

and other similar equipment. At one end, and also carried through two stories, a high-tension electrical laboratory has been provided, where researches will be carried on at voltages up to about 750,000. This has been decided upon in view of the enormous hydro-electric development in Canada and the corresponding need for research in electrical transmission and related problems.

Laboratory Investigations.—Pending the completion of the main building of the National Research Laboratories the existing laboratories are being utilized to the fullest possible extent. The following is a partial list of the problems upon which researches are under way or have been recently completed:—

Heat insulation for houses, to determine the heat conductivity of various insulating materials.

Aerial photography, with the object of eliminating electrical effects which now spoil a large proportion of the films exposed.

The rapid determination of moisture in grain by electrical methods.

The development of a method of grading grain which will more clearly distinguish between the various grades.

The study of sound waves so rapid as to be inaudible to the human ear.

The chemical effect of extremely short electro-magnetic waves.

Voltmeter design.

The standardization of radium.

The utilization of Canadian deposits of dolomitic magnesite.

Methods of testing raw wool.

Research in laundry problems.

Leather research, especially problems in tanning.

The chemical nature of rubber, the treatment of its several constituents and the development of rubber accelerators.

The conversion of natural gas into intermediate products which can be used in present commercial processes, the production of carbon black and hydrogen.

The utilization of Canadian asbestos.

Improvements in the quality of fish oils, and their conversion into more valuable products.

The utilization of waste apples.

The clarification of honey and the development of new honey products.

Researches on maple sugar.

The utilization of loganberry residues.

The synthesis of resins.

Biological researches have not yet been carried out at Ottawa by the Council's staff, owing to the very limited laboratory accommodation, but for several years work has been under way in Edmonton, in co-operation with the University of Alberta. The activities of the staff there have in the main been confined to problems of the grain industry.

Associate Committees.—Two classes of associate committees have been established by the National Research Council. The main function of the first class is to advise the Council on scientific questions, and of the second, to direct or undertake research work on some major problem.

Advisory committees have been established on chemistry, physics, botany, mining and metallurgy, nitrogen fixation, electrical measuring instruments, and engineering standards. These committees report on problems referred to them