

THE CANADIAN MINING JOURNAL

VOL. XXXVI.

TORONTO, November 1, 1915.

No. 21

The Canadian Mining Journal

With which is incorporated the

"CANADIAN MINING REVIEW"

Devoted to Mining, Metallurgy and Allied Industries in Canada.

Published fortnightly by the

MINES PUBLISHING CO., LIMITED

Head Office 263-5 Adelaide Street, West, Toronto
Branch Office 600 Read Bldg., Montreal

Editor

REGINALD E. HORE

SUBSCRIPTIONS — Payable in advance, \$2.00 a year of 24 numbers, including postage in Canada. In all other countries, including postage, \$3.00 a year.

Advertising copy should reach the Toronto Office by the 8th, for issues of the 15th of each month, and by the 23rd for the issues of the first of the following month. If proof is required, the copy should be sent so that the accepted proof will reach the Toronto Office by the above dates.

CIRCULATION

"Entered as second-class matter April 23rd, 1908, at the post office at Buffalo, N.Y., under the Act of Congress of March 3rd, 1879."

CONTENTS

	Page.
Editorial—	
Value of Research to Industry	645
Crushing and Concentrating Gold and Silver Ores	647
Mining in the Yukon. By J. B. Tyrrell	649
Basic Principles of Mining Cost. By J. R. Finlay	656
Electro-plating with Cobalt. By H. T. Kalmus, C. H. Harper and W. L. Savell	658
The Beaver Lake District. By Wm. McInnes	662
Ores of Worthington Mine. By Dr. T. L. Walker	667
A Pair of Old Snowshoes. By J. Harmon Patterson	669
Personal and General	671
Special Correspondence	673
Markets	676

RESEARCH AND INDUSTRY

In this issue we publish some account of the investigation carried on by Dr. H. T. Kalmus and his assistants in the metallurgical laboratory at Queen's University, Kingston, and by Mr. W. S. Barrows at the plating plant of the Russell Motor Car Co., Toronto, in connection with the problem of electro-plating with cobalt.

Cobalt is one of the chief constituents of the silver ores of the Cobalt district, Ontario. It is produced in larger quantity than the market warrants, owing to the very limited use which it has found up to the present. It is known to have splendid properties as a metal, but for most of the uses to which it might be put, nickel, which is much cheaper, is satisfactorily filling demands.

The experiments carried on last winter by Mr. Barrows to determine the commercial value of the solutions prepared by the investigators at Kingston, seem clearly to indicate that the advantages of the cobalt solutions over the ordinary nickel solutions are such that cobalt is likely to gradually displace nickel for plating purposes.

In our last issue we published an article by Mr. F. M. Turner on the value of research to industry. The investigation of cobalt and its compounds being carried on for the Department of Mines in the laboratories of Queen's University has had results which go to prove Mr. Turner's contentions. Co-operation between the investigators in their laboratories and the foremen in the shops, such as there has been between Dr. Kalmus and Mr. Barrows, is much needed in Canada.

The Canadian Mining Institute is compiling a list of miners throughout the Dominion who have enlisted for military service. The Secretary of the Institute has been advised that such a list, which should particularize the regiment joined, would be useful to the military authorities.

In order that the list be most useful it should be complete and up to date. It is to be hoped, therefore, that the mining companies will promptly advise the Secretary concerning enlistment of their employees.

The Rice Lake, Manitoba, district, is again to the front with another gold discovery. According to interested parties this is a world beater. The information so far available is scanty.

The Sudbury district is making a record production of nickel and copper. There are few places which have been so favorably affected by the war. The demand for the metals is not only good, but likely to continue so.