

Technical Manpower

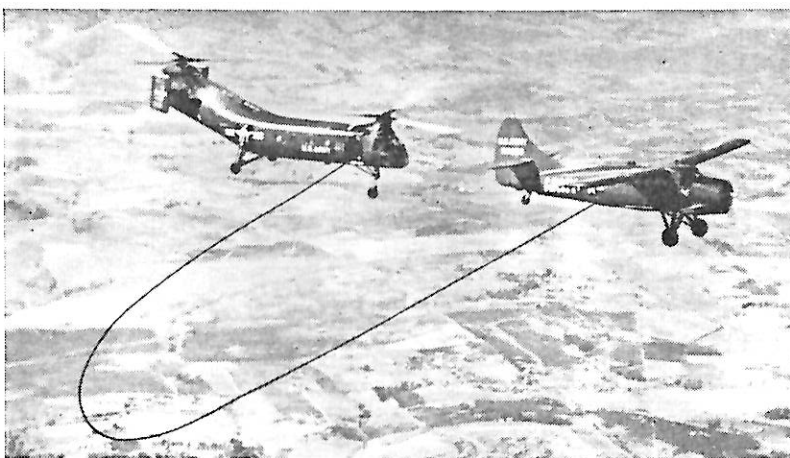
By 1980 Canada will have to quadruple today's force of engineers and scientists and increase by 10 times the number of technicians. To meet this problem \$1,750,000,000 will be required to provide additional university facilities. These were a few of the facts presented at the Engineering Manpower Conference held in September at St. Andrew's-by-the-Sea, N.B.

As the three-day conference between Canada's leaders in industry, education, government, professional societies and organized labor drew to a close, the members approved \$100,000 for this year, to establish two organizations which will try to deal with Canada's

educational problems.

The first organization to gain the approval of the 110 delegates was the Industrial Foundation on Education. For this A. V. Roe Canada Ltd., which sponsored the joint meeting, pledged \$53,000 to cover the first year's expenses. This foundation is primarily designed as a fact finding and study group, aimed at finding ways and means of meeting the growing need for engineers and scientists. Crawford Gordon, Jr., president & general manager of A. V. Roe Canada, was named first chairman, and has appointed Stanley H. Deeks, chief of engineering administration, Orenda Engines, to head the organization.

A NEW ROLE FOR THE OTTER



With the aid of flight refueling, a U.S. Army helicopter made a 2,610 mile non-stop transcontinental flight across the U.S. during August. The helicopter which made the 32-hour flight was a Vertol H-21C, while the tanker aircraft was an Army de Havilland U-1A Otter.

Purpose of the flight was to prove the practicability of ferrying helicopters as much as 3,000 miles, to increase the striking power and the mobility of the ground forces.

During the course of the transcontinental flight, flight refuelings were carried out over Wink, Texas; between Big Springs and Abilene, Texas; Maxwell AFB, Alabama, and Fort Benning, Georgia.

The first successful in-flight refueling of a helicopter was carried out at the U.S. Army base at Fort Rucker, Alabama, just a few days before the transcontinental flight was made. Previously, experimental dry runs involving the hook-up of refueling equipment had been carried out, but no actual transfer of fuel was made. In all cases, the types of aircraft used were the same as those which

participated in the transcontinental flight.

Equipment used for the in-flight refueling includes 200 feet of aviation fuel hose reeled out from the Otter tanker. This and other equipment involved was supplied by Flight Refueling Inc., Baltimore, Maryland.

The method used for the link-up consists of the H-21C flying behind and slightly to one side of the Otter tanker, while the hose is trailed from the latter with the support of a small parachute. The helicopter changes position, flying in close enough to the lower end of the hose to enable crew members to reach the hose with a grappling hook and pull it in. The hose is connected with the helicopter fuel tank manually.

Crew members of the H-21C were Major Rupert D. Gaddis, Captain James E. Bowman (chief pilot), SP2 Robert M. Price, Joseph E. Givens, and Pfc. Carl E. Herrington. Aboard the Otter were Captain Leonard F. Seitz, Captain June H. Stebbins, Sgt./lc Joseph Loncar and SP3 Charles A. Glass.

Firms in the pulp and paper, chemical and electrical manufacturing industries, said they would put up \$40,000 to \$50,000 to pay the expenses of the second organization, an exploratory committee. This committee will look into the setting up of a national advisory committee on the advancement of education. James S. Duncan was named chairman with Dr. G. Edward Hall, president of the University of Western Ontario, and D. W. Ambridge, president of Abitibi Pulp and Paper Co. as other committee members. Three additional members of the committee are yet to be selected by Mr. Duncan.

Reciprocal Agreement

An agreement has been signed between National Aeronautical Corporation of Fort Washington, Penn., manufacturers of Narco aircraft navigation and communications equipment, and Canadian Marconi Company of Montreal, whereby Narco will handle distribution in the U.S. of the Canadian Marconi 301 Automatic Direction Finder.

At the same time Narco has designated Canadian Marconi as distributors in Canada for Narco standard line equipment for business aircraft and the Sapphire line of navigation and communications equipment which is type-certificated by CAA for airline use.

Kaman Demonstration

Kaman Aircraft Corp. of Bloomfield, Conn., and Kaman Aircraft of Canada Ltd., St. Catharines, Ont., demonstrated a Kaman K-600 (USN-HOK-1) general utility helicopter to the RCAF, RCN, the Canadian Army, the RCMP and other governmental agencies during the last half of September.

The demonstrations were held at RCAF Station Rockcliffe, Ottawa, and HMCS Shearwater, Dartmouth, N.S.

Rockets at Churchill

A rocket-launching site—to be used in connection with International Geophysical Year studies—at Churchill, Man., is scheduled for completion this month.

The program of rocket launchings in the Arctic is part of the intensive study of the earth, atmosphere and the sun, to be conducted over the entire world from July, 1957, to December, 1958. From this study the scientists of all nations hope to gain a better understanding of the earth's structure and

various effects in the atmosphere such as aurora and airglow cosmic rays and solar activity.

Rocket experts chose Fort Churchill for two reasons: it is readily accessible, and it lies within the Arctic auroral belt where Northern Lights are most easily observed. The rocket launchings are a part of the scientific effort of the U.S. to explore the atmosphere in the Arctic to a height of 180 miles. Aero-bee rockets will be used for high altitudes and smaller two-stage rockets for lower altitudes.

Industry Wages Rise

Data prepared by the Department of Labor show that the wage index for hourly paid workers in the aircraft and parts industry rose 4.1 points in 1955 to a figure of 158.3 (taking the 1949 figure as 100).

A breakdown of the hourly rate paid to aircraft workers in certain categories would be as follows: aircraft electrician \$1.72; aero-engine mechanic \$1.73; aircraft mechanic \$1.79; carpenter \$1.81; final assembler \$1.71; inspector \$1.76; janitor \$1.33; laborer \$1.38; lathe operator \$1.69; machinist \$1.87; major assembler \$1.75; milling machine oper-

ator \$1.76; millwright \$1.92; spray painter \$1.63; sheet metal worker \$1.76; sub-assembler \$1.64; tool and die maker \$1.91 and welder \$1.70.

Winslow Distributor

Lund Aviation (Canada) Ltd. has been appointed as a distributor for Winslow Full Flow aircraft filters. The filters, manufactured by Winslow Aero-filter Corp., Oakland, Calif., has been approved for all Wright and Pratt & Whitney engines.

One of these filters is said to remove as much as 2.6 pounds of solids per 100 hours operation on an R-1830 engine, reducing overhaul costs in proportion.

BILLY BISHOP

(Continued from page 67)

limelight during World War II when he served as the RCAF's Director of Recruiting with the rank of Air Marshal. When World War II ended, he resumed his business career, living in comparative obscurity, spending his summers in Montreal, where he con-

ducted his business affairs, and wintering in Florida. This spring, he did not return to Canada, being under treatment for an illness from which he had been suffering for some time.

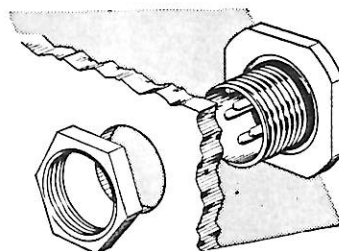
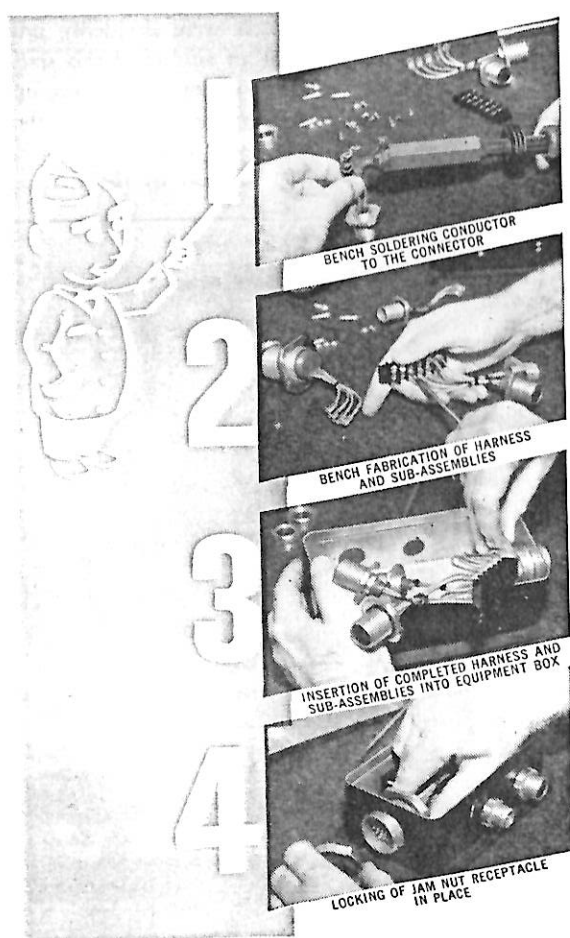
On September 11, Death called on Billy Bishop and collected a debt on which it had given several deferments in 1917 and 1918. Services were held in Toronto on Friday, September 14, following which the body was cremated and the ashes returned to Owen Sound, where Billy Bishop was born. The hero had come home for the last time.

BRITANNIA

(Continued from page 57)

cause his name is Arthur John.

Irresistible: The first stages of the take-off are notable for the powerful and irresistible surge that embraces the passenger's back. In length of time and length of run, the take-off is so short that one is hard put to assimilate coherent impressions which can later be described with lucidity. We were in fact, about 100 ft. in the air



JAM NUT RECEPTACLES

**Easy to install,
to service, to replace**

Jam nut receptacles offer such positive savings in assembly time that it will pay you to check into their application on your product. These receptacles permit bench wiring of harness and sub-assemblies prior to final installation with proven savings in assembly labor.

Just consider these design advantages—only one mounting hole required per receptacle—no extra gasket required—no user problem of sealing around screw holes—no extra hardware necessary such as screws, washers or nuts.



SCINTILLA DIVISION
SIDNEY, NEW YORK



For engineering specifications and application details, consult Aviation Electric, Ltd., 200 Laurentien Blvd., St. Laurent, Montreal 9, Quebec, Canada.