

## SCIENTIFIC AND INDUSTRIAL RESEARCH.

the possibilities of extension and expansion, and particularly to ascertain the scientific man power available for research and the necessity of adding thereto.

(c) To co-ordinate these agencies so as to prevent overlapping of effort, to induce co-operation and team work, and to bring up a community of interest, knowledge and mutual helpfulness between each other.

(d) To make themselves acquainted with the problems of a technical and scientific nature that are met with by our productive and industrial interests, and to bring them into contact with the proper research agencies for solving these problems, and thus link up the resources of science with the labour and capital employed in production so as to bring about the best possible economic results.

(e) To make a scientific study of our common unused resources, the waste and by-products of our farms, forests, fisheries and industries, with a view to their utilization in new or subsidiary processes of manufacture and thus contributing to the wealth and employment of our people.

(f) To study the ways and means by which the present small number of competent and trained research men can be added to from the students and graduates of science in our universities and colleges, and to bring about in the common interest a more complete co-operation between the industrial and productive interests of the country and the teaching centres and forces of science and research.

(g) To inform and stimulate the public mind in regard to the importance and utility of applying the results of scientific and industrial research to the processes of production, by means of addresses to business and industrial bodies, by the publication of bulletins and monographs, and such other methods as may seem advisable.

In pursuance of the work with which it has been charged, the Council, in order to develop in Canada a body of men who have been thoroughly trained in science and its application to industry,—such as that which has aided so greatly in the industrial development of Germany in recent years—has recommended to the Government the establishment of twenty or more studentships and fellowships in Canadian universities and technical schools, to be given to men who have completed their regular course of study and have displayed a special aptitude for scientific research. These will enable such men to pursue a course of advanced work for a further period and thus acquire a practical training in the methods and conduct of research. Arrangements are also contemplated whereby students will be placed in one or other of the great manufacturing establishments of the Dominion, where they will continue their training under the conditions of actual commercial practice.

For the purpose of making a complete census or inventory of all work in scientific and industrial research which is being carried on in the Dominion at the present time by all the agencies now at work, and also for the purpose of ascertaining the various lines and directions in which the application of research was most necessary and might be made most fruitful in the development of our industries and manufactures, the Council in the spring of 1917 issued questionnaires to all the universities, Government departments and technical societies, as well as to all Canadian manufacturers, asking for specific information on the various subjects which come within the purview of the Council. In the distribution and in the collection of proper returns from these questionnaires the Council has received the active, energetic and sympathetic assistance of the engineering and the various technical societies of the Dominion, as well as of the Canadian Manufacturers' Association.