

ores mined in Canada, and to promote the production in Canada of zinc—Mr. Templeman—read the second time, and House went into committee thereon.

On section 1,

Mr. SPROULE. Explain.

Mr. TEMPLEMAN. When the resolution was before the House a few days ago there was a very full explanation given of the purport of this Bill. At that time I was asked by the hon. member for South Simcoe (Mr. Lennox) to state somewhat more in detail how it was proposed to expend the sum of \$50,000, and I promised to give that information. The money which is being set apart for the promotion of the zinc industry will be expended approximately as follows:

1st. Investigation of processes which promise commercial results:	
(a) The De Laval Process, in operation at Trollhatten, Sweden.	3,000 00
(b) The Ferguson-De Laval Process, demonstration plant being erected in London, Eng.	2,500 00
(c) The Cote-Pierron Process, recently invented in France.	3,000 00
(d) The Kermodé Bisulphate Process, demonstration plant being erected in Wales.	3,000 00
(e) The Hiram Nixon Process, of Philadelphia.	2,500 00
There are two more processes, of which information is being obtained, one in Russia and one in Vienna, Austria, which are stated to be commercial, each \$3,000.	
	6,000 00
	\$21,000 00

It is intended that these processes be examined on a commercial scale, in detail, by competent metallurgists.

The investigation of each one of these processes will require several weeks. In explanation of the cost of these investigations it may be stated that it includes the salary of the chief metallurgist and his assistants and their travelling expenses, and the writing of the report, also the payment of the needed labourers, of sufficient number to enable the staff to be divided into night and day shifts, as the processes are continuous.

It is only after this necessary information has been gathered, that it will be possible to frame a plan for further procedure.

If any of these processes promise commercial results, the remainder (\$29,000) of the grant may be employed in setting up and operating an experimental plant on the lines of the approved process. As the sum, \$29,000, is very small for so important an inquiry, it will be necessary to avail ourselves of the electric outfit already in existence at Nelson, B.C.

That is the statement prepared by the Director of Mines as to the method of expending this money. The purport of the Bill, what we expect to accomplish, the

Mr. OLIVER.

necessity of the work and all that kind of thing were very fully discussed when the resolution was before the House, and I think the House is fully impressed with the importance of the proposed work.

Mr. J. A. CURRIE. Is it the intention of the minister to have the present commercial processes also investigated, such as the process now in operation in New Jersey and the Belgian process? These have been commercially employed for a great many years, and I think that before starting in to exploit new processes for the smelting of zinc, it would be well also to investigate the old processes which have been successful. Does the minister not also think it important to investigate those processes that have been in successful operation for some time?

Mr. TEMPLEMAN. Undoubtedly that investigation will be made. The chief authority on this continent on zinc is Mr. Ingalls, of New York city.

Mr. J. A. CURRIE. And Joseph Whar-ton also.

Mr. TEMPLEMAN. Yes. We propose enlisting the co-operation of these gentlemen at the very earliest possible date. As I am advised, the process for the reduction of zinc known as the Belgian process is not believed by metallurgists to be economically adaptable to the ores of this country, in which lead and zinc are in close association. The difficulty to be surmounted is to find a process that will recover these two metals. I believe that where zinc ores are smelted in the United States and Europe, lead is not present, or if it is present, it can be separated. The great problem is to save all the metals that are present in the British Columbia ores, and to solve that problem it is necessary to obtain a process that will save at once the lead as well as the zinc. It is believed by experts who have been investigating the processes that are referred to in this memorandum that that result can be accomplished by investigation and further experimentation in regard to the smelting of these ores. But our investigation would not be complete unless we fully studied and applied, if necessary, the well known processes of smelting now in use in many parts of the world.

Mr. J. A. CURRIE. The reason I mention this is that several so-called German chemists have exploited processes in this country at great expense to the people. A number of people in Hamilton put something like \$300,000 or \$400,000 into a process which proved a failure. I understand that one or two similar processes were exploited in the west at the expense of the public there, and from what I have learned from people who are actually in the business