

The waterproofing qualities of certain stone preservatives.
Vibration in electric transmission lines.
The standardization of radium.
X-rays.
Moisture condensation on dust particles.
Velocity of sound in liquids contained in cylindrical tubes.
Velocity of sound in cylindrical rods.
Transmission of an ultrasonic beam through air.
Voltmeter design.

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 by the Council, make recommendations as to researches which might be undertaken, issue reports, and keep closely in touch with the advances being made in their respective branches of science and technology.

The associate committees whose function it is to undertake research usually have in their membership representatives from other organizations prosecuting research or interested in the special problems which the committees were appointed to study. In this way co-operative researches are carried out with other government departments, both Dominion and provincial, the universities and various other organizations.

Research committees of the kind described have been established on animal diseases, asbestos, biophysics, coal classification, field-crop diseases, grain research, heating and insulation, honey, laundry research, leather, magnesite, natural gas, oceanography, radio, smelter smoke, tuberculosis, weed control, wool growing and manufacture. This partial list of subjects gives some idea of the extent and character of the external work of the Council.

Assisted Researches.—Assisted researches are those carried out in other laboratories than those of the National Research Council, and to which the Council has made a financial contribution for the purchase of equipment not ordinarily found in scientific laboratories, or for the provision of technical assistance in carrying out the experiments. In no case does the grantee receive any compensation for his own services. By this plan important contributions to science and industry have been made at a minimum of expense to the Government.

The following may be taken as fairly typical of the more than 100 investigations on this plan now under way in the laboratories of 10 Canadian universities and in 15 government and industrial laboratories:—

The fermentation of honey.
Mastitis in cows.
Winter hardiness in crop plants.
Foot- and root-rot diseases of crop plants.
Fowl paralysis.
Wireworms of the Canadian prairie.
Factors governing the milling and baking quality of wheat.