



In the snow at Brooklands, early in 1917, is seen the first Camel of all, an F.1, with 110 h.p. Clerget rotary engine.

# SOPWITH CAMEL PART I

HISTORIC MILITARY AIRCRAFT No. 10

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**O**N December 22nd, 1916, the Sopwith Aviation Company's experimental department passed out a stocky little single-seat fighter which was to have a great influence on the course of the war in the air.

The Sopwith Biplane F.1, soon to be known as the Camel, was developed from the Sopwith Pup, to which it bore a family resemblance. In flying characteristics the two aircraft were not so completely dissimilar as most accounts imply; but because the Camel was heavier, more powerful and faster, its characteristics, good and bad, were more strongly pronounced. Things happened more quickly on the Camel, and the torque effect of its bigger and heavier engine was very marked, especially when changing direction. Both aircraft were manoeuvrable, but whereas the Pup was docile, obedient, tractable, the Camel appeared waspish, wilful, intolerant.

Yet in the right hands the Camel was a lethal weapon. Its sensitivity to the controls made it the supreme dog-fighting aeroplane in the armoury of the Allies; only the Fokker Dr.1 could match its manoeuvrability. The total number of enemy aircraft shot down by Camels was 1,294, a greater number than were defeated by any other single type of aeroplane of the 1914-18 war.

The Camel was a snub-nosed, hump-backed little biplane with staggered single-bay wings. The lower wing had a pronounced dihedral angle which contrasted markedly with the flat upper wing and seemed to accentuate the hump which enclosed the breeches of the two Vickers machine-guns. It was, of course, to that hump that the Camel owed its name. The name was unofficial, but so popular that it was ultimately accepted.

Structurally there was nothing unusual about the Camel. The fuselage was a wire-braced wooden box-girder with a rounded top-

decking. Aluminium panels covered the first bay behind the engine; the sides were then covered with plywood as far aft as the rear of the cockpit; and the remainder of the structure was fabric-covered.

One of the factors which contributed to the Camel's manoeuvrability was the concentration of all the greater masses within a short length of fuselage. The engine, guns, pilot and fuel were all close together in an overall length of about seven feet.

The wings were conventional wire-braced, fabric-covered wooden structures. On the prototype Camel the upper wing was in one piece, but on production machines it was made in three parts: a centre section and two outer panels. Naturally this led to a different disposition of wing ribs in the production Camels. The spars were of spruce; the lower mainplane rear spar was solid and the others were spindled-out for lightness.

The centre section was unusually wide and extended some way outboard of the centre-section struts. These struts were splayed outwards when seen in end elevation and were made of spruce, as also were the interplane struts. Ailerons were fitted to both upper and lower mainplanes.

The prototype Camel was powered by the 110 h.p. Clerget rotary engine, but production machines had the more powerful 130 h.p. engine of the same make. The F.1 Camel was also built in some numbers with the 110 h.p. Le Rhône.

The pilot sat between the rear centre-section struts, where a considerable portion of his field of vision was obscured by the upper wing. There was the usual cut-out in the trailing edge of the centre section, and a central aperture was made between the spars in order to improve the upward view. This opening varied in width according to the tastes of individual pilots, and was longitudinally bisected by the central compression strut of the centre section. The ailerons of production Camels were of slightly greater span than those of the prototype.

As a British fighting aeroplane the Camel's greatest significance lay in its armament. It was the first British fighter to mount the classic weapon installation—a side-by-side pair of synchronized Vickers guns firing through the airscrew. It was not by any means the first two-gun fighter, for several earlier enemy types had had twin synchronized guns; nor was it even the first British fighter to have two guns, for it was preceded in the Service by the S.E.5 with its combination of a Lewis and a Vickers. The Camel's fire-

A standard Clerget-powered Camel of the R.F.C. The guns have been removed but one port is visible in the "hump" forward of the cockpit.

