

ferro-manganese, accounted for a capital of \$109,446,529 and a gross production valued at \$72,231,995. There were, in 1929, no fewer than 1,169 establishments handling iron and steel products, aside from the numerous custom and repair shops engaged in re-conditioning iron and steel goods. The plants represented a capital of \$754,989,105 and had a gross output valued at \$738,012,980. A great deal of this output is represented by agricultural implements, for which there is a large domestic demand, by factory and railway equipment and commercial and passenger motor vehicles. The output of automobiles has increased rapidly in recent years, the total production in 1922 being valued at \$81,956,429, in 1925 at \$110,835,380, in 1926 at \$133,598,456 and in 1929 \$177,315,593, so that this industry has had in recent years a greater production than any other in the iron and steel group and in 1929 stood fourth in gross production among all the industries of Canada. Illustrating the importance of transportation in Canada's economic life, next in the iron and steel group to the manufacture of automobiles was that of railway rolling stock. This industry, although subject to rather wide fluctuations, has for many years held an important place in Canadian manufacture and in 1929 was eighth among all the industries of Canada with products valued at \$126,487,000.

**Non-Ferrous Metals.**—During 1929 there were 408 plants in Canada manufacturing products from metals other than iron and steel. Employees showed an increase from 18,222 in 1922 to 21,409 in 1923, 27,735 in 1925 and 39,867 in 1929.

One of the leading industries in this group in recent years has been the manufacture of electrical apparatus and supplies; this industry had in 1929 a gross production of \$113,796,002. The industry is showing rapid growth in keeping with the widely increasing development and utilization of hydro-electric energy in Canada. The development of cheap electric power has done much to popularize the use of electrical equipment for both domestic and industrial purposes, and the future demand for such apparatus will probably be limited only by the development of adequate power.

The non-ferrous smelting and refining industry has shown a marked expansion in recent years in keeping with discoveries and developments in the field of mining enterprise. Metallurgical operations have been enlarged at the great smelter at Trail, B.C., and in the Sudbury district of Ontario, while, in addition to the copper smelter at Anyox, B.C., the silver-cobalt plant at Deloro, Ont. and the aluminium plant at Shawinigan Falls already in operation, there have been established within the last decade new copper smelters at Flin Flon and Noranda, new copper refineries at Sudbury and Montreal, and the new aluminium plant at Arvida, on the Saguenay. As a result, there are now 12 non-ferrous metal smelting and refining plants in Canada, and the net production of the industry has increased from \$16,465,000 in 1922 to \$68,438,000 in 1929, while the gross value of the products of this industry has risen in the same period from \$23,637,000 to \$109,854,000.

Another industry of some importance consisted of 102 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, wire and wire cloth. The selling value of the products was \$36,115,581, while the materials used in the process of manufacture were worth \$21,118,038 and the net value of production was therefore about \$15,000,000.

**Non-Metallic Minerals.**—The recovery in business conditions from 1921 to 1929 is demonstrated by developments in the non-metallic mineral group. The recent expansion is accentuated by the growth of the petroleum products industry,