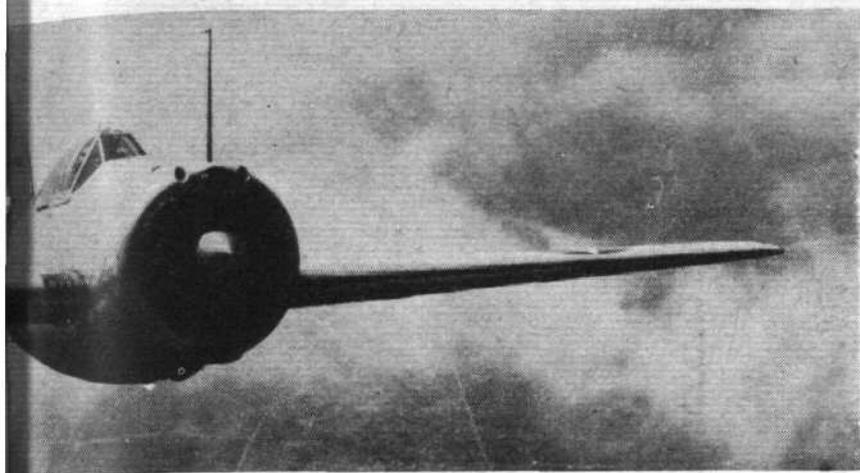


A "BACKGROUND" (CONTINUED)



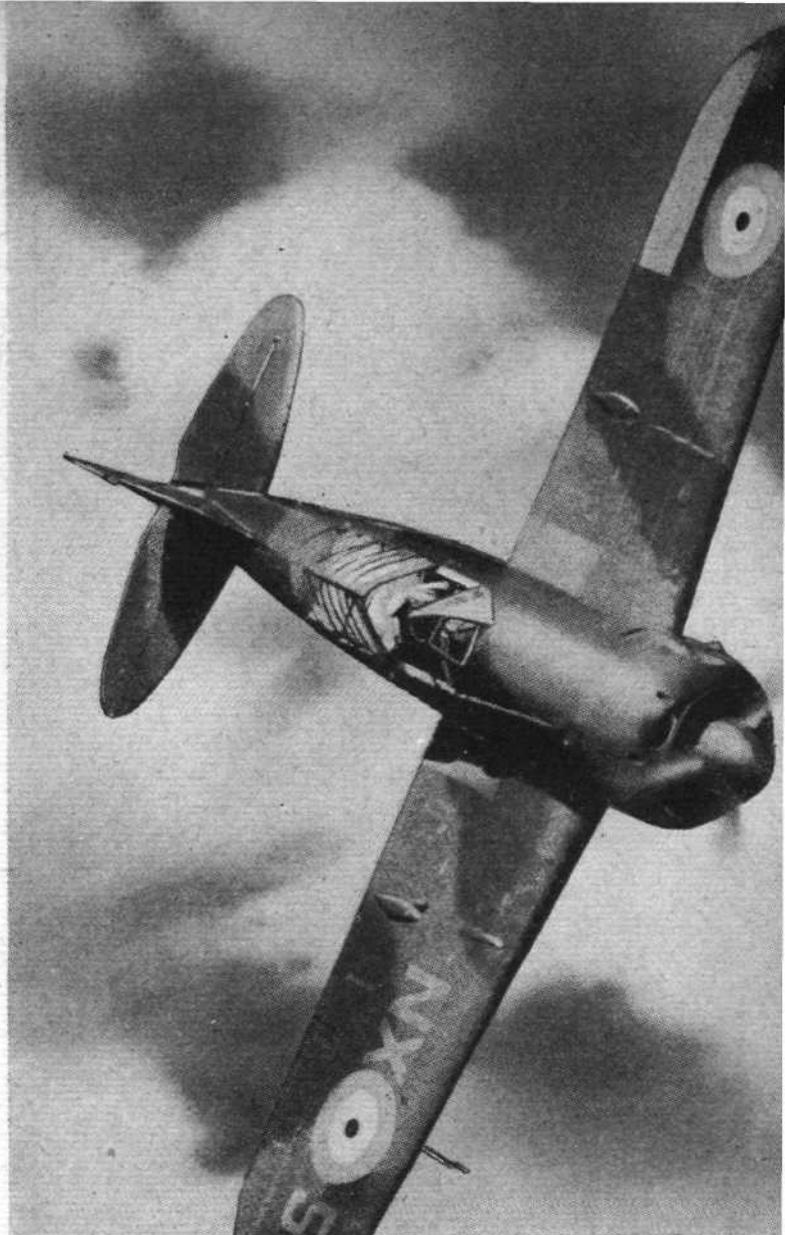
undercarriage, which retracts partly into the wing and partly into the fuselage. There is a tendency to regard this as a feature typical of Grumman aeroplanes and originated by that firm, initially for biplanes in which the wings are not thick enough to house the wheels. Actually, the scheme was used many years before the Grumman designers adopted it. At a Gordon Bennett race at Etampes in the 1920s there was a Wright monoplane which retracted the wheels into the fuselage, and our own Bristol company produced a racing monoplane with this feature at about the same time.

It may be a debatable point whether this arrangement is better than the more usual one for monoplanes (for biplanes it is the only practicable one). It does have the advantage of great strength, as the oleo leg, or leg carrying a sprung wheel, does not have to be cantilever, but is braced while in use. Moreover, the angle through which the leg has to move is approximately halved, 45 deg. against 90 deg., roughly. That it offers a good deal of drag during take-off is undeniable, and pilots report that the acceleration felt when the wheels go up is remarkable.

Orthodox Construction

Constructionally, the Brewster is fairly orthodox in other respects, with stressed-skin construction generally employed except for movable control surfaces, which are fabric covered. An exception is formed by the trailing edge flaps, which have metal skin covering.

In size the Brewster is comparable with the Spitfire in that the wing span is roughly the same (35ft. compared with the 36ft. 10in. of the British fighter). No performance figures are available, but it is to be supposed that with the G-105 Cyclone the speed at operational height is something over 300 m.p.h. With the G-200 engine it should be in the neighbourhood of 330 m.p.h. Variable-pitch airscrews are fitted, and may be either Hamilton-



Standards or Curtiss electrically operated to any pitch angle.

As built for the U.S. Navy, the armament included four machine guns or two machine guns and two shell-firing guns, the former housed in the deck fairing and firing through the airscrew disc, and the latter mounted in the wings, outside the undercarriage attachment. Deck landing equipment is incorporated.

From the fact that the machine was designed originally as a ship's fighter, the possibility exists of using it in the Fleet Air Arm, but it is not known if such is the intention. Finland and Belgium wanted land fighters.

Pilots have nicknamed the Brewster the "Peanut Special," or the "Flying Barrel." The undercarriage is unusual but very sturdy and accounts for the fuselage shape.

