transformers and the low-tension is conveyed to the electrode clamps by means of copper bus bars and flexible cables.—Iron Trade Review, April, 1919.

#### LE ROI, No. 2.

Interesting remarks in connection with the mining situation in British Columbia, and especially in regard to the Le Roi No. 2 mine at Rossland, were made by the chairman of the company, Lord Ernest Hamilton, at the annual meeting of Le Roi No. 2, Limited, held recently in London.

In this regard Lord Hamilton said that the conditions with which they had had to contend during the past twelve months had been extremely difficult. Their

chief difficulties had been with regard to the smelting of their ore. At one critical period the smelter to which the company had regularly sold its shipments entirely declined to accept the ore on the ground of their own labor troubles. The smelting contract expired after the declaration of war, and the smelter refused to sign a new contract, but agreed to take the company's ore with such qualifications as might be forced upon them from time to time by labor or market difficulties. At one period the smelter's labor difficulties were so severe that they were unable to take any of the company's ore, and the directors therefore arranged for temporarily shipping it to other smelters, but the terms obtained were less favorable on account of the higher freight. After a time, when shipments were resumed to Trail, the terms were less favorable than those formerly enjoyed. All this militated seriously against the profits at the mine. In addition to those troubles, labor was very scarce, and very difficult to obtain, while the necessary supplies and materials were very much more expensive.

The actual mining operations themselves had been successful, and the same might be said of development work. Important discoveries had recently been made in that part of the property which was known as the No. 1 mine. Ore bodies of considerable promise had been located. These had hardly reached the productive stage at the end of the financial year, but they had since played an important part in ore production.

Sinking on the South Rodney vein had been resumed at the end of the year, and had since been further continued down to the 1,950 foot level, at which level exploration was in progress. Shareholders could hardly expect him to make any prediction with regard to the mine outlook at such a moment as this. All that he was in a position to say was that the mine looked well, and that if pre-war conditions existed prospects would be much more favorable. All they could do was to carry on mining operations on sound and recognized principles, and to hope for an improvement in smelting facilities and for a corresponding reduction in the cost of labor and materials.

C. H. Stewart said that the chief feature of development was the finding of high-grade ore in the No. 1 vein, which was to be identified with the War Eagle vein, west of the fault which dislocated it. Progress had been made since the end of the financial year, and it had become the principal producing stope. The stopes were full above the 600 ft. level. Work was at and above the 400 feet level, in progress to prove the existence or otherwise, of an upward continuation. It was not possible to resume the sinking as to the deep ore body for exploration of this until the close of the No. 1 vein having been successful of the year, but the winze had now reached the 1,950 foot level, where it had got clear of the intrusive dyke into favorable mineralized ground, and it was hoped that the westerly drive and crosseut at that horizon would find the downward continuation of the ore body, which had been so productive in the upper level.

As to the production since the end of the year under review, shipments in the first five months of the current year had been 7,500 tons; receipts had been \$82,000, and costs \$56,000, but the value of ore in transit at this moment was \$10,600 less than it was at the close of the year. The last month's returns showed an improvement in grade. Settlements had been preliminary and partial, for since the armistice there was no official quotation for copper as defined by the smelter tariff.

## Special Correspondence

### NORTHERN ONTARIO.

#### Keeley Mine Re-opened.

After lying in idleness for the greater part of the past four years, the old Keeley mine, situated in the South Lorrain district, is to resume work within the week. Plans have been completed toward this end. Perhaps no other mine in the north has received quite so much notoriety as has the Keeley, due, not so much to the amount of silver which it has yielded, but, rather, to the fact that it was on this property where silver was first discovered which caused the rush to South Lorrain, and, later, the mine having figured in and having been partly responsible for the failure of the Farmer's Bank some years ago.

The mine was held under option by British interests at the outbreak of war, and an extension of time was given, to hold good "until one year after the war." At that time it was not expected that such a war could be waged for more than a few months; hence the long period of inactivity.

#### Palmer-Paine Co. Will Work Gowganda Property.

The Palmer-Paine Mining Company has been organized and will operate the property formerly operated by the T. C. 177 Mining Company, situated in the Gowganda district. The property adjoins the Miller Lake O'Brien as well as the Castle property of the Trethewey Company.

During the course of previous work a shaft was driven to a depth of about 210 feet. Arrangements have now been made to carry this work to a depth of 500 feet, at which point lateral operations will be conducted. N. R. Morrison is in charge of operations.

#### Installing Plant on Clifton.

A plant is being installed on the Clifton-Porcupine property, in the township of Deloro, and is expected to be ready for operation within the month. Ample finances, it is stated, are now in the treasury to assure the carrying out of a more or less extensive exploration and development campaign. A good deal of spectacular ore was opened up on the property some years ago.

#### Hurricanaw.

Navigation for river boats has opened on the Hurricanaw River, making boat travel possible from Amos on the railway to the centre of mining activity in the vicinity of the Indian Peninsula, as well as the Martin, and the Cisco mines.

#### Miller-Independence.

A special car is scheduled to leave Dayton and Germantown, Ohio, for Boston Creek. The car will carry a number of shareholders of the Miller Independence Mines, among whom are a large number of leading business men of both Dayton and Germantown. The party, it is stated, will arrive at the mine on May 26th.

Satisfactory progress is being made in the development of the mine. Also plans are being drafted for the proposed new 100-ton mill, the necessary finances having been provided for by the sale of a block of treasury stock at \$4 per share.

The Miller-Independence Company is in the happy

position of having the comparatively low capitalization of \$700,000 divided into 700,000 shares with the par value of \$1 each. Of this, some 500,000 shares were previously issued. About 50,000 of the remaining 200,000 shares are being sold, the block having been already pretty well subscribed for at \$4 per share. It is now believed it may not be necessary to dispose of the remaining treasury shares in order to bring the mine to an important producing stage. This situation holds out great promise to the present shareholders.

#### Rapid Progress at Tough-Oakes.

During the second week in May the Tough-Oakes continued to make rapid progress. For the seven-day period the underground workings were extended 299 feet, or at the rate of close to one-quarter of a mile per month, thus setting a new high record.

The new vein opened up during April has been further developed and gives promise of adding considerably to tonnage. Also, cross-cutting at the 400-ft. level is proceeding at a rate that should result in reaching the vertical shaft on the Burnside, and thus make that shaft available for lowering and raising men engaged in these lower workings, both on the Tough-Oakes side as well as on the Burnside.

#### McIntyre Making Larger Output.

The McIntyre-Porcupine mine is now producing at maximum capacity, and is expected to wind up its fiscal year, ending June 30, 1919, with a record of 180,000 tons treated during the period. With mill heads having maintained an average of about \$10 to the ton, it follows that the year's production should amount to about \$1,800,000. It is expected the margin of profit will be almost equal to one-half of the total output, or about \$800,000.

During the year the McIntyre has disbursed three dividends, each amounting to five per cent, or a total of about \$541,000. With this fact in mind it is expected an amount in the neighborhood of one-quarter of a million dollars may be carried to surplus. The surplus as of June 30th, 1918, amounted to \$872,172.75, and the amount added this year should increase the surplus well beyond the million dollar mark.

A force of about 348 men and 48 machines are employed, constituting the largest force ever before engaged by the McIntyre. The main shaft is being continued from the 1,000-ft. to a depth of 1,375 feet, where a second main haulage will be installed. With the work well under way at the 1,375 ft. level, the main shaft will be continued to still deeper levels, and will thus become the deepest operation so far undertaken in the Porcupine camp.

#### Will Maintain Gowganda Road.

The Journal has been informed that the Ontario Government, following the completion of the macadam road from Elk Lake to Gowganda, will also provide for the maintenance of the road. It is proposed to engage an expert road builder for the work of construction, and the work will be under the direct supervision of Mr. Fullerton of the permanent staff of the government. The method of maintenance will consist of keeping one man engaged during the summer months, and equipped with a two-ton truck so as to repair any small breaks that may occur in the road surface. In this manner no difficulty in keeping the road in first class condition is anticipated. The Government will also provide for oiling the road at least once a year.

### Speeding Up Work at Dome Mine.

With a force of between 250 and 300 men employed, the development of the Dome Mines is being gradually speeded up, and has now assumed large proportions.

It is planned to mill ore of an average grade of \$7 per ton during the period occupied in getting up to capacity. While running for a time at the rate of 600 tons daily, it is expected, costs will amount to about \$3.50 per ton. Later on, as the capacity is gradually increased to full, or 1,350 tons daily, the mill heads will be gradually lowered, until they ultimately reach the average throughout the mine, which is about \$5.10 per ton. Operating at full capacity, it is learned, the costs should be reduced to between \$2.75 and \$3 per ton, as compared with \$2.50 before the war. Therefore, the margin of profit is expected to amount to about \$2.25 per ton when operating at full capacity and would be well in excess of dividend requirements at the former rate of 20 per cent annually.

### Rich Ore Discovered at Chambers-Ferland Mine.

An important development has just taken place at a depth of about 300 feet on the Chambers-Ferland property of the Aladdin-Cobalt Company. Several rounds have been taken out of a vein averaging about six inches in width and containing silver values of about 2,000 ounces to the ton. The discovery occurred at a time when it was generally understood the old mine was about worked out, and when low grade ore was being shipped preparatory to cleaning up ready for curtailing operations possibly some time next winter.

There are indications that the present high grade ore shoot may be quite extensive. The shipment of low grade ore from other parts of the mine is proceeding at the rate of about twenty-five tons daily.

### Silver Found on Farragh Property.

On the property formerly known as the Farragh Mining Company, situated in the township of Coleman, on the north side of the Kerr Lake Majestic property, a vein has been discovered in which silver ore is found to contain several thousand ounces to the ton. The vein occurs in keewatin formation, at a point where the keewatin extends into the diabase. The vein crosses the sixty-foot tongue of keewatin, and continues in the diabase. At the point where the high grade silver ore was opened up the vein is from four to five inches in width, composed of calcite, cobalt and native silver.

The property was formerly owned by the Farragh Mining Company, and was sold at auction a few months ago to Pete Farragh, for \$10,200.

### Ontario-Kirkland.

Exploration and development work on the Ontario-Kirkland property is being carried on at the rate of about 500 feet every thirty days, according to official information. An average speed of about 17 feet daily has been attained. With the completion of the shaft to a depth of 300 feet, a cross-cut was driven, and at a point 30 feet from the shaft the No. 1 vein was encountered, showing a width of about five feet of commercial ore. Drifting toward the west is under way, and values are increasing, visible gold being present. Also, the cross-cut is being driven toward the No. 2 and No. 3 veins, which parallel No. 1 in comparatively close proximity.

### Adanac Ore Will be Treated at Temiskaming Mill.

The management of the Adanac mine has made arrangements with the Temiskaming Mining Company to treat a large tonnage of medium grade ore in the mill of the latter company, the arrangement being to treat Adanac ore in 500-ton lots.

At the same time the high grade ore encountered during the course of work will continue to be bagged.

### Government Prospecting Parties.

Members of the Canadian Mining Institute are being urged by H. Mortimer-Lamb, secretary-treasurer of that organization, to support representations which have been made to Sir James Lougheed, Minister of Soldiers' Civil Re-establishment, asking for the establishment of a prospecting expedition headed by returned men, to explore and investigate the mining possibilities of these parts of the Dominion, of which little is known.

The suggestion is that the government should utilize returned soldiers in the work of searching for mineral under the auspices and direction of the Department of Mines. It is recommended that suitable territory should be selected in different parts of Canada, and that each section so chosen and defined be placed in charge of an officer of the Department, whose duty would be to act as general supervisor of the work of the exploration parties. Each of the parties would be under a mining engineer who is a returned soldier, and the personnel of each expedition would be made up of returned men who are qualified for the work of prospectors.

Mr. Lamb further explains the idea as follows:

"After making a discovery an officer of the Department of Mines would investigate it and upon his recommendation it could be opened up. If the showing is found to be promising the Government would invite the larger exploration companies to send their representatives to make an examination and give them an opportunity to secure a working bond on it with the option to purchase.

"Of the monies realized from the sale of properties, 75 per cent would be retained by the government and would go towards defraying the expenses of the explorations, while the remaining 25 per cent would be divided among the members of the party responsible for making the original discovery. This latter provision is suggested as being not only a fair one, but as an incentive to activity on the part of the men who enter this service."

### Cobalt Views on Shining Tree Area.

Among the representative mining men in the precious metal mining fields of Northern Ontario, considerable discussion is heard relative to the situation in the West Shining Tree district where a number of professional promoters are advertising stock in prospects at prices for which shares in proven mining concerns may be purchased. The tendency on every hand appears to lean toward advising caution when delving or speculating in propositions where the older established mining concerns have hesitated to venture, after having made investigation. Not much real development work has yet been done on the promising prospects found in the West Shining Tree field, where the deposition of gold is found to be spectacular at times, but is decidedly patchy.

### Important Development at Nipissing Mine.

One of the most important developments met with in the Cobalt district during recent years, is the huge oreshoot opened up in vein 109 on the Nipissing mine. So far about 170 feet of drifting has been done, and the average silver content of the vein is high.

Some of the most optimistic statements made on the street are to the effect that the vein averages four inches in width and may be expected to be at least 100 feet in depth, and contains average values of about 6,000 ounces of silver to the ton. This would point toward there being about 3,600,000 ounces of silver in the shoot. While this report is probably over optimistic, yet it is interesting to note an official statement made in the Journal last week that the vein had then been drifted on for about 130 feet and had averaged about two inches in width of 3,000 ounces ore. Should this shoot prove to be 100 feet in depth it would contain about 1,500,000 ounces of silver.

The Nipissing management has always been noted for being very conservative when estimating ore, and while the reports that 3,600,000 ounces have been placed in sight may be somewhat high, yet it is a fact that the shoot is exceptionally large and may reasonably result in the company redeeming its former position as regards ore reserves as of the close of 1917 which were about 8,000,000 as compared with a decline to about 6,000,000 ounces at the end of 1918. In doing this the company is making still more secure its position of being the leading silver mine in the British Empire.

### Resume Work at South Lorrain Mines.

Arrangements have been made to resume work at the Pittsburg-Lorrain and the Wettlaufer mine in South Lorrain. It is planned to re-open the mill of the Wettlaufer, which is under lease to the Pittsburg-Lorrain.

The present plan of operation does not include underground work, but is confined to the retreatment of the tailings dump from previous operations. Horace F. Strong will manage the operation.

Business men of South Porcupine are planning a more or less extensive building program, following the loss of a score of buildings in the fire which swept the western part of the town recently.

### Kirkland Lake Gold Mines.

The Teck-Hughes is now producing at about full capacity. During the month of April a total of 2,602 tons of ore was treated, containing an average of \$10.46 per ton, according to official advice. This appears to indicate a production of \$27,216.92. The mill treated an average of upwards of eighty-six tons of ore daily.

With the Lake Shore mine having produced \$44,781.56 in April, the Teck-Hughes having produced \$27,216.92, and the Kirkland Lake Gold Mines producing about on a par with the Teck-Hughes, it is evident these three mines are now producing at the rate of about \$100,000 every thirty days. That this output will be gradually increased within the next few months is probable.

In the meantime the Tough-Oakes is developing ore at a rapid rate and will reopen its mill some time during the summer, and the Wright-Hargreaves is proceeding with the construction of a large new mill. These two mines will be producing in a big way before the close of the year, and it is calculated the

combined output of the mines of the Kirkland Lake field will aggregate about three million dollars during 1920.

In addition there are a number of smaller mines that should in due course add to the output. First is the Kirkland-Porphry where the erection of a mill is already warranted. Second is the La Belle-Kirkland where a large tonnage of commercial ore is in sight and where operations may be resumed before very long. Third, is the Ontario-Kirkland where very favorable results are now being met with a depth. Fourth, is the Canadian-Kirkland, the property recently acquired under a working option by the Crown Reserve Mining Company of Cobalt.

In addition to these are a large number of promising prospects upon which considerable exploration work is being carried on.

### Catherine Township Claims.

Arrangements have been made to explore the Angus and the Bent veteran claims in the township of Catherine, in the Boston Creek district. A small force of men have been taken in for the purpose.

### Adanac.

The scope of operations at the Adanac mine is being enlarged, a third machine having been set to work this week for the purpose of opening up the main vein system at the 200-ft. level. Heretofore, the greater part of the work done has been at the 310-ft. level, and at which point a considerable quantity of low grade ore has been opened up, and several tons of high grade ore has been bagged. Following the arrangement recently concluded with the Temiskaming Mining Company, the Adanac will begin shipping ore early next week to the Temiskaming mill for treatment. The content of the large tonnage to be treated will be returned to the Adanac in the form of concentrates following which the concentrates will be disposed of to the smelters.

### Indian Peninsula Mill.

The new mill on the Indian Peninsula mine of the Penn-Canadian Company has been completed, and is now understood to be in readiness for operation. Early in June, it is planned to commence production. The Indian-Peninsula is a molybdenite property, situated in north-western Quebec, about twenty-two miles south from Amos on the Transcontinental Railway. The property was formerly known as the St. Maurice Mines. Mr. W. F. Haines, president of the Penn-Canadian as well as the Indian Peninsula has just concluded a visit to Cobalt, and although it is quite evident the market for molybdenite is more or less limited at the present time, yet the probability of a rapidly improving situation is good, and Mr. Haines appears to be very confident as to the future of the mine.

### Exploring Hohenaur Property.

Exploration work has been resumed on the Hohenaur property, formerly held under option by the Temiskaming Mining Company up to the time of the change in the control of the latter company. At the time the Temiskaming dropped the option held on the Hohenaur, a plant had been installed at the expense of the Temiskaming. This plant was left on the property, adequate reimbursement being made to the Temiskaming. H. Cecil and S. Renaud are behind the present program of operations.

### Chambers-Ferland.

As a result of the recent strike of high grade ore at the Chambers-Ferland mine of the Aladdin-Cobalt Company, upwards of sixty sacks of high grade ore have already been bagged, and a considerable tonnage of mill rock has been opened up. Further work is proceeding along the vein, and the outlook for additional high grade is stated to be quite promising.

### Ontario Kirkland.

According to official advice to the Journal, the No. 2 vein has been cut at the 300-ft. level of the Ontario-Kirkland property, at which point the vein shows is said to be well defined and apparently well mineralized, although assay results have not yet been ascertained.

The manner in which the veins of the Canadian-Kirkland are developing at the 300-ft. level, particularly the No. 1 vein, has led the management to consider the advisability of installing a mill later on in the year. The trend and result of developments during the next few months will probably decide the course to be taken.

### Greene-Kirkland Gold Mines.

Among the new companies formed for the purpose of operating property in the Kirkland Lake field is the Greene-Kirkland Gold Mines, with a capitalization of \$3,000,000 divided into 3,000,000 shares of the par value of \$1 each.

### Miller Independence.

In the "D" or incline shaft on the Miller Independence Mines at Boston Creek, drifting operations are again under way. It is planned to develop as much ore as possible at this level so as to provide tonnage for the 100-ton mill which the management has decided to erect. In the meantime, diamond drill operations are making satisfactory headway from the 200-ft. level of the new central shaft. It is expected the main vein will be tapped at a vertical depth of about 300 feet.

### Lake Shore.

The Lake Shore mine produced \$44,781 during the month of April, according to official information. The mill ran 96.6 per cent. of the possible running time, reducing 1,800 tons of ore and recovering \$24.88 per ton, or an average of \$1,492.72 daily.

This compares with an average daily output of \$1,463 in March, during which period the ore averaged \$24.46 per ton.

### Canadian-Kirkland.

The shareholders of the Canadian-Kirkland Gold Mines Company will hold a meeting in Hailebury May 28th, for the purpose of considering, and if approved, ratifying an option agreement whereby Sir John Carson, representing the Crown Reserve Mining Company is given an option on 800,000 shares of the Canadian-Kirkland Company on a working option basis. Also, the shareholders will be asked to ratify a by-law recently passed by the directors authorizing the sale of 400,000 shares of treasury stock at 25 cents per share.

The Crown Reserve Company has already started work on the property, and the situation points toward the probability of the shareholders ratifying the deal on Wednesday.

### Temiskaming.

It is understood in usually well informed circles that prominent interests in the Temiskaming Mining Company still entertain hopes of being able to secure the Dolly Varden Mine, in British Columbia, despite the fact that the Taylor Engineering Company have been reported to have outbid the Temiskaming.

Whereas the Temiskaming bid \$900,000 for the Dolly Varden, it is understood the Taylor Engineering Company has bid \$1,100,000. On just what grounds the Temiskaming interests base their hope of still competing successfully for the Dolly Varden has not been made clear. There even appears to be many reasons for hesitating to share such a hope, in the light of the trend of events during the past few months.

### Silver Leaf.

The annual meeting of the Silver Leaf Mining Company will be held in Toronto on June 6th for the transaction of business that may properly be brought before the meeting.

### May Reopen Hylands Property.

The reopening of the old Hylands property, lying between the Ophir and the Gifford Extension properties, is under contemplation and arrangements are expected to be concluded within a short time. It is understood a number of business men who are interested in the property have arranged for the necessary finances.

The geology on the Hylands is said to be favorable, the formation being keewatin overlying diabase. On the north side of the property the distance down to contact is not far, but the contact dips quite sharply and reaches a depth of perhaps 400 feet at the southern boundary.

### Berry Claims Optioned.

Interests close identified with the McIntyre-Porcupine Mining Company have secured an option on the Berry group of claims in the Kirkland Lake gold district. The Berry group are situated along the boundary between the townships of Teck and Lebel, and adjoin the Burnside mine on the south. The property consists of five claims comprising a total of not far under two hundred acres.

It is interesting to note that the McIntyre-Porcupine is the first important Porcupine mining company to interest itself in the prospective area of the Kirkland Lake district. Perhaps no other mine in the Porcupine field had a greater struggle to succeed than did the McIntyre on its Porcupine property. For many months at one point of development it appeared as though the proposition would go down as a failure. Perhaps the two chief reasons why the McIntyre did not experience such a fate was the fact that it was backed by such a competent man as the late Col. A. M. Hay, and with the work being done under the management of the present manager, R. J. Ennis. The company's entry into the Kirkland Lake field, although yet only to the extent of holding an option on an important group of claims, shows the aggressive policy of the McIntyre. Having firmly established itself as the third largest gold mining concern in the Dominion, it is evidently not the intention of the company to limit its ambition even to its present very favorable position.

**BRITISH COLUMBIA.**

**Granby.**

The last quarterly dividend of the Granby Consolidated Mining & Smelting Company was at the rate of \$1.25 a share, amounting to \$187,481, and making a total of \$11,136,367 paid in 20 years.

**Florence Silver.**

The Florence Silver Mining Company operating in the Ainsworth, has mailed cheques for its monthly dividend (April) of \$17,650. The rate is 1½ cents a share. Total disbursements amount to \$35,500. In future disbursements will be made on the quarterly basis instead of the monthly system.

**Gold Discovery at Terrace.**

William Dahl, of Terrace, B.C., states that he has found free milling gold in paying quantity on a property which he and his partner have been developing for the past nine years in the vicinity of Terrace. A tunnel has been driven 180 feet, in addition to considerable stripping and surface work. The veins uncovered run from 18 inches to 14 feet in width, and the general average of the ore is said to return about \$10 a ton. Seven claims, which are known as the "Lucky Seven," have been staked. A handsome specimen taken from the lower workings is on exhibition at the rooms of the Vancouver Chamber of Mines.

**Geological Survey Work in B. C.**

The season's work of the British Columbia Branch of the Geological Survey, Mines Department, Ottawa, commences this month. It will be conducted under the supervision of Charles Camsell, the well-known Canadian geologist. Several new fields are to be subjected to geological investigation and examination. One party at least will be sent to Northern British Columbia, and it is likely that the Alice Arm and Salmon River sections will be visited and reported upon. Nothing definite is yet known as to the policy in regard to the continuance of the investigation of the Tulameen platinum deposits.

**Smelter Rates Enquiry.**

The report of the special committee appointed to inquire into the justice or otherwise of the custom rates charged by the Consolidated Mining & Smelting Co. of Canada at its Trail (B.C.), Smelter, is expected to be available shortly. Messrs. S. S. Fowler, Ivan DeLashmutt and James Anderson, who constitute the personnel of the Committee, recently held a conference with Mr. O. R. Whitaker, the Colorado metallurgical expert, who has been employed to give technical advice, and the latter's findings are looked for in the near future.

**Ore Receipts at Trail.**

For the first four months of this year, some 65 mines contributed a total of 124,894 tons to the gross total of ore and concentrates received by the Consolidated Co. in Trail. This compares with 140,157 tons in 1918, and 146,395 tons in 1917 for the same months (four) respectively. Considering metal market conditions, which in the case specially of lead and copper, have been most chaotic, with almost no call for either metal, and then at nominal figures, the showing is encouraging, to say the least.

No ore whatever is being received from American mines, and comparatively little from mines in British Columbia other than those owned and operated

by the consolidated concern itself. In fact, the tonnage from the company's own properties comprise about 86 per cent. of the total received thus far this year.

Metals still continue to pile up at the refining works in Trail, or are stored in other central points awaiting a market of some sort. However, no one can tell what that market will be when a demand does appear. It is hoped that this will eventuate in the near future to relieve the situation. Thus far American sellers have been able to dump their lead in the Canadian market at any price that could be obtained.

For purposes of comparison herewith is given the monthly tonnage ore receipts at Trail smelter, separately, for the last three years.

	1917.	1918.	1919.
January . . . . .	36,570	27,404	35,283
February . . . . .	40,967	33,989	30,450
March . . . . .	42,949	41,725	30,809
April . . . . .	25,909	37,039	28,352
Totals . . . . .	146,395	140,157	124,894

**Miller-Independence.**

It is understood that a number of the directors of the Miller-Independence Mine and other shareholders from Ohio will shortly visit the mine at Boston Creek.

The directors are Geo. J. Miller, president; Wm. Stroop, vice-president; J. C. Schaeffer, secretary; Ed. Rettich, treasurer; Geo. W. Ozias, Judge O. B. Brown, Adam Begard, Frank Groch and J. A. Read.

**Canadian Collieries Wins Case.**

Judgment has been given in favor of the Canadian Collieries (D), Ltd., against the Pacific Coast Coal Mines in the action brought by the former for trespass and for the taking from its property without authority of a quantity of coal. Mr. Justice Murphy has allowed the plaintiff company damages of over \$85,000. The defendant company's answer to the allegations mentioned was that the boundary marked and accepted was not the true boundary and that, apart from this point, it had permission from the late Mr. Coulson, manager of the Wellington Collieries at that time, to remove the coal in question. That the coal was taken was not disputed. The contention as to the boundary not being accurately shown on the map, the judge observes, was not very seriously upheld. The main defence as to the coal having been removed by Mr. Coulson's permission he has been forced to find "with great reluctance" not proven. His Lordship points out that the only man who could have contradicted this statement is dead. "I think the plaintiff's case is made out that there was a deliberate taking of coal with knowledge that it was beyond plaintiff's boundary line," remarks the judge in conclusion. He fixes damages at the rate of \$3.25 a ton for 25,066 tons removed, and 15 cents a ton for 23,516 tons of coal left in place, but which is now valueless. The case, no doubt, will be appealed.

The Supreme Court of Canada has just handed down judgment in a case of a similar nature, in which the Canadian Collieries (D), Ltd., and the Pacific Coast Coal Mines figure as the principals. In this the latter have been ordered to pay \$64,097.70 to the former as recompense for trespass and the removing of coal without authority. The Pacific Coast Coal Mines appealed from the Appellate Court of British Columbia to the Supreme Court of Canada, but the latter court has dismissed the appeal with costs, without hearing argument from respondents' counsel.

### The Fires at Princeton Mines.

Ernest Waterman, general manager of the Princeton Coal & Land Company, is making every effort to establish the identity of the party or parties responsible for the fires which damaged the company's storeroom and destroyed the hoist at the mines on the morning of April 25th. For a time there was a suspicion that some of the strikers, who formerly were employed on railway construction near Princeton, were responsible. This theory is not now credited. It is said that there have been three fires at the mine in the past year, all apparently of an incendiary origin. On at least two occasions some of the fire hose was found to be cut and the hydrants tampered with. In the hope of solving the mystery and removing these annoyances by the apprehension of the guilty ones, Mr. Waterman has announced that the company will pay \$500 for the necessary information and the police are making a special effort.

### Surprise Mining Company.

Development operations are reported to have proved a considerable body of milling at the Ivanhoe Mines of the Surprise Mining Company, and there is a possibility that the Rosebery Surprise Mill at Sandon will be reopened.

Paul Lincoln, of the Noble 5 Mines, has returned from Salt Lake City, where he has been negotiating for the equipment of a new mill it is proposed to instal this summer. The headquarters of the Clarence Cunningham mining interests are to be moved from Sandon to new quarters adjacent to the Alamo mill site.

### Mining Convention at Nelson.

The Board of Trade of Nelson, B.C., is asking the Provincial Government to support the International Mining Convention to be held in that City on June 19-20-21, by a vote of \$1,000. It is pointed out that the Government aided the Vancouver Convention to the extent of \$2,500 and also assisted that of 1918 at the City of Revelstoke, B.C. The mining men of the interior of the Province are enthusiastically behind those who are arranging for this gathering, and it is proposed inviting representative mining men from the adjacent States as well as from all parts of British Columbia. There will be a full discussion of all the problems affecting the industry of the Northwest and it is hoped that action will be decided upon that will have beneficial results. Incidentally visitors will be assured of ample entertainment.

### Will Develop Gypsum Deposits at Falkland, B.C.

The British Columbia Gypsum Co., Ltd., announces its intention to develop its large gypsum deposits at Falkland, Grande Prairie, near Kamloops, B.C. A modern plaster mill is to be erected on the property. The Manitoba Gypsum Co., which is successfully operating in the prairie province, owns the greater part of the stock of the British Columbia Company. The decision to open up the Falkland property is believed to have been a result of the promise that a Kamloops-Okanagan Railway will be constructed, thus providing necessary transportation facilities.

Algeria's production of minerals in metric tons for the first three-quarters of 1918 included iron, 674,106; lead, 11,429; zinc, 37,297; pyrites, 10,976, and anti-money, 6,400. The report comes from Consul A. C. Frost, stationed in Algiers.

### New Machinery for Placer Mining.

An organization known as the Noble-Metals, Ltd., Vancouver, B.C., announces its intention to undertake active placer mining this season in the Omineca and other British Columbia Districts. It is said that entirely new machines and methods of recovery of gold and other previous metals from the placers of the Province will be used. A five-ton per hour capacity machine is reported to weigh less than 150 lbs., making it possible to transport it easily on horseback to "the most inaccessible parts of the interior." It also is stated that this machine, when necessary, may be operated by hand power. The company announces its intention of developing placer and other deposits on a royalty, lease, or percentage of gross earnings basis.

### Canada Copper Corporation.

The strike of workmen who were engaged in the construction of a branch railway from Princeton to Copper Mountain, B.C., the latter being the site of new mines of the Canada Copper Company, continues at the time of writing, May 6. There are no signs of a settlement, despite the attempts of government officials and others at conciliation, and consequently the preparations which had been going forward on a large scale to put the company's mining property on a shipping basis remain at a standstill. The position of the Canada Copper Corporation is shown by the terms of the following notice, which was posted recently by instruction of the management:

#### Notice.

Any employee of the Canada Copper Corporation, who has joined the union of the railway strikers is hereby requested to withdraw from said railroaders' union or leave the employ of the Canada Copper Corporation.

The reason for this request is not that the Canada Copper Corporation is opposed to organized Labor (provided said organization does not seek to establish a closed camp) but is very much opposed to giving support to the railroad strikers.

We consider that a minimum wage of 40 cents per hour for unskilled railway labor is a fair wage to-day, and that since the railway company is making no demand for a 10-hour day, they are not acting either unreasonably or unfairly, but, on the contrary, are both reasonable and fair. The fact that the great majority of laborers on the railway are employed by station men, means that the great majority are receiving 45 cents per hour instead of 40 cents per hour. Before the war the minimum wage on railway construction was \$2.50 per day of 10 hours. The 40 cents per hour now offered is 60 per cent higher than the wages paid before the war.

If employees of the Canada Copper Corporation wish to join a miners', millmen's, or a smelter-men's union, they are at liberty to do so, but to join the railroaders' union they are merely helping the railroaders to tie up our mine and mill, and that means we will have to close up our works both at Allenby and Copper Mountain.

We intend that Canada Copper Corporation money shall not help support a strike that will close us down.

The notice is signed by the Canada Copper Corporation, Limited, per H. R. Van Wagnen, and is dated at Allenby, April 22nd.



#### L. F. Fogle succeeds F. C. Moore.

F. Cushing Moore, who has been associated with Clarence Cunningham as consulting engineer at the Hewitt and Van Roi Mines, Silverton, B.C., has severed his connection with the Cunningham interests and has left for Spokane, Wn. L. F. Fogle, former mill superintendent for the Consolidated Interstate Callahan Company, in the Coeur d'Alenes, recently took charge of the Hewitt and Van Roi Mills.

#### Mr. F. M. Sylvester's Views on Joint Council.

The Royal Industrial Commission, appointed by the Dominion Government to investigate and report upon the relations between employee and employer throughout the Dominion, met in British Columbia recently to take evidence. Among others heard was F. M. Sylvester, managing director of the Granby Consolidated Mining & Smelting Company, who expressed the fear that any effort to establish a joint council of employees and employers for the purpose of handling labor problems would have to be confined to units if it was to meet with success. He said that such a joint council might fail because there "is so much difference of opinion and such a wide chasm between the employer and the employee in many industries. In his opinion an organization of the kind would have to be built from the bottom and extended over a long period to meet with success. Mr. Sylvester told the Commission that he had not give the question any great study, but he thought that the results achieved by an industrial council would be in proportion to the provision made for the education of the men. Progress could only be by evolution. Each industry would have to work out its own salvation. To illustrate his position he pointed to the impracticability of two cities having an amalgamated government. This would not work out, and for the same reasons different units of industry could not be regulated by an industrial council with satisfactory results.

#### Coal Mining Branch for Institute.

The complete re-organization of the British Columbia branch of the Canadian Mining Institute has been decided upon and H. Mortimer-Lamb, the secretary treasurer of the organization, is in the Province for the purpose of attending to the details. As a result, there has been a meeting of coal mine operators at which it was decided that it would be in the best interest of this branch of the mining industry that it should have an entity separate and distinct from the metalliferous interests. The majority felt that the Institute's activities in this Province heretofore have been devoted to such an extent to the metal mines that those associated with the coal industry have been overlooked, or, at least, given so little attention, comparatively, as to make it scarcely worth their while to continue with the organization. They, however, realized the benefit of the work of the Institute, generally, and wished to continue to support it, but not on the same basis of the past. If a coal mining section of the western branch of the Canadian Mining Institute were launched they would give it their hearty endorsement, as it then would be possible to give problems peculiar to the industry the attention warranted by their importance: It appears that the same sentiment exists among the coal miners, who are members of the Institute throughout Canada and, consequently, Messrs. Thomas Graham, superintendent of the Canadian Collieries (D), Ltd.; John Hunt, General Superintendent of the Canadian Western Fuel Company, and George Wilkinson, Chief Inspector of Mines of British Columbia, all of whom have long been prominently

identified with the coal mining industry of the province, have subscribed themselves to the following circular.

"It is suggested that a special section of the Canadian Mining Institute be organized in the interests of the members engaged in coal mining in Canada. This Section should have branches in Nova Scotia, Alberta, and Eastern British Columbia and on the Pacific Coast. May we depend on you to assist in organizing a Coast Branch of this section, and also to give it your active support after organization. It is obvious that such a branch will serve a most useful purpose in bringing the coal men together in their common interests. It is hoped, therefore, that you will reply in the affirmation to the above inquiry. Please address your reply to James Hargreaves, Technical Branch, Parliament Bldgs., Victoria, B.C., who has kindly consented to act as Provisional Secretary of the proposed coal branch."

These have been forwarded to as many of those identified with the industry in the coast district as possible. It may be that some have been inadvertently overlooked and, if so, they are requested to accept this notice.

On June 4th it is proposed holding a gathering of coal mine operators and others interested at Nanaimo, B.C., at which the organization will be completed and questions relating to the industry discussed.

#### Miners' Evidence Before Commission.

At the sitting of the Royal Commission on Industrial Relations held in Victoria on Monday, Robert Walker, member of the Cumberland Miners' Committee, said the results of the arrangements whereunder the grievance committee of the employes in the Cumberland plant of the Canadian Collieries (Dunsmuir), Ltd., meet the management every month or oftener if necessary, were good. Relations between the men and company had materially improved since the new management took charge.

One source of discontent among the men was the opinion that they were being denied the right to organize. They feel they are under the absolute control of the management, and if the present management were changed that they might suffer at the hands of the new. While he did not know much of the Whitley plan of joint management and control, he felt that if it meant merely increased efficiency, there would be little gained by its adoption. But if the conditions under which the workers worked and lived would be improved it would undoubtedly prove beneficial.

Asked what he considered were the chief causes of unrest among the labor unions, Mr. Walker somewhat surprised his hearers when he declared it to be his opinion that the main cause was the idea the workers have of the corruptness of the union officials. He also referred to the labor troubles at Princeton and the opinion of some of the men that police are being sent in with some ulterior motives. In the Cumberland district the workers feel they should have a greater share of the product of their labor. If they felt they would get something more along that line they would be more satisfied, though he supposed they would not be really satisfied, until they got it all.

He stated that the Cumberland men voted for the One Big Union idea, 169 to 5, and on the proposal of the six-hour day and five days a week only 12 voted against. There was no complaint about wages there, the chief demand being a shorter day. There was discontent, too, because of the men having to work with Asia-

Mr. William Fraser, employed by the Canadian Collieries Company at Ladysmith, said the present arrangements for the men meeting the management worked out fairly well. There is a branch of the union there, but the company did not recognize it. Opinion was divided, he said, as to whether the present committee arrangement was better than a union. The chief cause of discontent among the workers was the high cost of living. The last increase made under the system of readjustment every three months had been exactly two and three-quarter cents per day, while in the shipyards the advance had been at that amount per hour. No dissatisfaction has been expressed in the Ladysmith district with the eight hour day from bank to bank. The six-hour day had not been discussed, he said. Up to recently there had been little or no unemployment, but now that men were returning from overseas there was some. The company was putting returned men to work as fast as it could. He suggested some public works at Ladysmith which the Government should undertake to provide employment, among them being new wharf, extension road work, etc., as well as the re-opening of the smelter, thereby encouraging mine development.

#### The Rotherd Furnace.

The Industrial Committee of the Victoria Reconstruction Group, a body of business men banded together to forward the development of the natural resources of British Columbia, is urging the Provincial Government to lend its financial support to the end that the Rotherd Electric Furnace is established in this Province. It also is recommended that the water power available at Stamp Falls, Vancouver Island, be reserved in order that they may be harnessed to supply the necessary electrical energy. Opinion is not unanimously in favour of immediate action, the view having been expressed by some organizations that the efficiency of the furnace should be subjected to careful investigation before the Province should lend its guarantee to the bonds which would have to be floated in the financing of the enterprise. It should be observed that the Reconstruction Group does not go on record as being in favour of the guaranteeing of bonds. On the other hand its resolution, which now is before the Executive Council, concludes as follows: "It is therefore urged that the industries of the Province should be developed by Provincial finances for the benefit of the community at large rather than for that of certain individuals." The Government, however, at present has only one proposition before it from those who control the smelter, namely, that it should go behind the

latter up to a certain point in any issues that may be necessary. Incidentally, it is interesting to note that and ex-parte report on the furnace is not yet available. and that the Industrial Committee—a body composed of representatives of the returned soldiers' organizations—ask that action be suspended pending the result of investigations being made as to the practicability of the soldiers undertaking the operation of the suggested smelter.

#### Miners Want Assay Coupons With License.

The Free Miners' League of Prince Rupert has presented a petition to the Provincial Government asking that the Minister of Mines appoint licensed assayers at central points throughout the Province. It also is asked that the holder of a Free Miners' License Certificate, when purchasing his license, shall receive five assay coupons, each of which, on presentation to a district assayer, shall entitle him to one assay at half the current charge. These coupons, it is suggested, should be made valid only for the year of their issuance.

#### Officers for Nelson Convention.

A meeting of the Nelson, Slocan, and Eastern British Columbia Mining Associations was held recently at Nelson at which preliminary arrangements were made for the International Convention to take place on June 1920 and 21 at Nelson. An organization was appointed to prepare for the gathering, the personnel of which is as follows: Hon. Wm. Sloan, Minister of Mines, honorary president; S. S. Fowler, Riondel, honorary vice-president; Sidney Norman, Spokane, Wn., honorary vice-president; Frank C. Bailey Spokane, honorary vice-president; A. B. Trite, Fernie, honorary vice-president; J. J. Malone, Nelson, president; W. A. Cameron, Rambler, vice-president; A. N. Wallinger, Cranbrook, vice-president; Fred J. Peters, Rossland, vice-president; Alex. McCrea, Revelstoke, vice-president; J. R. Hunter, Nelson, vice-president; J. D. Blackwood, Nelson, vice-president; J. E. Thompson, M.P.P., vice-president; Fred R. Starkey, Nelson, secretary; J. A. Gilker, Nelson, treasurer; A. G. Larsen, Spokane; M. M. McCune, Sheep Creek; E. W. Widdowson, Nelson; I. G. Nelson, Nelson, and C. F. Caldwell, Kaslo, directors.

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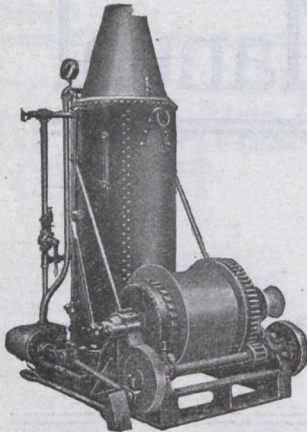
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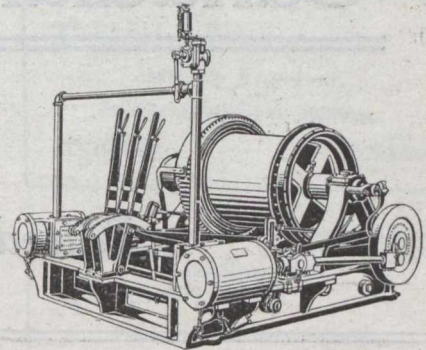
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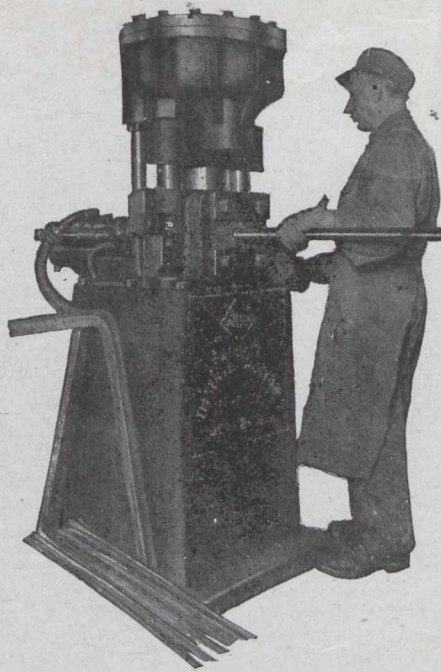
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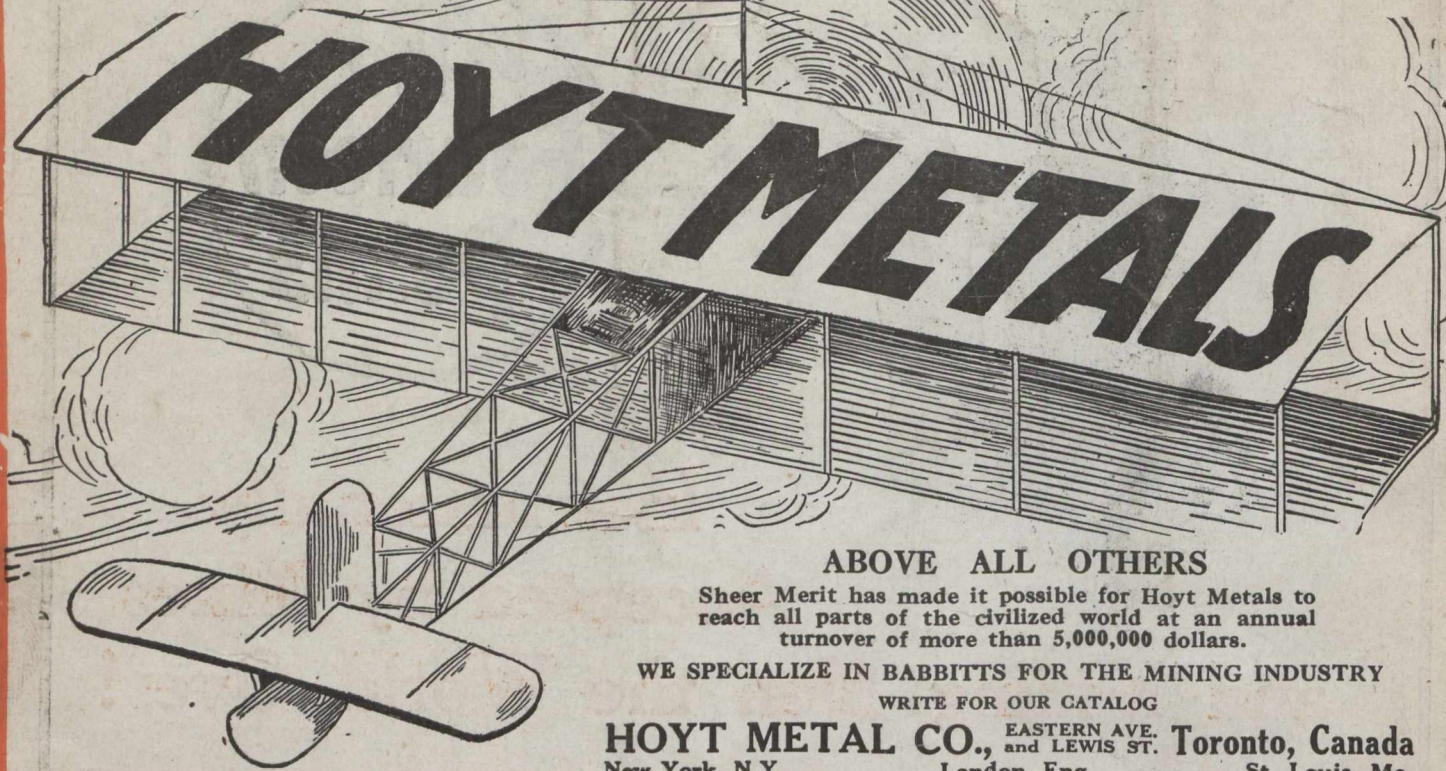
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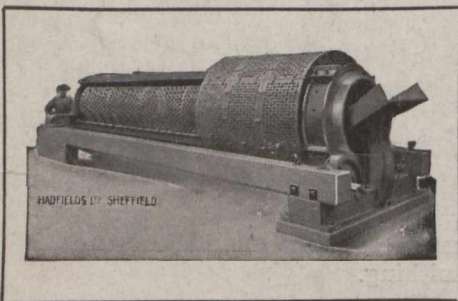
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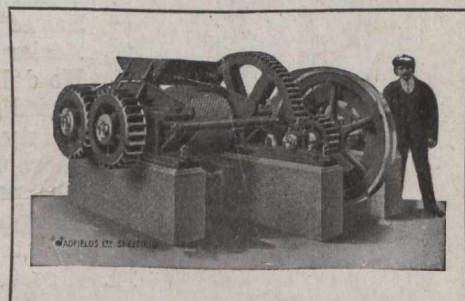
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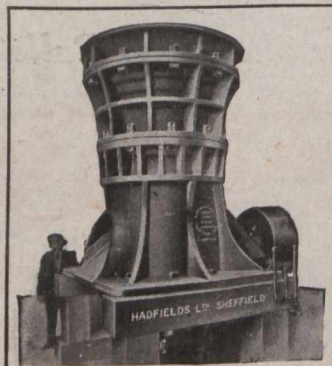
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