

smaller towns have ceased operations because of the competition of hydro-electric power, and where the scope of the operations did not encourage the installation of equipment for the recovery of by-products. Nevertheless, gas has its particular uses in the industrial field as well as for domestic purposes, and the statistics show that the industry is gaining ground annually. The coke industry of Canada is intimately connected with the iron and steel industry or dependent upon the demand of the non-ferrous smelting plants. Coke plants are maintained at Sydney, Hamilton and Sault Ste. Marie by the three principal iron and steel companies. In the western provinces, coke is made by the International Coal and Coke Company and the Crow's Nest Pass Company for sale chiefly to the Consolidated Mining and Smelting Company at Trail, B.C. The Granby Consolidated Mining, Smelting and Power Company manufactures coke at Anyox from Vancouver Island coal.

Other industries of a varied nature included in this group are the manufacture of asbestos products, the glass industry, the manufacture of abrasives, the preparation of ornamental and monumental stone and the bottling of aerated waters.

Chemicals.—Chemical industries, associated in many phases with the use of hydro-electric power, have recorded marked growth in Canada in recent years. Owing to Canada's great water power resources and in particular to the fact that many water powers are situated near tidal waters, there is an opportunity in this country for the expansion and establishment of new chemical industries. Electric refining, at first applied to copper only, is now being extended to all the metals, and the electric current is also employed in their extraction from the ores. The production of aluminium, of cyanamide, of new refractory materials and of graphite, have already created large industries. The fixation of nitrogen, with its many subsidiary industries, such as the manufacture of nitric acid, ammonium nitrate, explosives, etc., the reduction of magnesium and the production of innumerable chemical compounds, known at present only to the special trades requiring them, are now under commercial development. Noteworthy progress has been made in the output of calcium carbide, which can be readily marketed in countries dependent for their domestic manufacture on electrical energy derived from coal. Exports of this chemical, mainly to the United States, increased in value from \$161,000 in 1914 to \$2,261,000 in 1922. The development of cheap electrical power has contributed to the advance of industries using electro-thermic reactions, the intense heat which it is possible to develop by electrical means being an especially advantageous factor. The manufacture of chemicals during the war period represented enormous figures, and even in 1922 the output reached a total value of \$95,944,000. The products include commodities of such fundamental importance as fertilizers, calcium carbide, cyanamide, soap, paints, varnishes, wood distillates and so forth.

In certain well defined fields, the production of chemicals in Canada has attained world-trade importance; in many other lines, production in competition with imported chemicals is being carried on successfully, and latterly the manufacture of specific commodities for which there is a definite and continuous demand has proved an attractive field for small concerns. Several plants have been established, each of which specializes in the production of one or more of these necessities for the chemical trade. A study of the import statistics shows that many such opportunities still exist.

Financial and employment statistics for 1922 of each of the industries engaged in Canadian manufacturing are presented in Table 10.