



**NAPIER OF CANADA APPOINTMENTS:** Officials of the recently formed D. Napier & Son (Canada) Ltd. include, L to R: H. Sammons, pres.; L. A. Sanson, executive vice pres.; G. T. R. Cochrane, aero representative. Mr. Sammons is also managing director of the parent D. Napier & Son Ltd., London, England, while Mr. Sanson was formerly Napier's senior representative in Canada. The new Canadian subsidiary has its head office in Montreal.

1939. The eastbound Atlantic Mercury covers the 2120 air miles in just under 7 hours. By further comparison, the airline's new DC-8 jets, will fly from Vancouver to Toronto in 4 hours 10 minutes.

### New Soviet Bomber

USAF General Nathan F. Twining, chairman of the U.S. Joint Chiefs of Staff, recently told the House Defence Appropriations Subcommittee that the U.S.S.R. is building a new long range bomber, "which we have seen", that is away beyond the capability of the turbojet Bison or the turboprop Bear, both currently in service with the Red air force.

### Churchill Radio Station

A new DoT Aeradio-Marine Radio station was opened late last month at Churchill, Manitoba. The new station replaces a marine radio station built in 1930 and an aeradio station built in 1942. It comprises four major units: a transmitter station four miles from the control point; a remote receiver

station shared with the RCAF; the control centre; and 20 apartments to house the staff located at Fort Churchill.

The new station provides a radio beacon for sea navigation, weather broadcasts and ice reports by both message and radio facsimile charts for shipping. It serves northern aviation, including international flights using the trans-Polar route, by providing a radio range for navigation, weather information and a fast message service from aircraft to their despatch centres.

The Churchill station also serves as a main link for message service to the Canadian North, beyond the areas covered by telephone and telegraph lines. It is connected with meteorological stations, Hudson Bay posts, mining camps and missions.

### New Rating for Dart 10

The Rolls-Royce Dart R.Da.10 turboprop engine has successfully completed a 150 hour type test to the Combined US/UK Civil Type Test Sched-

ule at a dry take-off rating of 2660 tehp (This 2400 shp plus 670 lb. thrust). The test, which was completed last December, has been officially acknowledged by the Air Registration Board of Great Britain.

The Dart engine is being still further developed, and has completed a 25 hour flight approval test at a military rating of 3200 shp boosted with water-methanol.

### Research Facility Opened

A new communications wing for the Defence Research Telecommunications Establishment (DRTE) at Shirley Bay, near Ottawa, was opened November 25. The new wing is intended to facilitate increased research in radio propagation relative to urgent defence radar communications problems.

Because of Canada's unique geographical position relative to the auroral zone and to the earth's magnetic field, the country is faced with unusual communications problems. Part of the auroral zone passes over Canada and directly over Fort Churchill, Manitoba. This effectively divides the country into separate north and south areas. Communications near the auroral belt are frequently disturbed by ionospheric storms and auroral disturbances.

The presence of aurora borealis emphasizes the peculiar role that Canada can play in radar research. Ionization in the zone causes clutter in long-range radars that can mask small targets. This is a new problem that has arisen only recently with the advent of new, very high power radars for ballistic missile defence.

The Prince Albert Radar Laboratory, with one of the largest radars in existence, is a DRTE sub-unit. The radar is being installed with USAF assist-

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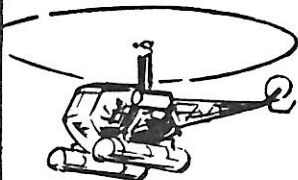
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