ventional type aircraft would really make them less dependent on Government subsidy than does the DC-3 in their particular type of operation.

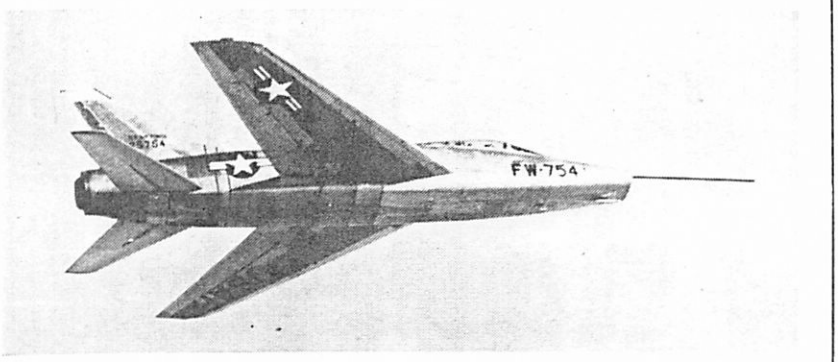
4. *Because* the rest of the world market—of about the same size as the American market—is divided up into such a great number of customers that it is impossible to expect a large enough initial quantity on which to base the development and production of a new plane.

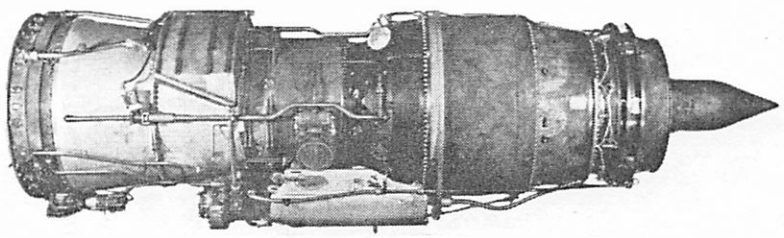
5. *Because* military commitments have kept many of the aircraft manufacturers from devoting time and interest to this matter during the Korean war period, which would otherwise have been the right time to start a DC-3 replacement project.

Said Mr. Larsson: "If we conclude from the foregoing that as a private venture we see little possibility of entering into a DC-3 replacement project, this picture would of course change entirely should government or military sponsorship become available.

"With, for example, an order for 75 military cargo CL-21's to break the ice, it would be a matter of course to run off a couple of hundred more for commercial purposes which would be quite reasonable in price at the tail end of the production line.

"It could be that therein lies the only solution to a DC-3 Replacement."





SUPER SABRE: Now in full production is the North American F-100 Super Sabre, said to be the first operational airplane to be capable of supersonic speeds in level flight. With a span of 36 feet and a length of 45 feet (45 degrees sweep on the wings), the F-100 has a gross weight of approximately 27,000 lbs. Power is by the Pratt & Whitney J-57 turbojet (below) with afterburner. The J-57 is claimed by its makers to be the first in the world to be rated in the 10,000 lb. th. class.

Vibratory Gyroscope

A new and different kind of gyroscope that imparts gyroscopic action by means of a vibrating tuning fork-like device instead of a spinning wheel, has been revealed by Sperry Gyroscope Company of Great Neck, N.Y., in conjunction with the U.S. Navy's Bureau of Aeronautics.

Trade-marked the "Gyrotron", the new instrument, according to the Bureau, is analogous to the "halteres" or gyratory sense organs found on the common house fly. These are club-shaped vibrating rods behind the fly's wings which give the fly his sense of balance. They have functioned as gyro flight instruments on certain insects for more than 200 million years. In reducing this principle to practice, Sperry engineers studied slow-motion pictures of insects in flight.

The fundamental principle of the vibratory gyroscope indicates a promising range of applications, according to Sperry. Its development, however, is still in the experimental stage and it may be some time before it is ready for production, it is emphasized.

Experimental vibratory gyroscopes, until recently a classified project at Sperry for the USN, consist of small electrically driven tuning forks which are sensitive to extremely small as well as large turning motions. The experimental units can measure rates as slow as the earth's rotation, to more than 100 rpm.

A new automatic pilot based on experimental vibratory gyroscopes is currently undergoing flight experiments in a USN airplane at the Sperry flight research centre on Long Island.

Contracts Awarded

Contractors awarded business in excess of $10,000 by the Department of Defence Production during the period September 16 to October 15, include the following. The list does not include orders placed by the Department outside Canada or with other agencies, and increases in orders placed earlier—nor do orders classified as secret appear here.

(Names appearing in bold face are current *Aircraft* advertisers.)

Abercorn Aero Ltd., Montreal, $36,480 for life jackets.

British American Oil Co. Ltd., Toronto, $31,724 for aviation turbine fuel

Capital Metal Works, Ottawa, $17,420 for aerial delivery cargo containers.

Dominion Rubber Co. Ltd., Montreal $10,000 for repair and overhaul of rubber fuel cells during the fiscal year.

Goodyear Tire & Rubber Co. of Canada Ltd., New Toronto, Ont., $77,672 for aircraft wheel parts.

Imperial Oil Limited, Ottawa, $31,300 for aviation gasoline.

Irvin Air Chute Ltd., Fort Erie, Ont., $127,302 for parachute equipment.

A. V. Roe Canada Limited, Toronto, $590,000 for mobile training unit.

Sperry Gyroscope Co. of Canada Ltd., $164,077 for aircraft instruments.

Canadian Aviation Electronics Ltd., Montreal, $233,108 for installation of radio equipment.

Canadian Diaphlex Ltd., Toronto, $109,378 for communication equipment.

Canadian Pratt & Whitney Aircraft Co. Ltd., Longueuil, P.Q., $107,455 for aircraft parts.

Canadian Pratt & Whitney Aircraft Co. Ltd., $120,312 for conversion kits.

Field Aviation Co. Ltd., Oshawa, Ont., $12,574 for aircraft instruments.

Four Wheel Drive Auto Co. Ltd., Kitchener, Ont., $643,040 for crash trucks.

Walter Kidde & Co. of Canada Ltd., Montreal, $15,322 for aircraft parts.

A. V. Roe Canada Limited, Toronto, $82,559 for airframe spares.

Rolls-Royce of Canada Limited, Montreal, $50,000 for aircraft engine spares and tools.

Ross-Smith Co. Ltd., Montreal, $50,000 for modification of target aerial flags.

Spartan Air Services Ltd., Ottawa, $10,000 for helicopter spares.