

10 GEORGE V, A. 1919

Professor MILLER: A great number of men, and they must be trained in the highest possible degree. I was speaking to Dr. Lang Muir, one of our industrial research men, and he expressed the view that the remedy was to train these men in the colleges. He felt that the colleges should either have funds appropriated from the Government, or raised by taxes or by increased tuition, so that they could offer inducements to the better men to remain on the teaching staff to train men for the industrial laboratories. The difficulty is to retain the best men on the teaching staff. Dr. Lang Muir was of the opinion that while the tendency is for the best men to leave the universities, the colleges must make their work more attractive, and he wanted men trained in pure science, not in the industrial laboratories.

WEDNESDAY, June 4, 1919.

The Committee met at 10.30 a.m., Mr. Cronyn, Chairman, presiding.

The CHAIRMAN: We have Doctor Miller, Professor of Physical Chemistry in the University of Toronto, with us to-day, and I presume it is the pleasure of the Committee that he be heard.

Dr. W. L. MILLER: I thank the Committee for the honour done me in inviting me to appear before it, and also the Secretary for having sent me a copy of Dr. Macallum's address in which certain concrete proposals were laid before the Committee. I am glad to say that I find myself in substantial agreement with most of these. I am glad to give my support to the work of founding an institute of research and to bring the support of a number of gentlemen whose names I shall give.

There is one matter which I would like to deal with first. A question was asked by Mr. Nickle, "Which is cause and which is effect? Is it the lack of demand by the establishments, or the lack of supply from the universities that makes so little research work in Canada?" Then again Mr. Nickle asked "You think that if the universities had produced the men, the industries would have absorbed them"? Again he remarked "So that it is the universities' lack of appreciation that led to the small number of men being employed by the industries". These were very general questions, and the answers had to be given in a very general way. I should like to supply some information as to our experience in the case of chemical industry, which I think will throw a good deal of light on that phase of the subject. If a student in Toronto wishes to take a university course in chemistry, he takes the honours course in the faculty of Arts. For some time there has been a similar course in the faculty of Applied Science which has now been amalgamated with the Arts course; they approached so closely to each other that they were turned into one course. This honour course in Arts includes instruction in chemical research to all students who take it. That has been the law and the practice since 1892, that is to say for 27 years. During all that time, any student in the university who took the honour course in chemistry had, as part of his undergraduate work, instruction in chemical research. During the last 15 years or so, practically the whole of the fourth year has been devoted to research. There are some five lectures a week, and some of the students who wish to teach spend a few hours a week in the biological laboratory, but all the rest of the time, during the fourth year, is devoted to chemical research.

Mr. NICKLE: That was compulsory?

Dr. MILLER: Yes.

[Professor Dayton C. Miller.]