

RECORD BREAKER. Fairey Delta 2 climbing out.

The Delta run

Its real meaning

By CLIVE BAXTER

Early one morning, recently, the night porter of a small English hotel brought a guest his 6 a.m. breakfast. It was the same hard-boiled eggs that Peter Twiss had been eating for the four previous sleepy mornings.

By 7, dressed in an old sweater and baggy flannels, 34-year-old Twiss was at Boscombe Down Experimental Station. He checked the weather—for the fourth day it was "forecast perfect."

By 8, the "things-to-come" Fairey Delta 2 had been towed out on the ramp. The nose pointed down at a 10-degree angle from the fuselage, for all the world as if someone had taken a big stick and bashed it.

► **False Start.** A final word with ground crews and design staff, then Twiss swung up into the cockpit. The Avon engine rumbled into life, and at once the Delta moved off toward the giant runway. Less than a minute later the quiet Wiltshire countryside was blasted by the roar as Twiss flipped in his after-burner and headed for the brilliant blue sky.

At 8.25 he was back sweeping over Boscombe. There had been a fault in

the timing apparatus. At 10 he took off a second time. This was it.

► **Record Run.** While RAF Radar Stations on the South Coast tracked him, Twiss swept over the nine-mile course twice. Royal Aero Club-manned cameras followed his two runs. His final recorded speed was 1,132 miles per hour, and it had shattered the existing records that had crept slowly up since 1946—finally reaching 824 miles per hour last summer.

What does this all mean? It is certainly a shot in the arm for Britain at a time when it is badly needed.

There are many things wrong with the British Aircraft industry, but things are nothing like as bad as some critics — notably Time magazine — would make out.

There are almost certainly other aircraft in the world that could match, and maybe better, this speed. No doubt they will. But one tremendously significant point was made clear last month—Britain is catching up in air frames.

► **Standard Power Plant.** It was a popular cliché, not without foundation, to say Britain led the world in engines, but had nothing to put them in. Yet the FD2 is powered by a

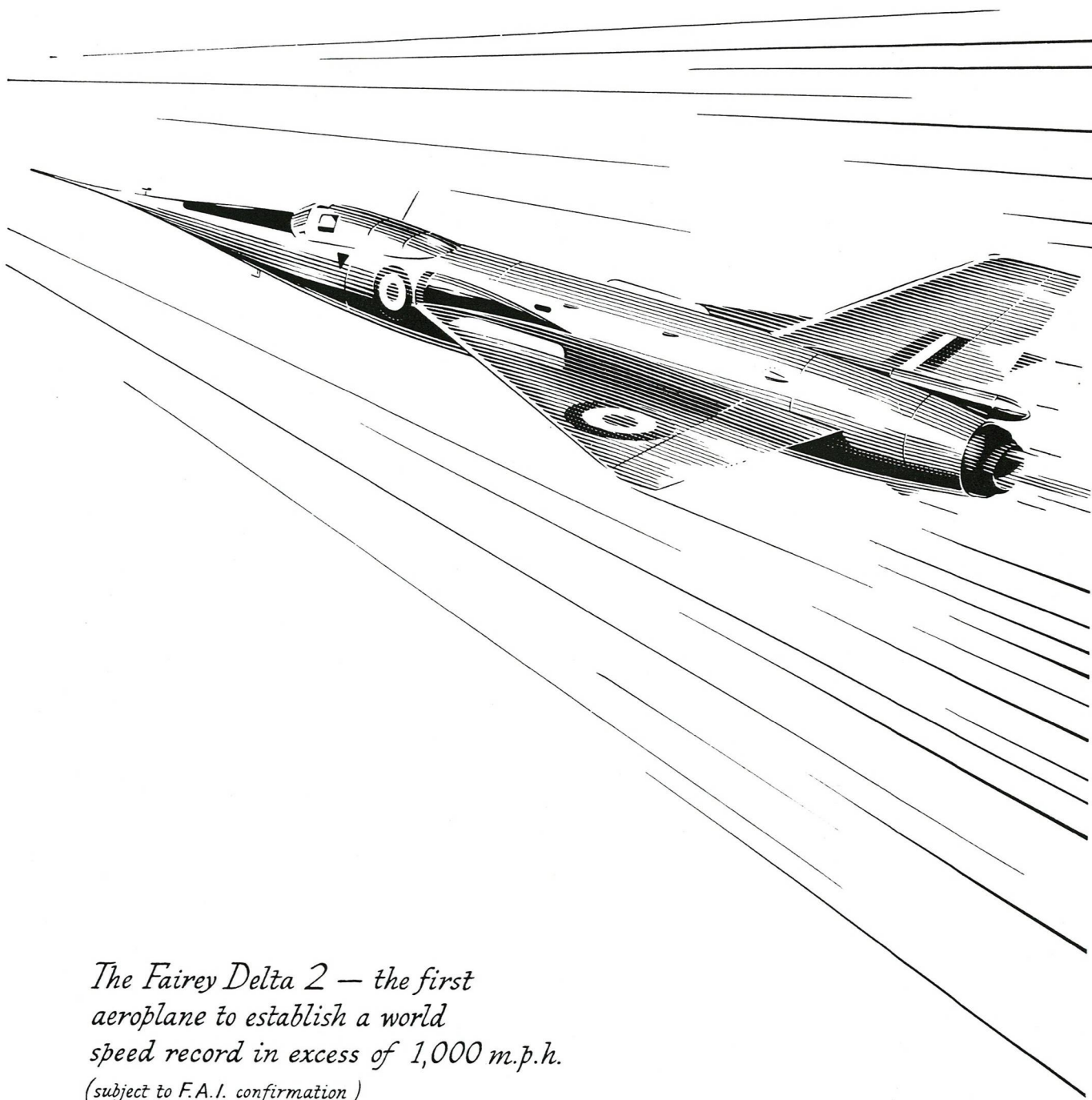


TOUCH DOWN. Pilot Peter Twiss leaves the FD 2 immediately after his record run.

standard Rolls-Royce Avon with after-burner—the same engine that powered the Swift that in 1953 pushed the record to 736 miles per hour.

It is not hard to imagine what results might be obtained from a Conway or Gyron powered FD2.

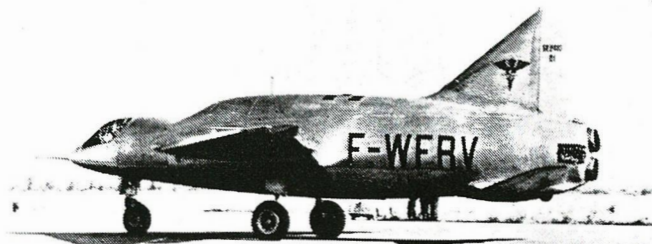
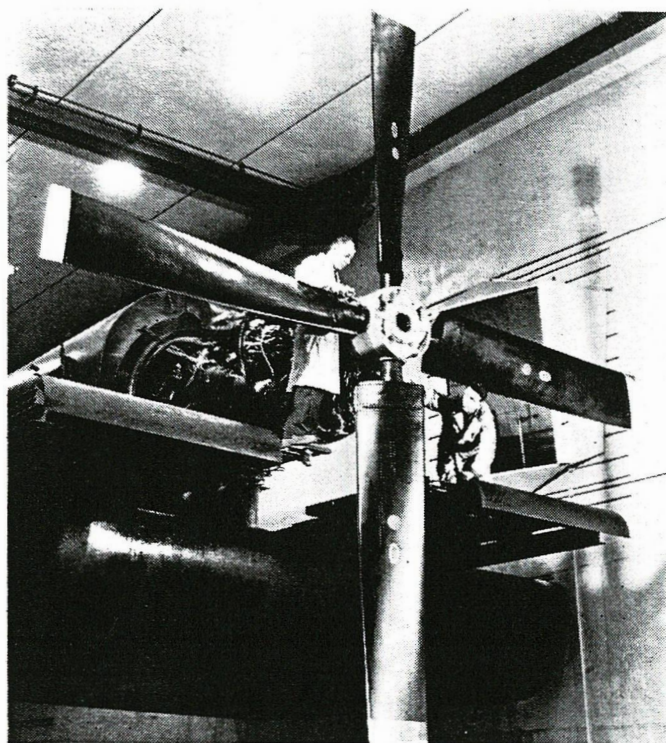
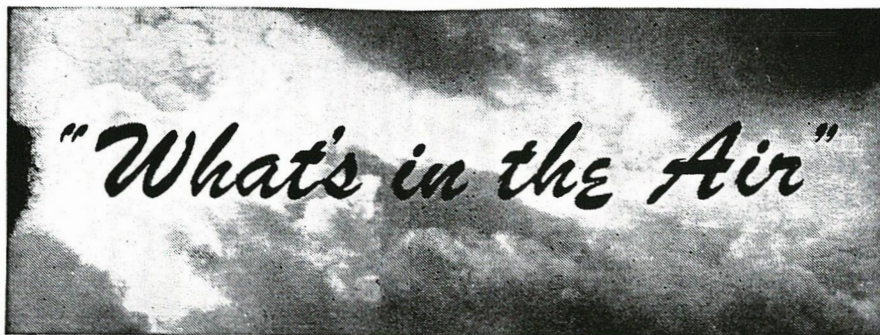
10TH MARCH 1956 . . . 1,132 M.P.H.



*The Fairey Delta 2 — the first
aeroplane to establish a world
speed record in excess of 1,000 m.p.h.
(subject to F.A.I. confirmation)*

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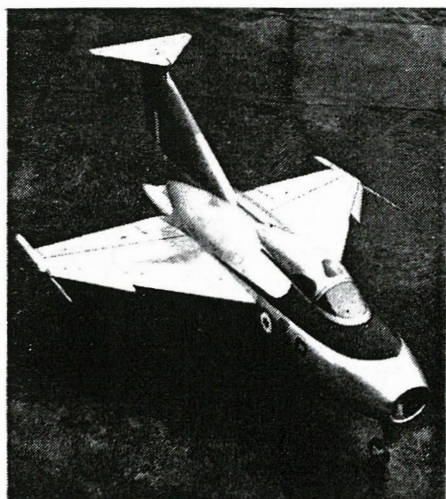


Howard Levy Photo

ABOVE—French "piggy-back" jet fighter-bomber, the Groguard is powered by two Nenes mounted one above the other in the fuselage. Note twin tail pipes.

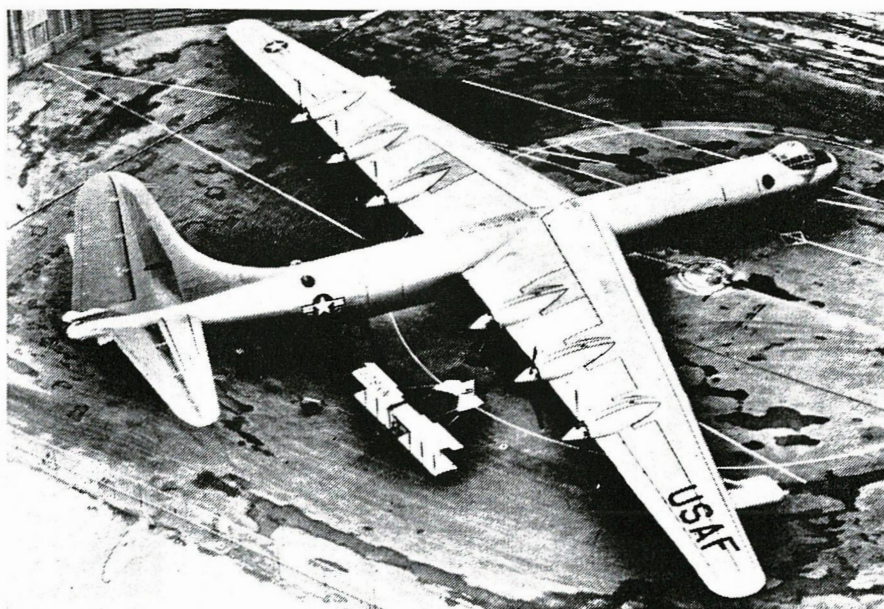
LEFT—THE BIG FAN—A 19-foot aircraft propeller, largest ever built for turbine engines by Hamilton Standard, is being tested by the USAF Air Materiel Command at Wright-Patterson Air Force Base. The propeller was developed under Air Force sponsorship for power plants delivering over 5,000 hp. The big propeller has a double purpose. It can be used on the highest power piston engines now being considered as well as on the so-called "medium" horsepower turbines. Also, it can be adapted for mating with another propeller of the same 19-foot diameter, to make an eight-blade dual rotation model.

The new propeller is the third of Hamilton Standard's line of specially designed turbine propellers, called Turbo-Hydromatics, to reach the service testing stage. The Turbo-Hydromatic uses an electronic control to regulate the hydraulic pitch changing mechanism which adjusts blade angle to deliver more or less thrust in flight. On the ground, direct control of propeller blade angle is taken over by the pilot. This permits him to control the airplane's taxiing speed, both forward and backward, by varying blade pitch to change the propeller thrust.

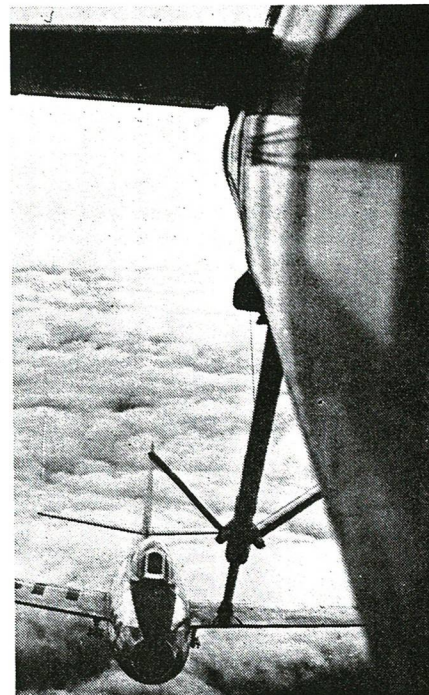
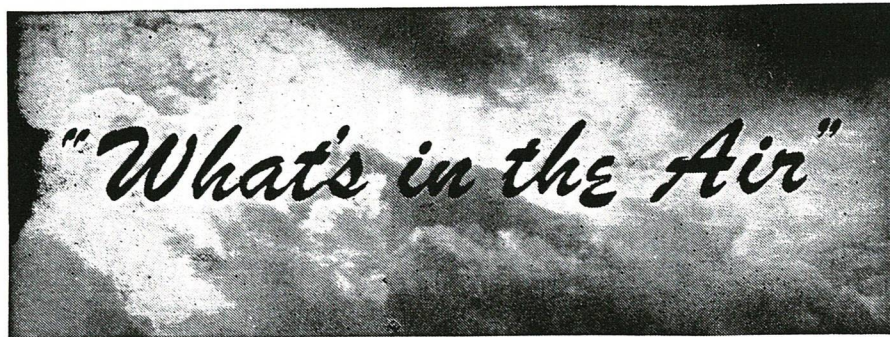


First photograph of the latest British research aircraft, the Fairey FD1, which made its first flight on 12th March, 1951 piloted by the company's chief test pilot, Gordon Slade.

The FD1 is 26' 3" long and has a wing-span of only 19' 6½". It is powered by a Rolls-Royce Derwent turbo jet. A tail plane and wing slots have been fitted for the initial stage of constructor's flight trials.



A PAIR OF PUSHERS—A Curtiss biplane, vintage 1912, nestles behind the wing of another pusher-type, the Consolidated-Vultee B-36D USAF bomber. The latter has six pusher piston and four jet engines. The Curtiss biplane is still flying after more than 3,000 air hours. Total power of the B-36 is about 42,000 hp, compared with the 80-hp Gnome nine-cylinder rotary engine with the other pusher. Weight of the biplane is 1,150 lb., compared with the 358,000 lb. gross wt. of the bomber.



FLIGHT REFUELING

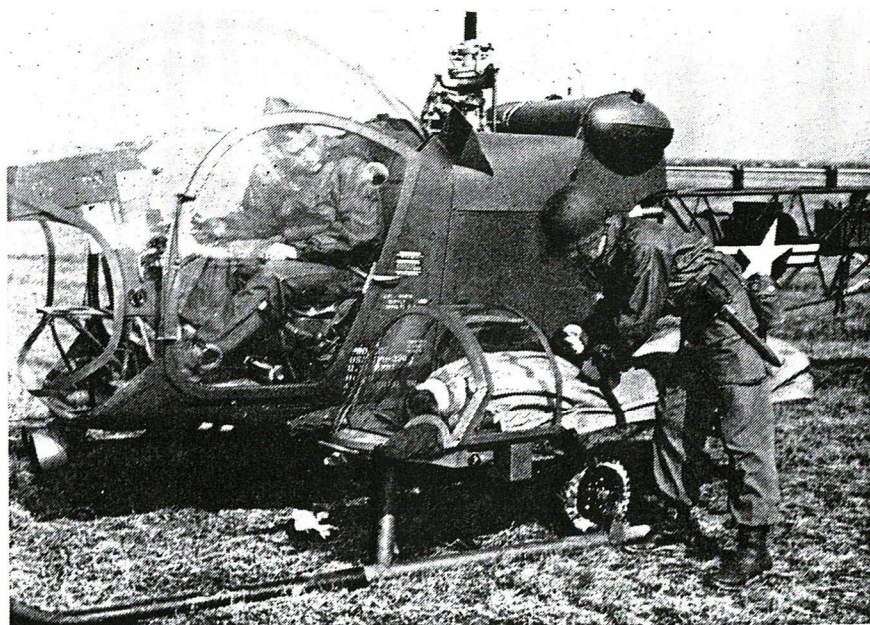
Quenching the "thirst" of military jet aircraft in flight has been the object of much research in the U. S. The "flying boom" system of transferring fuel from tanker plane to receiver has been perfected to the stage where it has been standardized and applied to numerous types.

ABOVE—A Republic F-84G Thunderjet was the first U. S. operational jet fighter to be fully equipped for mid-air refueling. The tanker is a Boeing KB-29P Superfortress.

LEFT—The Boeing B-47 Stratojet bomber is refueled through the nose in flight. A telescopic swivelling flying boom is controlled from a tail cockpit in the tanker. Fitted with V-shaped "ruddevators," the boom is "flown" into a slipway coupling in the nose of the bomber.



BELOW—Evacuation of wounded from battle areas has been speeded by development of the Bell litter-carrier attached to the skid landing gear of the H-13D helicopter. Note the clear canopy shielding the patient.



Helicopter passenger service has been inaugurated between Birmingham and London. Launched by British European Airways the service is thrice daily each way, uses three S-51 helicopters.