

JET PROGRESS — Following the announcement that Britain intends to embark on a fairly extensive program of flying boats powered by gas turbine propeller power plants comes further news of recent developments. One is the ducted fan augmentor which was first fitted in August, 1943, to the Metropolitan Vickers F 2/4 axial flow 10-stage compressor, straight flow annular combustion and single-stage turbine engine. The ducted fan is placed at the intake and only a proportion of the air is taken into the combustion chamber, the rest is diverted to the efflux pipe bypassing the turbine.

Another line of development is the jet thrust reheat (sometimes called "after-burning") in which more fuel is injected aft of the combustion chamber for further power but only at the expense of increased fuel consumption. There is likely to be a definite limit to the use of this since modern units like the Nene and Ghost are already burning up to 600 and 700 gallons per hour.

Also revealed is perhaps the most significant device: the jet thrust spoiler in which a mechanical system of vanes placed in the jet stream will make possible a precise variation of the thrust and will even achieve negative thrust which gives pilots a much more flexible engine.

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LIGHTPLANES BY MILES—I was invited down to Miles' airdrome near Reading the other day to fly the M-28 and the Messenger. The Messenger was originally conceived for Army liaison and light communications and its features include a 60-yd. takeoff run, a remarkable initial climb and a payload of 740 lb. The cabin can take either four people or three and a space for luggage. There is a large single-piece molded perspex windscreen giving an unusually good view. With the interesting Miles high-lift flaps, the stall seems to take place at about 25 m.p.h. and the cruising speed with a DH Gipsy I/C or V engine is 100 m.p.h., maximum speed 120 m.p.h. The still air range with 18 gallons is 250 miles and with long-range tanks 500 miles. The rate of climb at sea level is 1,000 ft. per minute and service ceiling is 17,000 ft. Price of the Messenger has not been fixed yet.

The Miles M-28 is generally similar to the Messenger except that two rudders are fitted instead of three, a retractable undercarriage instead of the fixed lever suspension type and the Gipsy Major III with CS airscrew

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By R. G. WORCESTER

is standard equipment. The maximum speed of the M-28 is 183 m.p.h., cruising at 173 m.p.h. The best rate of climb is 1,300 ft. per minute and stalling speed of 42 m.p.h. The takeoff run is 110 yds and range, with 24 gallons, is 490 miles.

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BRITISH FLYING CLUBS—Everywhere in British circles people interested in aviation are asking "What about the clubs?" "Are we going to be able to fly cheaply?" Although a few more surplus aircraft and airdromes are becoming available (Perth and Inverness are the latest to be released) there is no sign of any concrete proposals for the future of private flying either of power types or gliders. Of course, it was realized some time ago that the Minister of Civil Aviation is awkwardly placed. He has got to persuade the military and the treasury that it is the country's interest to give selected pilots cheap flying.

We can only hope that all concerned will remember that the pre-war club pilot and private owner formed the backbone of the second-line squadrons in the RAF and RN as well as in the ATA and they played a vital, if not decisive, part during the war. On these grounds there should be a strong case for the resumption of civil air guard.

The wartime use of amateur pilots must continue to form part of the modern military machine until it can be proved that novel weapons will make that war machine out-of-date. The advent of powerful guided missiles, homing rockets and so forth is all very interesting (ominous is perhaps the word) but nobody can pretend that these weapons replace existing air equipment yet.

Meanwhile there is no excuse for the frustrating and heartbreaking delays in getting along with civil flying. In the airliner class the deliveries are still absurdly slow and in the small class there is no airplane of repute on sale for less than about \$10,000 with the honorable exception of the Taylorcraft. The difficulty lies in the

fact that British firms are forced to build airplanes to stupid specifications like for instance the Naval 05/43 which permits any manufacturer to build an airplane too heavy and too large to be accommodated in any British carrier.

We could have had a fleet of Shetlands available by now and aircraft recommended by the Brabazon committee are appearing very slowly. These facts have been recited to show that our future in the air depends upon our ability to switch the emphasis from military to civil projects in the shortest possible time but this cannot be done if service chiefs are allowed to stand in the way as they tend to do at the moment.

There is nothing basically wrong with the industry except for example an extraordinary timidity in the design of the 150,000-lb. landplane which ought to be in the "intensive flying" stage like the Globemaster and Strato-cruiser. We must just hope that the turbine-engined Brabazon I 250,000-lb. will offset our shortcomings in the 150,000-lb. field. The Tudor II and even the York could compete with the Globemaster, using Alan Cobham's Flight Refuelling now in the final development stage.

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TRANSPORT NOTES — The first Avro Tudor I production super-transport was completed recently. Avro's two famous Lancastrians, Stardust and Starlight, based at Heathrow go to and from South America on their proving flights, the former breaking a record for the trip. Meanwhile the much-travelled RAF Lancaster Aries broke, by a handsome margin, the record to the Cape set up in 1939 by Alex Henshaw in his tiny little racing Mew Gull. Avro Yorks and Lancastrians are operating from Croydon alongside Air France's Ju 52's but the airfield is a shadow of its former self.

More information is now available on both the new Handley Page Hermes transport and the Avro Lincoln. The Lincoln has four Merlin 85's of 1,705 h.p. each driving 13-ft. four-bladed DH propellers.

The Hermes has a span of 113 ft., a low-wing monoplane with four Bristol Hercules engines in low-drag cowlings driving four-bladed DH airscrews. The maximum speed is 337 m.p.h. at 22,700 ft., cruising at 284 m.p.h. at 22,700 ft. There is provision for up to 50 passengers carried in a pressure cabin.

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