

nally there is much activity concentrated mainly on the installation of engine and flight controls, hydraulic and electrical services and flightdeck equipment. Power-operated controls for the Brabazon have been developed extensively for the past two years and much testing of the system has been done on the ground. Flight testing of the hydraulic system on a Lancaster has proved most successful recently. One of the most formidable aspects of the Brabazon, and an indication of its size, is the fact that power output of the six alternators which generate the electrical supplies is enough to supply the needs of a small town and, there

Tiger Moth as the elementary trainer for the RAF. A difficult choice.

Strength of the RAF

Anxiety about the strength of the Royal Air Force has been growing for some time and was forcibly expressed in the House of Lords during a debate on November 24. Three speakers who spoke from great experience of Air Power were Viscount Templewood, formerly Sir Samuel Hoare who was three times Secretary of State for Air, Viscount Trenchard, "Father" of the RAF, and Viscount Portal of Hungerford—Air Chief Marshal Portal, Chief of Staff to the RAF

the bombers, and 150 squadrons of transport aircraft to carry small armies. This, he thought, would be the front line and could prevent a war.

Lord Portal spoke of the National Service men (as those called up for compulsory service are now called) and said that the term of service with the RAF should be at least two years—competent technicians could not be trained in 12 months or even 18, to give much value to the service.

Changes in the Industry

Interesting changes in the Industry have been made recently. What amounts to a merger has been made between Blackburn Aircraft and General Aircraft. The new arrangement is in the form of a working agreement whereby General Aircraft will sell all its undertakings, including work in progress, stocks, contracts, designs, patents and so on, to Blackburn in exchange for shares in Blackburns.

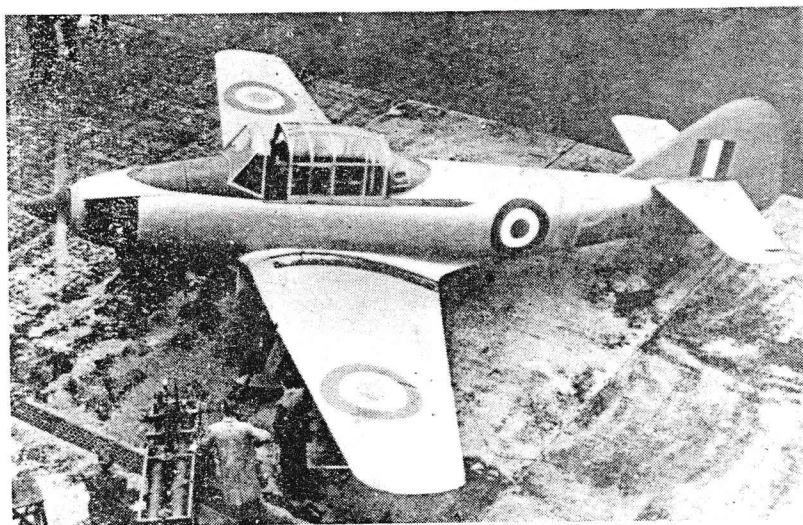
General Aircraft is to remain in existence as a company, retaining its own works, plant and equipment, at Hanworth, but renting them to Blackburns. The name of General Aircraft is also to be changed to Hanworth Securities Ltd. General Aircraft is working on the Universal Transport aircraft and has several tailless research gliders. All work in hand at Hanworth will be completed, but later, production will probably be centred at Blackburn Works at Brough.

Because of the merger the senior executive of Blackburns is being reorganized. Robert Blackburn, one of the pioneers of British Aviation and founder of the company is resigning because of ill-health. He will be succeeded as managing director by his brother, Captain N. W. G. Blackburn, who will be joint managing director with H. V. Gort, at present managing director of General Aircraft. Major Bumpus who has been joint managing director of Blackburn is to direct the activities of the Dumbarton Works of the Company.

Other interesting items of news from the industry include the appointment of George Miles as assistant chief designer to Airspeeds Ltd. Mr. Miles was responsible for many of the Miles Aircraft types, including the Marathon.

L. G. Frise, known throughout the world for the Frise Aileron, for which he was responsible, and for his long association with the Bristol Aeroplane Company, has joined Percival Aircraft Ltd., as chief engineer.

The Avro Athena



Another picture of the Avro Athena advanced trainer shows its spacious cockpit, which is designed to take an instructor and two students. The Athena may be powered either by the Armstrong Siddely Mamba or the Rolls Royce Dart, both of which develop over 1,000 shp. This aircraft is said to have a fighter's manoeuvrability.

are almost 150 miles of electric cable in the Brabazon.

One exceptionally fine achievement, the structure weight of the Brabazon is only 50 lb. more than the original design estimated weight.

News that the de Havilland Tiger Moth is about to be retired after 16 years' service in all parts of the world, as both a civil and military training aircraft, will be regretted by the countless thousands who have flown this sturdy biplane. De Havilland's will replace it with the Canadian-built Chipmunk, which should prove a worthy successor.

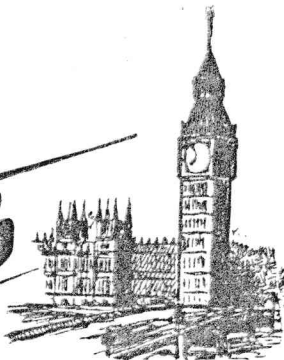
The Chipmunk and the Fairey Primer are at present undergoing official flight trials at Boscombe Down to determine which shall succeed the

from 1940-45.

All three expressed concern at the failure to attract the right men in the right numbers into the RAF. Lord Templewood thought that Anglo-American Air power could be the most formidable deterrent against aggression and that an Allied Air Force of 100 jet fighter squadrons, 150 long-range bomber squadrons and 50 pilotless-rocket squadrons would hold up any aggressor. He urged that a definite priority must be given to the Air Force.

Lord Trenchard agreed with Lord Templewood but put the strength of an Allied peace force as 100 squadrons of short-range fighters, 150 squadrons of long-range bombers and 150 squadrons of long-range fighters to protect

BRITAIN CALLING



By **JOAN BRADBROOKE**

British Correspondent, Aircraft and Airport

So many changes, retirements and resignations have been made in connection with British Air Transport during recent months that two new appointments have been particularly welcomed. In appointing Air Commodore H. G. Brackley as its Chief Executive, British South American Airways has obtained the services of one of the most experienced men left in British Air Transport.

The other appointment, which is of interest to the Aircraft Industry as a whole, is that of Canada's Beverley S. Shenstone to be Chief Engineer, British European Airways. He will supervise engineering standards throughout B.E.A. for the maintenance of aircraft already in use, as well as in the development of new types. The post of Chief Engineer is a new one for B.E.A.

Tudor IV As Freighter

Tudor IVs are returning to service with B.S.A.A. as temporary freighters. The ban which grounded this type after the lot of the Star Tiger in February has now been lifted following a preliminary—and apparently confidential—report by the Air Safety Board, but until further trials have been made in connection with range and fuel consumption the Tudor IV may not carry passengers. B.S.A.A. expects to operate them by way of Shannon and Gander to Bermuda for the present and not between the Azores and Bermuda.

Foreign Tours

Continuing the policy of British aircraft companies in sending their aircraft on "personal" tours abroad, a Vickers Viking which has already toured Africa and Australasia has now gone to demonstrate its capabilities in India and Pakistan. The Viking

is already well-known in India, where it is used by Air-India, but is less known in Pakistan.

Much information of value to both the R.A.F. and the airline corporations should be gained by the record-breaking flight of the Handley Page Hastings to Australia. The Hastings left Radlett Aerodrome on the 10th March and arrived at Sydney on the 18th March with a new record flying time for the flight of 46½ hours. It also flew non-stop from Karachi to Ceylon at an average speed of 345 m.p.h.

Actual performance figures for the Hastings have proved better than estimated performance.

De Havillands recently received an order from Norway for four D.H. Vampires, and preliminary negotiations for more Vampires for Norway are in progress.

Because of the increasing orders in hand for both military and civil aircraft the de Havilland Company has acquired additional production facilities. It has been allocated a Government factory at Broughton, Cheshire, of approximately the same size as the factory at Hatfield. The Broughton

factory was engaged on aircraft work under the management of Vickers-Armstrongs Ltd. during the War and will be taken over by de Havilland's in the near future. De Havilland's has a back-log of orders amounting to about ten million pounds for exports. The Argentine Government has recently ordered another 50 D.H. Doves.

The Mamba Prop-Jet

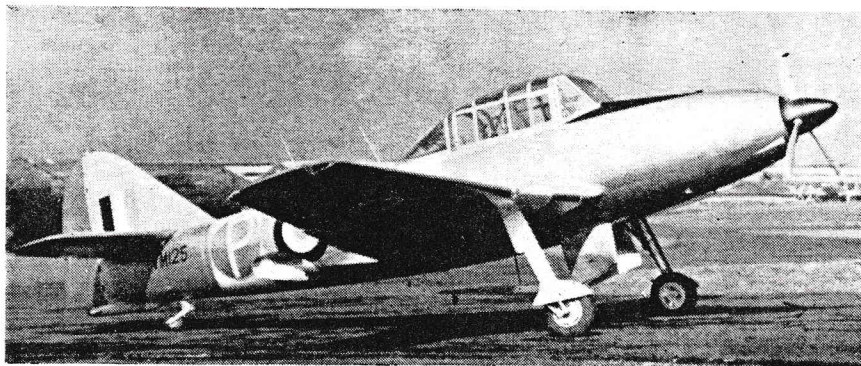
The Armstrong Siddeley Mamba I is the third British gas turbine propeller engine to pass the arduous 150-hour combined Military and Civil Type Test and is the first engine in its class to reach this standard. The other two Prop-Jets which have passed the test are the Bristol Theseus and the Rolls-Royce Clyde.

The Mamba is to power the Avro Athena and Boulton Paul Balliol trainer aircraft, which are likely to be flying soon, and is also to be used in the Armstrong Whitworth Apollo air liner which is expected to fly this year, and the Miles Marathon II.

Miles Aircraft

The future of the Miles Marathon is still unsettled although details are now known of the plan to avoid liquidation of the Miles Aircraft Company.

The name is to be changed to Copycat and Associated Manufacturers Ltd. and production will be confined to the Copycat duplicating machine and the Biro pen. The aircraft side of the company will close down gradually. There are still hopes that one of the other aircraft companies will take over the aircraft side and at least complete the orders for the Marathon.



Prototype of the new Avro Athena 3-seat trainer, powered by an Armstrong Siddeley Mamba engine, is shown at Woodford Aerodrome, Cheshire. In addition to its function as a training aircraft for the new prop-jet engines, the Avro Athena is fully equipped for many other training roles, and by special screen arrangements may be used for night flying training in daylight.

Meteor Said World's Fastest Trainer

The **Gloster Meteor VII** Trainer, claimed to be the world's fastest training aircraft, made its first flight recently in Britain.

A dual control version of the Meteor fighter, the new trainer is designed to bridge the gap between the piston-engined advanced trainer and the operational jet-propelled fighter.

Fitted with Rolls-Royce Derwent engines, the Meteor VII has a maximum speed of 580 mph and an initial rate of climb of 8,000 fpm.

CPA Takes Over Old Mackenzie Routes

Licenses covering routes formerly operated by Mackenzie Air Services have been cancelled and appropriate licenses issued to Canadian Pacific Airlines as a result of a review of licenses by the Air Transport Board pursuant to the Aeronautics Act.

The issue of the licenses to CPA was condition precedent to the purchase of the properties and assets of the Mackenzie Air Services by the Canadian Pacific Railway.

Use Falcons to Stop Flocking of Birds

Experiments with peregrine falcons to discourage birds from flocking on airfields have provided some useful information to Britain's Royal Air Force—sufficient to justify a continuation on a larger scale next autumn when the mating season is over. In 1947 there were 17 accidents to RAF aircraft in Europe caused by impact with birds.

TCA Annual Report Shows Deficit

Despite an increase of 19% in operating revenue over 1946, Trans-Canada Air Lines in 1947 had an operating deficit of \$1,499,145.

After payment of \$261,897 interest on capital, the deficit for 1947 totaled \$1,761,042.

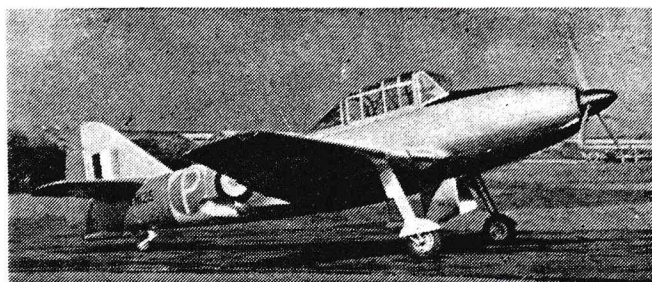
Total operating revenue was \$15,297,346. All departments contributed to the increase, with passenger revenue up 30% over 1946, cargo revenue up 47% and mail revenue up one per cent.

The increased revenue, however, could not offset the mounting expenses, according to the company's annual report. Payroll charges, for example, increased by \$1,347,908, and materials by \$1,128,541.

A number of improvements were inaugurated during 1947 in the airline's service. North American routes were extended by 1,248 miles, and a 34% increase in carrying capacity was realized through service extension and the use of larger aircraft. Besides increasing its passenger-carrying capacity, an air cargo service, which in 1948 will handle commodities in volume at low cargo rates, was prepared.

The year saw Fort William and Sault Ste. Marie provided with main airline service, the flying time between Toronto and Winnipeg reduced, the opening of a direct line between Winnipeg and Edmonton, and the inclusion of Medicine Hat and Swift Current on a daily transcontinental schedule.

Mamba-Powered RAF Trainer



Avro Athena Mk. 1

The prototype of the new Avro Athena three-seat trainer, powered by an Armstrong Siddeley Mamba prop-jet engine successfully completed its initial test flight in Britain recently.

Of all-metal construction, the aircraft is designed for advanced training and conforms to the latest RAF "all-weather" specifications. Cockpit instrumentation is claimed extremely comprehensive, and one of the most interesting features is the additional

amber-tinted front screen, which is raised or lowered by compressed air.

In addition to its function as a training aircraft for the new prop-jet engines, the Athena is fully equipped for such other roles as gunnery training, photography, bombing and glider towing. It has a maximum speed of 287 mph, and cruises at 253 mph. Rate of climb is 2,630 fpm. Service ceiling is 34,800 ft. and the range is two and a half hours with normal tankage.

North Star on TCA Domestic Runs Early

Trans-Canada Air Lines switched to North Star aircraft on its coast-to-coast flights on June 1, a month ahead of the proposed date of introduction.

Improvement of supply of the company's \$15,000,000 order for 20 North Stars, built by Canadair Ltd., is the reason for the step-up in operations. The North Star will completely transform the airline's service, increasing each plane capacity from 21 to 40 passengers and substantially reducing the flying time.

New RCAF Book to Aid Arctic Flyers

A handbook for Arctic fliers, known officially as the "RCAF Directory of Hinterland Aerodromes," is being compiled at Air Force Headquarters, Ottawa, and will be issued to Air Force photographic crews before they leave for their northern bases this summer.

The handbook will be in six volumes, covering areas from British Columbia to Labrador, and as far north as the Arctic archipelago. It will contain information on 450 air and water bases in those areas. The information is not limited

to aerodrome data, but contains hints on survival in summer and winter, advice on weather conditions, a study of native habits and even some gen about edible plants supplied by the botanical division of the Dept. of Mines and Resources.

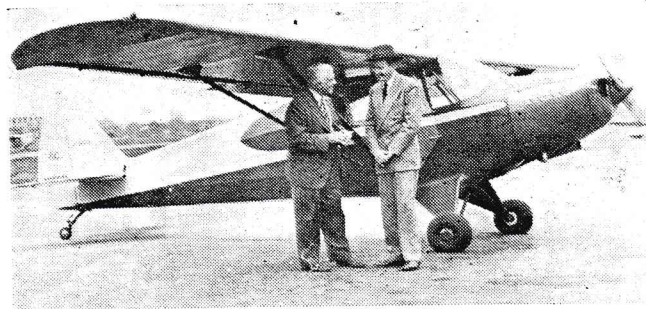
Although the handbook has been compiled primarily for RCAF research and rescue organization and for Air Force photographic crews, it will be available to flying clubs and other civilian bodies.

Increase Forestry Patrols in B. C.

Aerial patrol of forests in British Columbia will be increased this year by the provincial government. The forest branch will have six aircraft on call for fire spotting and for transporting crews to sudden outbreaks.

Contract for supplying forestry aircraft has been let to Central B. C. Airways of Vancouver and Prince George, forestry officials announced. This company, which gave the service in 1947, was the only bidder on the tenders called by the department.

Two of the aircraft will be stationed in the Prince George area, two at Kamloops, one at Castlegar and one at Cranbrook.



Piper Delivers First PA-14 Family Cruiser

Shown above (left) delivering the first Family Cruiser to be sold by the Piper Aircraft Corp., is W. T. Piper, president of the company. They expect that this four-place machine will prove popular to flying enthusiasts for its utility and low price, \$3,825 FAF Lock Haven, Pennsylvania.