

Who Designed the Famous Sopwith Types?

A MYSTERY SOLVED BY . . .

Wg Cdr NORMAN MACMILLAN, OBE, MC, AFC

The Sopwith Pup

WHEN I set out to write *Great Aircraft* I found myself bedevilled by questions of historical fact to which I could find no answers through orthodox methods of research. Many other writers on the earlier periods of aviation must encounter similar difficulties—problems not made easier by the number (still increasing) of incorrect accounts of men, machines and events. I have just read a recently published book of the First World War in the air which is full of inaccuracies.

One of my particular problems was: who designed the Sopwith Camel? I searched through all contemporary copies of *Jane's All the World's Aircraft* and aeronautical journals and found no clue. None of the aeronautical bodies was able to answer the question. So I wrote to Sir Thomas Sopwith and asked him. He replied that it was a long time ago and memory was unreliable at such long range; he could not say whether it was "before or after Smith joined the company"; but if it was before (and he thought it was) then the Camel was designed by himself, Sigrist and Hawker in collaboration.

My next step was to find out when this Mr Smith joined the Sopwith company. But there again I drew blank with all the reference books and periodicals of the period. I did not even know the gentleman's initials or Christian names and I doubted if Sir Thomas Sopwith would remember them; so I did not trouble him with the question, particularly as he was by now abroad.

Frank H. Smith, the librarian of the Royal Aeronautical Society, unearthed through *Flight* that the name of the chief designer of the Hawker Engineering company at the time of the takeover of the dissolved Sopwith company was Captain B. Thomson (circa December 14, 1922, issue of *Flight*). Two-and-a-quarter years later *Flight* reported: "Mr Carter, the firm's chief designer . . . ably seconded by Mr S. Camm." The 1951 issue of *The Aeroplane Directory* listed Wilfred George Carter, CBE, FRAES, as the technical director of Gloster Aircraft Co Ltd; his notice stated that he joined the Sopwith Aviation Company in 1916 as chief draughtsman and that he was appointed chief designer when the firm became the Hawker Engineering Co, for whom he designed the Heron and Hornbill single-seat fighters and the Horsley day-bomber. He later became historically famous as the designer of the Whittle turbine-engined Gloster E.28/39 flight-tested in May 1941. In the same reference work I found that Mr (now Sir) Sydney Camm, CBE, FRAES, became chief designer of Hawkers in 1925.

But still no clue turned up to locate Mr Smith! Conflicting information came to me from various sources, with numerous surmises and inaccurate dates (as I subsequently proved them to be). Then I learned that Mr Smith's initial was "E." This later proved wrong. It was H for Herbert. In the end it was Mr Alexander Johnston, head of the SBAC Information Department, who discovered and gave me the correct name and address of Mr Smith and I was able to make contact with him. The result



was an interesting piece of aeronautical history, which deserves its place in the record, for I cannot say where else it may be found but here.

Herbert Smith took a Diploma in Engineering at the Bradford Technical College, then spent three years in a workshop and one year in a drawing office before joining the Bristol Aeroplane Company as a draughtsman. He transferred to the Sopwith Company in March 1914, also as a draughtsman, and was there until their liquidation in October 1920.

When he first joined Sopwiths (he told me) they had no designer. The chief draughtsman, Mr Ashfield, had been a school teacher and carried out instructions from Sopwith, Sigrist and Hawker. These three were largely responsible for the 1½-Strutter, the Pup and the Camel, the last two being derivatives of their pre-war Tabloid.

Mr Smith recalled having seen the Tabloid at one of the flying meetings at the London Aerodrome, Hendon, in 1913. With a 50 h.p. Gnome engine it did about 80 m.p.h., which he thought very good considering the engine developed only about 38 h.p. He told me he imagined that nearly all pre-1914 machines were produced from full-size chalk drawings, a procedure he himself saw in operation. (The earliest aviation "lofting" process.) When he joined Sopwiths they were building the Bat Boat and a float-plane with 200 h.p. Canton Unné engines, which never passed much beyond the experimental stage.

From Mr Smith's evidence it became certain for the first time that the Camel was the brain-child of the famous trio: Sopwith-Sigrist-Hawker. In November 1914 Herbert Smith took complete charge of new design (as distinct from continuity development) and was responsible for the 110-130 h.p. Clerget-powered Triplane, the 230 h.p. B.R.2-engined Snipe, the Salamander armoured single-seat trench fighter, the two-seater armoured Buffalo trench fighter and contact patroller, and the 200 h.p. Hispano-Suiza-engined Dolphin.

The Clerget Triplane was started on April 18, 1916, and was tested on May 30—six weeks for construction, surely a record even for those days! The Sopwith company built two other single-seat triplanes, one fitted with the Hispano-Suiza engine, and another—the Snark—with a 320-360 h.p. ABC Dragonfly; there was also the three-seater Cobham triplane bomber with twin Dragonfly/Puma engines as further tributes to Mr Smith's versatility in design. He was responsible, too, for many other types which did not go into quantity production. He recalls that Harry Hawker used the 110 h.p. Le Rhone Camel-fuselage high-wing monoplane called the Swallow as a runabout.

After the liquidation of the Sopwith Aviation Co Ltd Mr Smith went to Japan as designer to Mitsubishi, returning to England in June 1924, when Hawker Engineering invited him to rejoin them as designer and Vickers approached him to join their newly formed Canadian company.

Dolphin four-gun fighter



Triplane (in the old skating-rink works)

