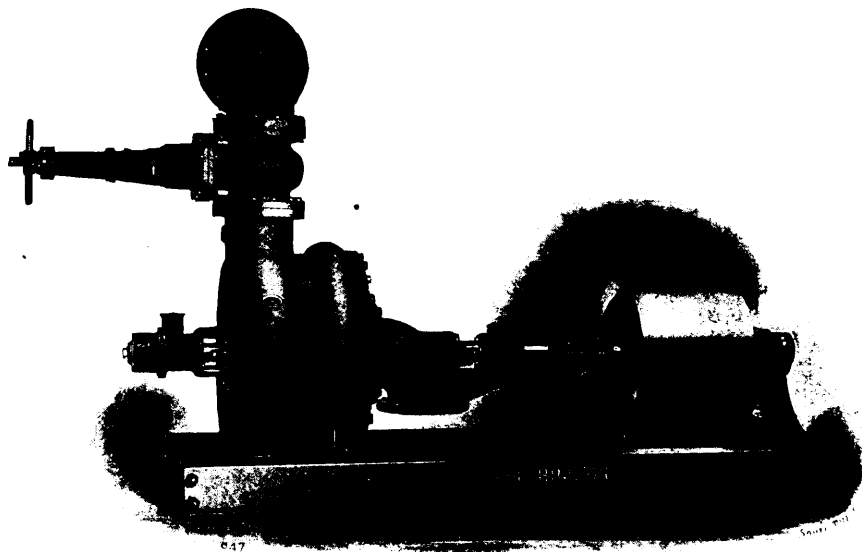


# The JOHN McDOUGALL Caledonian Iron Works Co. Limited.

## MONTREAL.



PATENTED

**EIGHT INCH, TWO  
STAGE TURBINE.**

Belt driven from a Water Wheel  
and used for Placer Mining,  
Capacity 1,750 gallons per minute  
against 170 feet head.

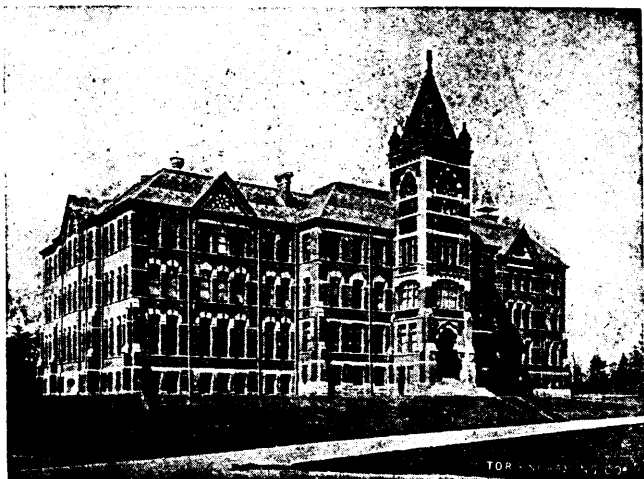
We manufacture for sale and on order PUMPS and PUMPING ENGINES for liquids, air and gas; Condensers, Cooling Towers and other apparatus and machinery under all Canadian Letters & Patent owned and controlled by the International Steam Pump Co. and its Companies, including the following Patents,—

47168	62005	74319	76519	77655	81034	84108	86516	89242
52155	70612	75069	76520	79001	82040	84109	86517	
53629	73076	75359	77066	80482	82041	86288	89241	

## SCHOOL OF PRACTICAL SCIENCE TORONTO

ESTABLISHED 1878

THE FACULTY OF APPLIED SCIENCE AND ENGINEERING  
OF THE UNIVERSITY OF TORONTO.



### DEPARTMENTS OF INSTRUCTION:

- |  |                                     |
|--|-------------------------------------|
| 1—Civil Engineering.                     | 4—Architecture.                     |
| 2—Mining Engineering.                    | 5—Analytical and Applied Chemistry. |
| 3—Mechanical and Electrical Engineering. | 6—Chemical Engineering.             |

Special attention is directed to the facilities possessed by the school for giving instruction in Mining Engineering.

### LABORATORIES:

- |             |               |                  |               |
|-------------|---------------|------------------|---------------|
| 1—Chemical. | 3—Milling and | 4—Steam.         | 6—Electrical. |
| 2—Assaying  | Ore Treatment | 5—Meteorological | 7—Testing.    |

A Calendar giving full information, and including a list showing the positions held by graduates, sent on application.

A. T. LAING, Registrar.

## CANADIAN MINING INSTITUTE

Incorporated by Act of Parliament 1898.

### AIMS AND OBJECTS.

(A) To promote the Arts and Sciences connected with the economical production of valuable minerals and metals, by means of meetings for the reading and discussion of technical papers, and the subsequent distribution of such information as may be gained through the medium of publications.

(B) The establishment of a central reference library and a headquarters for the purpose of this organization.

(C) To take concerted action upon such matters as affect the mining and metallurgical industries of the Dominion of Canada.

(D) To encourage and promote these industries by all lawful and honourable means.

### MEMBERSHIP.

MEMBERS shall be persons engaged in the direction and operation of mines and metallurgical works, mining engineers, geologists, metallurgists, or chemists, and such other persons as the Council may see fit to elect.

STUDENT MEMBERS shall include persons who are qualifying themselves for the profession of mining or metallurgical engineering, students in pure and applied science in any technical school in the Dominion, and such other persons, up to the age of 25 years, who shall be engaged as apprentices or assistants in mining, metallurgical or geological work, or who may desire to participate in the benefits of the meetings, library and publications of the Institute. Student members shall be eligible for election as Members after the age of 25 years.

### SUBSCRIPTION.

Member's yearly, subscription.....	\$10.00
Student Member's do .....	2.00

### PUBLICATIONS.

Vol. I. 1898, 66 pp., out of print	Vol. V. 1902, 700 pp., bound.
Vol. II. 1899, 285 pp., bound red cloth	Vol. VI. 1903, 520 pp., bound.
Vol. III. 1900, 270 pp., bound red cloth	Vol. VII. 1904, 530 pp., bound.
Vol. IV. 1901, 333 pp., bound.	

Membership in the Canadian Mining Institute is open to everyone interested in promoting the profession and industry of mining without qualification or restrictions.

Forms of application for membership, and copies of the Journal of the Institute, etc., may be obtained upon application to

**H. MORTIMER-LAMB, Secretary, Montreal.**