

**Production Programs.**—A new stage in the development of the Canadian aircraft industry was reached in the autumn of 1951 with the delivery to the Royal Canadian Air Force of the first pre-production model of the CF-100 all-weather jet fighter. This is the first all-Canadian jet aircraft, the airframe and the Orenda engines that power it being designed and produced in Canada. Deliveries under the main production contract began in 1952 and the aircraft is now in squadron service. The F-86E Sabre jet fighter, of United States design, has been in volume production since the autumn of 1951 and a number have gone to the United Kingdom and to the United States. An improved model of this aircraft is now being produced, powered by the Orenda engine; the earlier version used engines purchased from the United States.

The Harvard primary trainer aircraft, also of United States design, began to come off the Canadian production line during the autumn of 1951. Engines were at first imported from the United States, but were later produced in a new plant near Montreal, Que., which also supplies spare engines for the large number of Harvards now flying in many parts of the world. The Beaver aircraft is being manufactured to meet large United States orders as well as domestic civilian requirements. This is a Canadian-designed aircraft for general-purpose use in rugged territory. The Otter, a larger aircraft developed by the same company, has also proved very successful and a number of them have been purchased for the RCAF. Full-scale production began during 1952 of the T33-A Shooting Star jet trainer for the RCAF.

A number of aircraft stored since World War II have been reconditioned and equipped to serve new purposes. Some bombers were converted for use by the Maritime squadrons of the RCAF and other aircraft were converted for training purposes.

The above development required a considerable expansion in the capacity of the Canadian aircraft industry, much of the new plant and equipment required being provided by the Government as capital assistance.

Canada has built up an aero-engine industry as well as expanded the output of airframes. The Orenda engine, entirely of Canadian design, was the first jet engine to be built in Canada. The factory was owned by the Crown and operated by the firm that developed the engine, but was in 1953 sold to that firm. The plant supplying radial engines for the Harvard is Crown-owned. Another plant has been provided for the overhaul of jet engines. In addition, the production of components for jet engines, such as fuel systems, magnesium castings, and blades for compressors and turbines, has been introduced into Canada in plants established with government aid. Further development of Canada's aero-engine capacity will take place when the jet engines now being imported from the United Kingdom begin to be assembled in Canada.

Extension of industrial capacity is also taking place in the field of aircraft instruments. Artificial horizons, formerly imported from the United Kingdom, are now being produced in this country, as are a number of instruments formerly imported from the United States. Engine and instrument bearings are also now being produced in Canada.

Electronic devices are very important in defence, especially in the field of communication by radio, in the interception of aircraft and ships by radar, in fire control and in the exploding of missiles near their target. The Canadian electronics