

This Advisory Council, by the direction of the Chairman of the Sub-Committee of the Privy Council, was charged with the following duties:—

- (a) To ascertain and tabulate the various research agencies in Canada.
- (b) To note and schedule the researches and investigations.
- (c) To co-ordinate all research agencies so as to prevent over-lapping.
- (d) To tabulate the technical and scientific problems that confront the present industries.
- (e) To study the unused natural resources of Canada and the by-products of all basic industries.
- (f) To increase the number of trained research men.
- (g) To stimulate the public mind in regard to the importance and utility of scientific research and its application.

**Studentships and Fellowships.**—To maintain the supply of scientific experts available for service in the Canadian industries, the Council has founded a number of studentships and fellowships, of the value \$750 and \$1,000 each, respectively, to be awarded to university graduates or others, who possess the qualifications required in those who aim at a career in scientific or industrial research. The holders of these appointments may prosecute their investigations at any approved Canadian university and each may be re-appointed if the results of his work are reported to be of sufficient value as a contribution to science to warrant the continuation of the study.

**Assisted Researches.**—In addition to the studentships and fellowships above mentioned, the Council has also provided a fund to assist research into industrial processes and methods, especially those which involve the utilization of by-products. Ten of these grants, ranging in amount from \$250 to \$5,000, have already been awarded.

**Various Investigations.**—One of these is an investigation respecting tar fog. This has to do with the solution of the problem of conserving economically the products of the destructive distillation of wood, coal and the liquid products created during the manufacture of producer gas, etc. To demonstrate this matter, a plant on a commercial scale was established at Sault Ste. Marie in connection with the coke works of the Algoma Steel Corporation, Limited, and, as a result of experiments conducted by Dr. J. G. Davidson, the process demonstrated clearly that a great effort should be made to recover the products of the destructive distillation of wood and tar. Researches on straw gas involve the practical utilization for heat and light on the farms of the Prairie Provinces of the enormous quantities of straw, estimated at 20,000,000 tons, now being burned in order to dispose of it. The results of fog signalling experiments forecast the use of a new type of siren for use in the River St. Lawrence and the Gulf. The results of the disposition of sulphite liquor waste of the Canadian pulp mills, enormous in quantity, now poured into the streams and rivers, poisoning all fish life therein, are giving results which seem to point the way to the commercial utilization of at least the sugars they contain in order to furnish alcohol for industrial purposes. The necessity for investigation on the production of a rust-resisting wheat is found in the fact that, annually, more than \$20,000,000 are lost through the prevalence of the rust disease in