

Iron and Steel.—The primary production of iron and steel in Canada has always been handicapped by the fact that nowhere in Canada are workable deposits of coal and iron ore to be found in juxtaposition. The nearest approach is in Nova Scotia, where there is an abundant supply of coal, while iron ore is obtained from Newfoundland. In Central Canada, particularly in Ontario, where the secondary iron and steel industries are chiefly located, there are at present neither supplies of coal nor high-grade deposits of iron ore. There is a possibility, however, that high-grade bodies of ore may be found, and eventually the huge reserves now known to exist, though they require an unduly expensive smelting process, will become more valuable. From the manufacturing standpoint, conditions are much more favourable, as these areas are abundantly supplied with both hydro-electric power and the metals, such as nickel, chromium, molybdenum, etc., used in the manufacture of alloy steels, which form an increasingly large part of the output from modern steel works. Many plants now specialize in the large-scale production of special steels that depend for their successful utilization on the forging and heat-treating operations to which they are subjected.

Iron ore, which was imported largely from Newfoundland and the State of Minnesota, was treated in 1925 in 32 active furnaces and rolling mills, with a capital of \$82,593,940 and a gross production valued at \$35,337,685. There were, in 1925, no fewer than 1,075 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 \$567,912,477 and had a gross output valued at \$411,378,640. A great deal of this output is represented by agricultural implements, for which there is a large domestic demand, by factory 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 1923 at \$96,614,176, in 1924 at \$88,480,418, and in 1925 at \$110,835,380.

Non-Ferrous Metals.—During 1925 there were 378 plants in Canada manufacturing products from metals other than iron and steel. The aluminium, electric apparatus and lead, tin and zinc industries all showed increases over the previous year's production, but slightly offset by decreases in the brass and copper products, miscellaneous non-ferrous metal goods and precious metal products industries. Employment showed an increase from 18,222 in 1922 to 21,409 in 1923, 21,670 in 1924 and 27,735 in 1925. The statistics for 1925 include 5,104 employees in the smelting industry, not previously included among manufacturing industries.

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.