

The Controller has been responsible for setting up valuable machine-tool capacity in Canada. These plants are an asset to the country and will take care of the Dominion's requirements in the future. Meanwhile, the plants have supplied a substantial proportion of Canada's needs and, by the use of certain surplus capacity, substantial quantities of tools have been shipped to the United Kingdom, other parts of the Empire, the United States, and Russia.

In 1941, cutting tools and gauges came under the jurisdiction of the Controller, who set up new capacities to manufacture them. At the same time, he prohibited the exportation of any cutting tools until Canada's requirements were satisfied. On Nov. 14, 1941, another Crown Company, Cutting Tools Limited, later known as Cutting Tools and Gauges Limited, was formed to salvage and recondition worn-out cutting tools for use in war plants.

At the suggestion of the Controller, a Crown Company, known as Machinery Service Limited, was incorporated on Dec. 22, 1941, to overhaul and rebuild used machine tools, and to recondition equipment for contractors engaged in the production of war supplies. It is manned largely by skilled tool markers released from the purpore from refugee internment camps.

**Non-ferrous Metals.**—Canada is the greatest producer of nickel, asbestos, platinum and radium, the second greatest producer of gold, aluminum, mercury and molybdenum, the third greatest producer of copper, zinc, lead, silver and arsenic, and the fourth greatest producer of magnesium. Details of production will be found in Chapter XII, pp. 310-317. On the basis of mining operations a large metal-processing and -fabricating industry has existed in Canada for some time, and this has been greatly expanded since the War began. Certain important metals whose production is in the nature of manufacturing and not mining operations are aluminum and brass.

The aluminum industry in Canada provides what is possibly the most spectacular story of wartime expansion of any industry in any country. Aluminum production in Canada is a manufacturing industry; the mining operations to procure the raw materials, bauxite and cryolite, are conducted in British Guiana, Greenland and elsewhere, Canada being the site of the refining and processing operations because of the availability of hydro-electric power. In 1943 about 25 p.c. of all power consumed in Canada was used in this one industry, and the industry itself has been responsible for the development of much of the power it consumes.

Aluminum production over the past six years has been as follows: 1939, 163,900,000 lb.; 1940, 215,000,000 lb.; 1941, 424,600,000 lb.; 1942, 671,700,000 lb.; 1943, 985,300,000 lb.; 1944, 936,000,000 lb. (estimated).

To provide the enormous quantities of brass for cartridge cases for both gun and small-arms ammunition, and for other purposes, two Government-owned brass mills were built and went into operation in 1941. Erected at a cost of nearly \$10,000,000, these mills, one in Montreal East and the other in New Toronto, have helped to boost the output of this all-important alloy to a rate ten times greater than in 1939. The existing privately owned brass mills, and a small pre-war government plant, also contributed largely to this output.

**Metals Controls.**—On July 15, 1940, a Metals Controller was appointed in the Department of Munitions and Supply. His duties were to regulate the supply, distribution and use of non-ferrous metals, industrial materials and common