

contributed by the Diet, and the Emperor personally. It is expected that the fund will eventually amount to \$4,000,000. The functions of this Institute will be those of a Bureau of Standards and a Mellon Institute, but research on the industrial side will be specially provided for. A proposal made by the French Academy of Sciences for the establishment of a National Research Institute for France is now under consideration, and the present indications are that as soon as Peace is established such an Institute will be brought into existence. The Australian Advisory Council of Science and Industry has recommended to the Government of the Commonwealth the foundation of an Institute of Science and Industry which will carry on work and researches in standardization of scientific apparatus, of electric lamps, apparatus and machinery, of instruments of precision used in industry and of materials used in industry and by the Commonwealth and State Governments of Australia. It will, as recommended, also undertake research work in forestry, mining, metallurgy, and on the processes and methods concerned in the manufacturing industries with the view of aiding the development of the latter.

The fact that a number of such Institutes are in being and operation elsewhere and that the establishment of others are under contemplation brings strong support to the recommendation of the Research Council that a National Research Institute for Canada should be established. There is no such organization as yet in Canada which fulfils more than a small fraction of the functions of such an Institute. The needs of the Dominion in this respect are urgent. The position of our industries in the face of keen, incessant competition from abroad cannot be ignored and the utmost resources of science must be brought to their assistance. To do all this a great organization must be brought into existence, one of whose functions will be the initiation and conduct of researches on basic problems affecting the industries. That organization would centre in the management and staff of the proposed Institute which would be centrally situated, at Ottawa for example, possibly eventually with branches at points in the Dominion where special local needs require the establishment of such.

Associated with this function of investigating the basic problems of the industries must be that of superintending and guiding the researches on the various problems in which the Guilds for Research formed in the various lines of industry are concerned. This would necessitate, except in very special cases, the accommodation of the research staffs of such Guilds in the buildings of the Institute. Such a close association for research of the various industries, some of whose individual problems would be allied or closely related, would enhance the chances of success in attaining the object of all the Guilds. The very fact that the research staffs of these would be constantly under the supervision of the staff of the Institute, composed as it ought to be of the most highly qualified experts that can be found, would promote the formation and maintenance of such Guilds in all the lines of industry which would profit by the application of research to their problems. The industries of Canada would thus, it is safe to say, be assisted to a degree out of all proportion to what they would expend or to the cost of the maintenance of such an Institute.