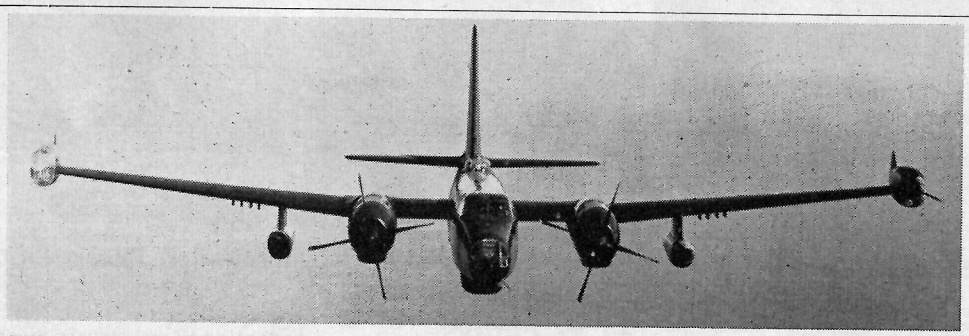
The NEWS

APRIL CANADIAN AVIATION 1954

CANADAIR GETS NEW SABRE ORDER



THE RCAF NEPTUNE AIRCRAFT, for use by its Maritime squadrons, is shown. The Neptune Lockheed is a twin-engine, medium-range, piston-driven aircraft in use for some time by the U. S. Navy and also in use as a maritime reconnaissance aircraft by the RAF.

The first Neptunes are expected to be taken over by the RCAF toward the end of 1954 or early in 1955. RCAF maritime requirements call for two new types of aircraft to replace the Lancasters now used by the Squadrons, and to meet needs arising from the increasing importance of this type of air operation, and the development of new airborne weapons. These requirements call for both an aircraft of the Neptune type, and for a larger aircraft with a greater carrying capacity, to be met by the Canadair Britannia.

Initially, the Neptunes will likely supplement the Lancasters now in maritime service, rather than replace them completely.

Following are statistics on the Neptune:

Wing span: 104 feet; length: 91½ feet; height: 29 feet, cruising speed: 225 mph (approx.); all-up weight: 72,000 lbs.; range: 4,700 miles; power: two Wright turbo-cyclone compounded engines of 3,500 hp, each (at take-off). Armament: (a) Two pairs of 20-mm cannon (in nose and tail turret). (b) Two 0.5-mm machine guns in dorsal turret. (c) Sixteen 5-inch rockets. Bomb load: 4,800 lbs.

An order for the manufacture of over 100 additional Sabre fighters for the RCAF has been awarded to Canadair. The new order, together with current backlog, is estimated to be enough to keep the company's Sabre production line rolling at full speed for the next two years.

Planes under the new order may be armed with rockets and air-to-air guided missiles now being developed in Canada. They will be powered with Orenda jet engines built by Avro Canada.

The company soon will have produced its 1,000th Sabre. Four fully operational Canadair-made Sabre wings are now in Europe as part of the RCAF's NATO commitment.

It is understood that the new contract will not mean the recall of any of the 1,500 employees laid off following the loss of the T-36 contract. The main effect will be to prolong present Sabre manufacturing.

The company's plans to go ahead with the manufacture of a commercial version of the cancelled T36 USAF transport for executive use have now come to a halt. The civilian aircraft was to have been named the CL-42 and to have cost around $550,000. Powered by two Pratt & Whitney engines with a seating capacity of 12 and cargo space of 40 cu. ft., the plane was calculated to cost $237 an hour to operate.

However the company is still considering designing a twin-engined propeller-driven aircraft as a successor to the DC-3 to fill the needs of feeder passenger and cargo airlines. This is planned to be a high-wing pressurized plane with a gross weight of 32,000 lb. and capacity for 32 passengers and a crew of three. It would sell for about $450,000. The company is reported to have completed a world-wide sales survey and market assessment.

RCAF RETIRES "MIGHTY ANSON"

The last of the "old faithful" Avro Anson aircraft that played such a vital part in the British Commonwealth Air Training Plan are being retired from RCAF service.

The RCAF's last four Ansons have been turned over to Crown Assets Disposal Corporation.

The Plan's success was in no small way due to this well-tried aircraft, well suited in its flying qualities and its equipment to all branches of instructional work. The Anson was also used for photo survey and light transport and communications purposes, as well as for certain airborne research and testing operations.

The post-war aircrew training program called for better equipped aircraft, and for some years the Anson has been a rare sight in RCAF flying operations. These final four Ansons were used until recently in the Ottawa and Arnprior, Ont., area for testing and developing airborne equipment in collaboration with various governmental departments and agencies, and aircraft firms. They are being replaced by twin-engine Expeditors.

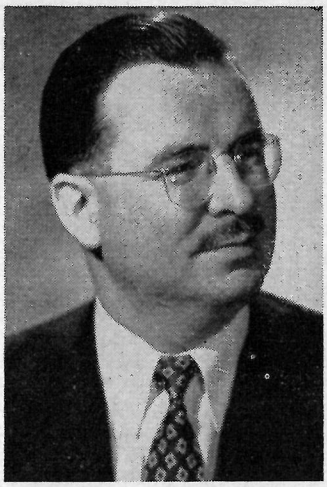
Of British design, the Anson first flew in 1935, and went into squadron service with the RAF the following year. Originally intended for coastal command operations by the RAF, the Anson did many other jobs, including transport, photo survey, crop dusting and even fighting.

While not reflecting the intended purpose of the Anson, a notable engagement between three RAF Coastal Command Ansons and nine Messerschmidt 109 fighters took place over the English Channel in June, 1940. The Ansons succeeded in shooting down two of the enemy and damaging a third.

One thousand five hundred completely British-built Ansons were shipped during the war to Canada, but the plan to assemble additional aircraft in this country from British parts was changed after Dunkirk, and a decision was made to manufacture the aircraft here. A crown company, Federal Aircraft Ltd., undertook all phases of development and administration. With exception of certain development work and some fuselage manufacture in a plant operated by Federal Aircraft Ltd. direct, the manufacture of all parts and assembly was carried out by large-scale subcontracting. Assembly was done by Canadian Car and Foundry Co. Ltd., Amherst, N.S.; National Steel Car Corporation Ltd., Toronto; de Havilland Aircraft of Canada Ltd., Toronto; MacDonald Bros., Winnipeg; and Ottawa Car and Aircraft Ltd., Ottawa.

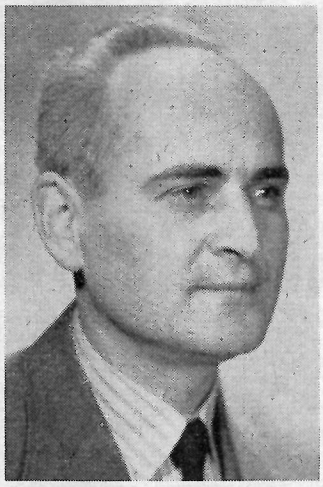
In all, 2,872 Ansons were produced in Canada. Of these 1,822 were Anson II's, equipped with the American-built Jacobs engine in place of the Cheetah's used in the British-built Anson.

TCA ANNOUNCES EXECUTIVE APPOINTMENTS



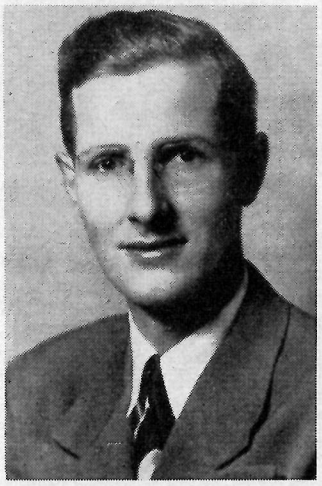
J. B. McCORMICK
Passenger Sales Development Supervisor.

J. G. GAFFIKIN
Traffic Representative, California



W. FABRO
Director of Passenger Services.

J. L. McLELLAN
Director of Station Service.



R. A. KOLB
Passenger Sales Supervisor, Montreal.

Purolator Filter

Puralator Products (Canada) Limited, of Toronto, has announced its high-pressure filter, claimed to be the only Canadian aviation oil filter made to A N specifications, has been chosen for the Rolls Royce Nene engines powering the Canadair-made T33 Silver Stars.

Bob Sangster

As part of Technical Enterprises Limited development program, R. (Bob) Sangster has been appointed Chief Electronic's Engineer.

Mr. Sangster is a graduate of the University of Toronto in Electrical Engineering and a member of the Association of Professional Engineers of Ontario.

For the past five years Mr. Sangster has been with the Hydro Electric Power Commission of Ontario in the Communication's Department.

Standco Canada Starts

A wholly owned subsidiary, Standco Canada, Ltd., has been created by Standard Pressed Steel Co., an American firm, to supply industrial Ontario and Quebec Provinces with precision metal fasteners.

An increasing market produced by Canada's industrial growth dictated the new move, SPS said.

Headquarters for Standco Canada is in a new brick and masonry building at 193 Bartley Drive, Toronto. There the company has 7,500 sq. ft. of leased space, 6,400 of it for storage, the rest in offices. There are loading platforms for tractor-trailers and for pick-up trucks.

JAMES P. PRICE
General Manager

General manager of the Toronto subsidiary is Canadian-born James P. Price, also a vice-president.

Flying Club Leases For Hangar Space To Be Revised

The D.O.T. has recently discussed hangar accommodation and requirements of flying clubs with the executives of the RCFCA in the light of increased demand for space on aerodromes across Canada. These discussions have resulted in a decision whereby all flying club leases are being reviewed on site and club leases revised where necessary.

During the last couple of years hangar space on the majority of aerodromes has become critical and more and more pressure has been put on the clubs to sub-lease their excess space for aircraft storage and repair shops.

In view of this increased demand the D.O.T. has decided to review each club's lease in the light of the local requirements and, where deemed advisable, to limit the original lease to that space the club requires for its flying training operations. There is also a provision that the club may lease the excess space from the D.O.T., at standard rates, to provide storage for privately owned aircraft or for such other uses as are approved by the D.O.T.

The clubs have voluntarily waived the six months' termination clause in their leases and J. K. R. Main, assistant controller of Civil Aviation, is presently touring club sites and negotiating with club directorates for new agreements mutually satisfactory to both

Grounded Pilot's Plan

The Canadian Airline Pilots' Association is considering adoption of an insurance plan to provide pilots, permanently grounded because of physical disability, $25,000. It will likely be adopted in May.

Capt. Harvey W. Watt, of Eastern Airlines, who helped establish a similar plan for pilots of that airline, has outlined the proposal. It would affect about 850 Canadian pilots of Trans-Canada Air Lines, Canadian Pacific Airlines and Queen Charlotte Air Lines.

CF-100 Flight Simulator

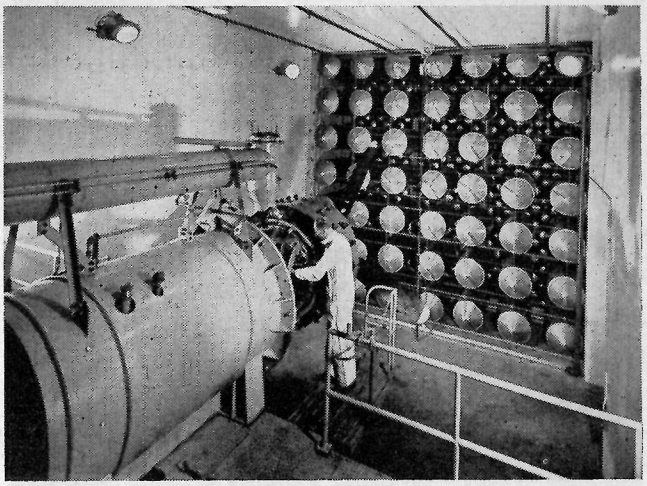
Production of the first flight simulator ever produced in Canada is nearing completion in the Montreal plant of Canadian Aviation Electronics Ltd., it is reported.

It will be the prototype CF-100 Mark IV simulator which will train RCAF aircrew in the operation of the CF-100, all-weather jet fighter. The firm has also undertaken to produce five production models.

"This is the first time construction of a simulator has been tried in this country and it is one of the most complex cases," said Dr. F. H. Quinn, head of the company's research and development department. "Work is getting along."

The project began October 1, 1952. When completed, the simulators will be used to train experienced jet pilots in the operation of the CF-100, probably at operational bases like St. Hubert's or North Bay.

"NEW LOOK" SAID NEEDED IN AIR DEFENSES



A BRISTOL CENTAURUS ENGINE, capable of developing 2,600 h.p., being rigged for testing in the new aircraft engine test house of Bristol Aeroplane Engines (Eastern) Limited, Montreal North. The unique sound absorbing Py-Dee cylinders which make up the front and back walls of the test house absorb so much of the sound of the engine that it can scarcely be noticed 100 yards away.

BRISTOL'S NEW TEST CELL

A $500,000 test house, capable of handling the largest type of propturbo or reciprocating airplane engine, has been opened at the Montreal North plant of Bristol Aeroplane Engines (Eastern) Limited today.

The test house, largest and first of its kind in Canada, was designed with a particular view to eliminating the noise factor commonly present in less costly projects of a similar nature and to test the new Curtis Wright engines being supplied to TCA for installation in their new Super Constellations.

An engine which normally can be heard for many miles can barely be heard 100 yards away when on test in Bristol's especially designed structure.

Because an aero engine consumes a vast amount of air, one of the major problems of construction was the question of letting the air in without the noise getting out. This was solved by using 1,780 spaced Pye-Dee tubes which range from 9 in. to 30 in. in diameter and 8 ft. to 8 ft. 7 in. in length.

Sound enters the tubes through the perforated outer surface into absorbent material which fills them. This material has a great multiplicity of small openings and voids which in effect bounce the sound from wall to wall of these voids. The sound energy thus gets tired and eventually weakly flows from one tube into another and another until finally the high and low frequency sound waves have been straightened out and virtually nullified.

Perforated aluminum sheet is used for the outer shell of all the Py-Dee units which makes them easy to clean and handle, and impervious to corrosion. The interior of the shell, depending on the sound absorption problems involved, is generally filled with long fibreglas of varying densities.

Both the acoustical treatment and installation facilities of the engine for testing are quite different from any used before. The unit, with minor alterations, can handle turbo props and is expected to take care of well over 5,000 hp.

The test stand and its accessibility is a vast improvement over the bulky, awkward structures presently in use elsewhere.

Every practical safety precaution, gained over many years' experience in the operation of aircraft engine test cells, has been incorporated in this test cell and its equipment. Careful design has eliminated practically every danger by denying access to the control room of all fuel or oil fumes.

A dynamometer test cell and control room have also been incorporated in the present structure

Advocating a new look at Canada's defense program, Crawford Gordon, Jr., president and general manager of A. V. Roe Canada Ltd., builders of the CF-100 bomber interceptor and Orenda turbo jet engine for the Sabre, as well, last month told the Toronto Board of Trade that Russia's concentration on bombers "is an ominous change in emphasis." He said it "constitutes a far different and more direct threat to our collective security than existed heretofore."

Mr. Gordon listed the basic component of Canada's "key to survival" as follows:

"First: Uninterrupted program of defense re-equipment.

"Second: Establishment of a strong retaliatory bomber force, in co-operation with our Allies.

"Third: Establishment of an effective civil defense program. The four requisites for an effective program are: a) adequate supply of equipment, both training and operational; b) provision of adequate funds; c) necessary legislation giving civil defense status and authority; d) unqualified moral support by all elected representatives of government, no matter what the level — federal, provincial or municipal. Given these requisites, those closely associated with civil defense say the so-called lethargy on the part of the public will be replaced with adequate community response.

"Fourth: Adopt a 'new look' in Canada's defense mobilization. A revised program should be geared for the long pull, not a year-to-year, stop-and-go policy.

"Fifth: Exert the greatest possible effort toward standardization of weapons. Wherever possible the western world should choose the most outstanding development for mass production in whatever country or countries may seem most desirable.

"Sixth: Continuous research and development to ensure technical superiority. The knowledge that the Russians had the bomb gave a sudden and gigantic impetus to the research and development program of the free world. Vast programs were launched for offensive and defensive techniques. Studies are going on right now regarding aircraft made completely of titanium. We are also thinking of engines with a large proportion of this wonder-metal whose properties are not yet fully determined. We in Canada have already probed the transonic and supersonic and now we are engaged on completely supersonic projects. We are searching for new materials, new fuels, new control devices, new aerodynamic shapes and configurations. The industry's forward thinkers and planners are even now looking at long-range plans which have to visualize the day when the pilot and crew will be virtually a thing of the past, at least as far as certain military aircraft are concerned.

"This vast research and development program is being conducted here and elsewhere by a combination of government, industry and science. This process must be maintained. As weapons pass from design to production stages, design engineers must immediately conceive and lay out still better weapons. The most economical program of research and development is one of continuous effort."

Air Defense Budget

New aircraft and engines constitute the biggest item on Canada's defense budget of about $850 millions, representing $395 millions for the RCAF and $23.5 millions for the Royal Canadian Navy. This total budget is substantially more than is being spent this year, estimated now to be about $780 millions.

The estimates for this year's plane costs were $429 millions for the Air Force and $1.5 millions for the Navy, but actual expenditure probably will not be much above $400 millions. One of the biggest unexpected savings was on the cost of the T33 jet trainer, being manufactured at Canadair.

Cost of CF-100's and Orendas from Avro Canada is expected to go up next year. Canadair will be doing some work on its order to adapt the Britannia for maritime reconnaissance, but it will receive less from its Sabres as production slows down. The de Havilland order for Grumman S2F anti-submarine planes will start in the next fiscal year.