



ANOTHER BELL: Model depicts the new Bell XH-40, now being developed by Bell Aircraft Corporation for the U.S. Army. To be powered by a new gas turbine engine, the Lycoming XT-53, the XH-40 is being designed primarily as a front line evacuation and instrument training aircraft. The new machine has a design cruising speed of over 100 knots and can carry more than 800 pounds of cargo. It is said to be somewhat larger than the 47 series machines. In its helicopter version, the new Lycoming engine is rated at 825 hp for military power and 770 hp for maximum continuous operation. XH-40 was winner of design competition in which all major helicopter companies participated.

his father. He succeeds Squadron Leader Colin E. Ettles, 32, who has been transferred to 14 Operational Wing headquarters in Toronto. S/L Curtis, a graduate of Royal Roads, Victoria, B.C., joined the RCAF Auxiliary in 1948.

- Air Commodore R. C. Ripley, Assistant Chief of Staff for Plans and Policy with Allied Air Forces Central Europe, has been selected to attend the 1956 course at the Imperial Defense College, England. Prior to his AAFCE appointment, A/C Ripley was Air Officer Commanding, Air Transport Command, with headquarters at Lachine, Que.

Three More Squadrons

The RCAF has announced the formation of three more CF-100 all-weather fighter squadrons, bringing to seven the number of such squadrons whose existence has been officially confirmed by AFHQ. The original planned total for regular CF-100 squadrons was nine, but this is expected to be raised as a result of a decision not to equip auxiliary squadrons with aircraft of this type.

The three CF-100 squadrons referred to in this most recent announcement are 440 and 432, formed at RCAF Station Bagotville, P.Q., late in 1953 and 1954 respectively, and 433, formed at the end of last year at RCAF Station Cold Lake, Alberta.

Commanding officer of 440 Squadron, which flew during World War II as a fighter-bomber unit, is Wing

Commander V. B. Carson. No. 432 Squadron operated during the War as a heavy bomber unit and is now commanded by Squadron Leader L. A. Bolin. The third squadron, 433, also operated as a heavy bomber unit during the last war. It is commanded by Squadron Leader Kenneth C. Mason.

AFC to F/O S. E. Burrows

The award of the Air Force Cross to Flying Officer Sydney E. Burrows, 25, has been announced by AFHQ. The award was made for "extreme courage and devotion to duty" during a jet flying accident in Germany last September, when F/O Burrows was stationed with the RCAF's Air Division in Europe. He is at present stationed at RCAF Station Rockcliffe.

The accident occurred as a four-aircraft formation of Sabres was returning to base at Baden-Soelingen. About 20 miles from base, a bird struck and shattered the clearview canopy of F/O Burrows' aircraft. Pieces of shattered canopy were embedded in his face and left eye. Partially blinded, he maintained control of the aircraft and gave the international distress call. To give sufficient vision, he tore off his helmet to clear his face and eyes but was then without radio communication.

The section leader, on determining the emergency, assigned one of the pilots in the formation to lead F/O Burrows to base. Although losing blood, suffering from shock and pain, and

almost completely blinded, he safely executed a wheels-down landing on the airfield. He then taxied his aircraft clear of the runway to enable the remainder of the formation to land. He was lifted from his aircraft and taken to the station hospital for emergency treatment.

Infrastructure Rep

Air Commodore H. B. Long, OBE, has been named Canadian representative on the Infrastructure Airfields Section in the NATO Secretariat at Paris, France. The appointment is now effective. A/C Long succeeds Group Captain R. B. Whiting, MBE, who has been transferred to a post with the department of the Air Member for Technical Services, Ottawa.

A/C Long has been closely connected with the RCAF's construction engineering activities throughout his Air Force career, which began in 1940. Most recently he has been Chief of Construction Engineering, in which capacity he was directly responsible for the conception and administration of the RCAF's huge \$400,000,000 building construction program that is now practically completed. He is credited with conceiving the idea of using the cantilever design in the construction of RCAF hangers, and a number of hangars of this type — the largest of their kind ever built — are now in use.

He was also responsible to a large degree for the initial construction planning of the Mid-Canada Line.

RCN Inventor

A Canadian seaman on exchange duty with the U.S. Navy's Air Anti-Submarine Squadron 26 at Norfolk, Va., Kerry Philip Briard, 21, of St. Catharines, has solved an ordnance problem with the S2F Sentinel aircraft.

The S2F carries three rocket projectiles on each wing. A "pigtail wire" connects the propelling charge of the rocket motor to the electrical circuit of the aircraft. The wire is supposed to break away when the rocket fires. Frequently, it hasn't done so, which means that the igniter receptacle shears off and the pigtail plug shatters.

Briard, one of a dozen RCN personnel who joined VS-26 in May to become familiar with the operation and maintenance of the S2F, designed a wirecutter that assures that the pigtail wire breaks cleanly.

try to get the answer as far as you can before launching upon production, because these are extremely costly projects to develop."

Marconi Mission

A stubby, 140-foot freighter, carrying 24 engineers and technicians of the Canadian Marconi Co.'s Special Services Division, is plowing its way to isolated sub-polar stations of the U.S. Air Force in Newfoundland, Labrador and Baffinland.

for drafting, product engineering, publications, electronics engineering and a new environmental laboratory. Included are:

Vibration equipment, for both horizontal and vertical shake tests; altitude chambers, to determine performance at altitudes up to 100,000 ft. at temperature ranges from -100° F. to 300° F.; humidity chambers, to determine performance in relative humidities from 20 to 98 per cent; shock testing equipment; wind tunnel,

of the industry's floor space. And if efficient management was provided for, he did not think the interests of his department would be prejudiced.

As for the creation of a monopoly, there is not much competition in the industry anyway, except for a race to reduce production costs, the minister said.

Pump Dealers

New York Air Brake Co. has appointed Aviation Electric Ltd. of Montreal and Standard Aero Engine Ltd. of Winnipeg as Canadian representatives for Stratopower pumps manufactured by the company's Watertown division.

Stratopower constant and variable delivery type aircraft hydraulic pumps range from capacities of one quarter of a gallon per minute to 10 gallons per minute at the nominal speed of 1,500 r.p.m. Maximum continuous operating speed for most models is 3,750 r.p.m.

Best Customer

Canada last year became the U.S. aircraft industry's largest foreign customer, according to the Aircraft Industries Association. She took delivery of nine Lockheed Constellations, valued at \$15,400,000, for Trans-Canada Air Lines, and 191 smaller aircraft of various types, valued at \$1,800,000.

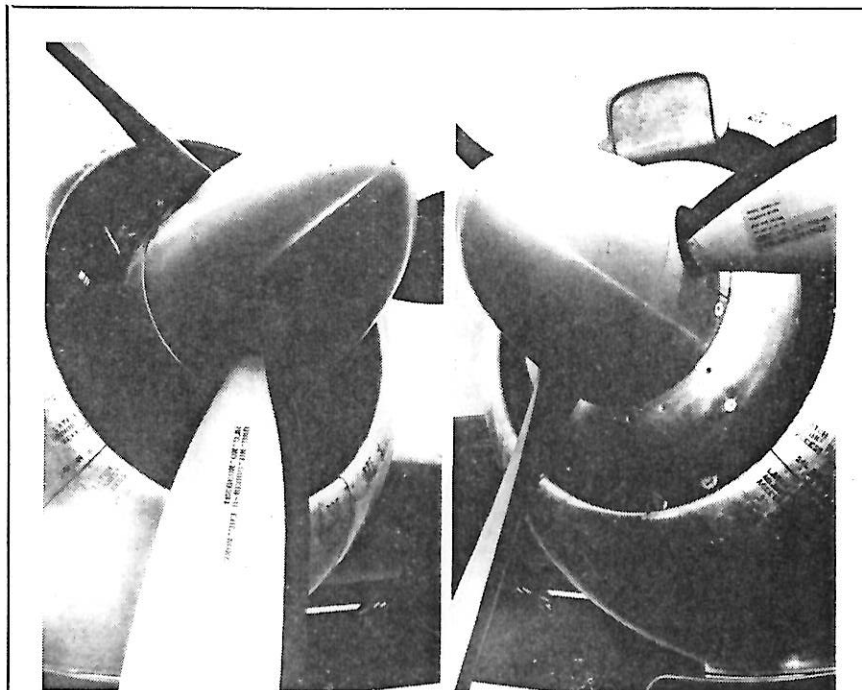
For the previous six years, The Netherlands ranked as the U.S. industry's top export buyer.

Total export volume was \$618,900,000 — \$260,000,000 under the record year of 1953, but three times the total volume for all the years prior to the Second World War. Britain's 1954 aircraft exports amounted to \$157,000,000.

The bulk of the 1954 export sales, \$497,000,000 worth, was in military items. The remainder, including 112 commercial transports worth \$96,000,000, was sold to civil interests in 79 countries.

Antarctic Beaver

A Toronto-built de Havilland Beaver, wearing the insignia of the Royal Australian Air Force, is to accompany the 1955 Australian Antarctic Expedition, which departs late this year aboard the vessel Kista Dan. For 12 months the expedition will make its headquarters at Mawson.



SCOOPING IT UP: New improvements on Lockheed Super Constellations are redesigned air scoops (top of nacelle in right picture) which are said to add nearly 1,000 ft. of critical altitude at max. cruise power settings, and new propeller afterbodies, called "dishpans", which increase cruise speeds by 2 mph. For comparison, old nacelle is shown at left. New scoop increases air pressure available at the carburetors by eliminating the more complicated air channel used previously. An alternate, sheltered source of air is located under the cowlings. Prop afterbodies increase speed by reducing drag without affecting cooling.

The ship is a floating electronics and diesel repair depot; her mission is the annual preventive maintenance call to the North East Air Command's far-flung radar stations. Routine repairs and adjustments are done on the spot. Equipment requiring major overhaul will be replaced and returned to the Marconi repair base at Pepperell, Nfld.

Canadian Marconi's Special Services Division has been responsible for the installation and maintenance of various radar warning systems in Canada.

ARL Expansion

PSC Applied Research Ltd. of Toronto announces extension of its facilities to provide enlarged quarters

for speeds up to 200 mph., with a working cross-section of 12" x 12"; physical testing equipment, for analyzing performance on switches, motors, relays, etc.

Avro Monopoly?

The question was raised recently in the House of Commons by J. M. Macdonnell (PC, Toronto-Greenwood) of whether a near-monopoly was threatened in the aircraft production field by the offer of Avro Canada Ltd. to purchase Canadian Car and Foundry Co. Ltd.

Defense Minister Howe replied that the offer was a surprise to him, but that if a merger was completed it would involve less than 50 per cent