

Another reason for the recent development of the electrical equipment industry is that its raw materials are being provided in increasing quantity in Canada by the simultaneous expansion of the non-ferrous smelting and refining industry. Due to the developments at Trail and Anyox in B.C., Sudbury in Ontario, and Rouyn and Arvida in Quebec, this industry has made great strides, and, at the time of writing, a new smelter is being built at Flin Flon in Manitoba, while the plants at Sudbury are being greatly enlarged. Indeed, the electrical equipment industry and the non-ferrous metals smelting and refining industry account in large measure for the fact that the production of manufactured commodities of the non-ferrous metals group has increased more rapidly in recent years than any other group.

The aluminium industry in America dates from 1890, when the first successful process was worked out for the economical extraction of the metal from its ores. The lightness and ductility of the metal, and the fact that it is not readily attacked by organic acids, air or water, together with its capacity for transmitting heat readily, soon brought it into favour as a material for kitchen utensils, and in this connection it has become well known. Large quantities of aluminium wire are now used for electric transmission lines and quantities are used in the manufacture of such apparatus as cream separator parts and other light machinery. Alloyed with magnesium, it possesses great tensile strength and finds extensive use. Aluminium bronzes, too, are widely used, and during the war great quantities were utilized in the manufacture of aeroplane engines and parts.

Another industry of some importance consisted of 99 firms engaged principally in the rolling, casting, and manufacturing of brass and copper, the principal products being castings and machinery fittings, brass steam fittings, plates and sheets, rods and wire cloth. The selling value of the products was \$24,054,657, while the materials were worth \$12,546,718.

**Non-Metallic Minerals.**—The gradual recovery in business conditions since 1921 is demonstrated by developments in the non-metallic mineral group. The recent expansion is accentuated by the growth of the petroleum-refining industry, which in 1927 produced nearly 37 p.c. of the gross value of the entire production of the group. The 23 plants were located with a view to economy of distribution, based on the greatest accessibility to the source of supply and the proximity of the markets. The refineries on the eastern and western coasts obtain their crude petroleum from South America, Mexico and the United States by tank steamers, bringing transportation costs to a minimum. Those situated in the central part of the Dominion are necessarily supplied by rail or pipeline. The more general use of the automobile has resulted in a continually expanding demand for gasoline and lubricating oils. The installation of oil-using equipment in industrial plants for generating power and in buildings of various kinds for heating purposes has also increased the consumption of fuel oil.

The illuminating and fuel gas industry of Canada is chiefly centred in the larger cities, especially in parts of the country where manufacturing predominates. Coal gas and carburetted water gas are the most important products, but pintsch gas is made at many divisional points along the railways to meet the demand for lighting purposes on passenger trains. Acetylene gas is used in several small towns where the size of the municipality is not sufficient to warrant a coal gas plant. The facility with which by-products, such as coke, tar and light oils, are turned out in connection with large-scale production, becomes an incentive to plant expansion, provided that a demand is assured by increasing population and industrial develop-