

and bursaries which the advisory council supervise, and, after proper examination, award for special researches in different lines. They take up quite a large range at the present time. There are included in them some forestry problems, mining problems, productive problems in industry, and scientific problems to a certain extent where they are trying to solve difficulties which are met in processes of production and they carry on experiments to that end. The system of bursaries, fellowships and studentships has been found to work well in Great Britain and other countries, and the same line is being followed out under this research board.

Mr. McMASTER: I would venture the assertion that the work conducted under this Advisory Council of Industrial and Scientific Research might far better be conducted under the universities of this country. For instance, we know that in the Faculty of Applied Science of McGill Universities we have had some of the leading scientists, I may say, of the whole world, some men who occupy chairs in that faculty are really men of world-wide reputation and have done a great deal of their most important work in connection with the university. What I am afraid of, in voting this \$120,000, is that we are largely duplicating the work of the universities, and I think if we wish to promote scientific and industrial research, that work can much better be carried on in the great scientific schools attached to universities like McGill, Toronto Varsity and Queen's University at Kingston.

Mr. CASGRAIN: The University of Montreal.

Mr. McMASTER: The University of Monereal, Laval University and others. I would like to bring forward this objection which, I believe, is a serious one. Would the minister inform us how he expects with the appliances available at Ottawa to have the work done as well as it would be done with the magnificent equipment at McGill, for instance, and I speak of McGill not because I do not realize there are other universities splendidly equipped, but because I am familiar with the equipment of my Alma Mater.

Sir GEORGE FOSTER: I am afraid my hon. friend has not read the yearly reports as diligently as he might have done if he had had more time. The universities are not ignored under this system. Their energies are co-ordinated by the members of the Research Council, many of whom

are connected with the universities. These researches are not carried on by means of appliances here in Ottawa, but at the universities themselves by members of the universities, either professors or students who have gained their degrees or passed through most of their courses and have specialized in some one of the subjects. They are appointed under the bursary studentship and fellowship appropriations to carry on during the vacation months researches along a certain line. Here is a research, for instance, being carried on by Professor Porter of McGill University. A grant of \$1,500 is proposed to be given him out of this vote in order to defray his expenses in carrying on an investigation with reference to oil flotation in the recovery of values, by the application of Canadian and other oils, taking into consideration minerals other than those of the Cobalt district. There is a line along which research has been extended. The professor has been at work on that and shows an aptitude for it. This grant is given to him under the supervision of the Research Council to enable him to defray his expenses in carrying on that investigation for another year. That is just an example of how the work is done. There is no laboratory here under the management of the Research Council where independent research is undertaken. I have a number of instances here of bursaries, studentships, fellowships, and grants for researches that are being carried on at McGill, Queen's, Toronto University, and other universities which have the appliances and the skilled workmanship necessary to enable them to undertake that work.

Mr. McMASTER: I would not like the minister to think I was opposed to research work. I am glad to know that it is being carried on in these places where it can best be carried on, but I would like to be convinced of the necessity for this council in regard to this work. Would the minister tell us roughly how much of this \$120,000 is going to the actual work of research at the universities, and how much goes for the salaries of officers or officials connected with the council?

Sir GEORGE FOSTER: The Research Council is composed of a number of gentlemen who are selected because of professional and scientific knowledge and skill, also of men who are versed in and familiar with the industries of the country. All of them give their services without any