

immense quantities of such ore in Canada. This investigation has advanced to a stage which promises important results bearing on the utilization of these ores. An investigation on wheat genetics has been carried on for the past two years, and a variety of wheat has been produced which ripens two weeks earlier than the Marquis. Also varieties have been produced, some of which are wholly rust resistant. An endeavour is being made to produce a hybrid of these which will ripen early, be completely rust resistant, give a good yield per acre, and have the necessary milling and baking qualities. Another grant was made to provide for preliminary investigations on the cause of the discoloration of canned lobster. This trouble results in an annual loss to the lobster industry of many thousands of dollars and, as the success of this important industry depends on a high grade of product, a thorough and prolonged research on the problems affecting the industry must be systematically planned and carried out. A Fish Canner's Guild for Research is in process of organization, and it is expected that when it is fully organized it will undertake and continue the support of this investigation. Grants have also been made to provide for researches on the chemistry and bacteriology of fish curing; an investigation on the character and amount of the sugars in sulphite liquor from pulp mills with a view to the utilization of these sugars in the manufacture of industrial alcohol; the flotation of Canadian ores by waste oils from wood distillation; the utilization of ultra-violet rays; experiments on fog signalling apparatus; investigations on a unit storage battery, on a laboratory scale, of the oxy-hydrogen type.

Utilization of Fish Waste.—The question of the utilization of fish waste has been under consideration by the Research Council for the last eighteen months. A thorough survey was made, and the Council ultimately came to the conclusion that a project for the utilization of the offal could be successfully carried out; they recommended to the Sub-Committee of the Privy Council on Scientific and Industrial Research and to the Reconstruction and Development Committee of the Privy Council that a plant be established. Eventually a private company was organized to engage in this industry.

Industrial Alcohol.—Denatured alcohol is very extensively used abroad as a chemical agent, a precipitant, a solvent, a cleanser in many industrial processes, especially in the chemical industries, and it is also used as a motor fuel to replace gasoline and for illumination purposes. In Canada the consumption is a meagre one. In 1917, if it had been in proportion to the population, as compared with the United States, the amount would have been about twenty times as great as it was. One of the reasons for this very limited consumption in Canada is the exceedingly high cost, and this is due principally to the conditions under which denaturation is carried out, to the present bonding system and to the high cost of corn and other raw materials used to produce it. If raw materials, which are at present merely industrial waste, were employed in the production of alcohol, the price might eventually be considerably reduced. It has