

# Chemical Research and Industrial Problems

**Grant by Research Board to Mr. Horace Freeman for Investigation of Refractory Sulphide Ores Calls Attention to Numerous Problems That Could Be Solved by Scientific Investigation.**

An announcement recently appeared in the daily press to the effect that the Honorary Advisory Council for Scientific and Industrial Research has made a grant to a local chemist for the purpose of investigating the complex sulphide ores of this province.

This is the first grant given for research purposes in British Columbia, and irrespective of immediate results, is to be regarded as a logical step in the development of our natural resources. There are many subjects meriting scientific research on a considerable scale, as Mr. Freeman points out in a concurrent article. Industries for this province must be developed from the ground up, as it were, step by step in a scientific manner if concrete results are to be obtained. An industrial research bureau or laboratory is badly needed to point the way to the development of our raw materials. Such is beyond the scope of the individual except in very rare instances. The work on the complex ores will be conducted by Mr. Freeman personally, at a laboratory in the Cave Building, Vancouver. Mr. Freeman has for a number of years carried on research in the city, and it was he who successfully developed the manufacture of cyanide in Canada. The process and plant devised by him supplies from Niagara Falls, Ontario, the greater part of the cyanide used in North America for gold and silver extraction. A large amount is also used for fumigating of orange trees in California. For this purpose it is converted to prussic acid gas, which is injected into tents erected over the trees.

Cyanide was imported from Germany in large quantities prior to the war.

Mr. Freeman's article on "Chemical Research and Industry" was read before the British Columbia Technical Association on October 25th, and is as follows:

The great war did much to emphasize the necessity for bringing scientific research to bear on problems of production. As one result we now have a number of industries in Canada, which hitherto had been regarded as economically impossible. Canada is now among the greatest electro-chemical producing countries of the world, thanks to cheap hydro-electric power, and to the patient research which has taught us how to convert it into chemical energy in the form of new products. Some day British Columbia will occupy the position on the Pacific seaboard that Shawinigan and Niagara Falls do in the eastern section of the country. In other words chemical research will find a load for the as yet undeveloped power resources of this province.

Let me give a few specific examples of problems calling for research in our own province.

First, in the lumbering industry. There are approximately five thousand tons of wood waste consumed daily in the incinerators, in and adjacent to the city of Vancouver alone. Considerable sums of money are expended to burn this waste and the result is simply a smoke nuisance. It is no mean problem to find a way of turning this waste to profit. Our soft woods give too low a yield of wood alcohol and acetic acid to allow of this manufacture being made profitable by the present known methods of treatment. It is more probable that the conversion of the waste to charcoal, disregarding the volatile constituents entirely, might be made profitable. It costs too much to trap and treat the

## PROVINCIAL ELECTION COMING!

The return of the Oliver Government by the electors of this Province on December 1st next, will mean uninterrupted prosperity for our growing industries. It will mean the uninterrupted activities of the Department of Industry, which although established only on July 16, 1919, has already assisted some seventy industries, has recommended and granted loans of over one million dollars, and has helped to create employment for 1,179 persons.

At the head of the Department of Industry is the Premier, the Hon. John Oliver himself, the man who has been both a wage earner and an employer, an experience which fits him peculiarly for the post.

In the granting of loans to industrial enterprise, every application is given a most careful hearing, but the greatest caution is exercised throughout.

## British Columbia Industries Are Growing

**Return the Oliver Government and They Will Grow an Hundredfold**

**VOTE FOR  
LIBERAL CANDIDATES  
DECEMBER 1st**