

TEST FLYING 1918-1926

by CAPT. FRANK T. COURTNEY

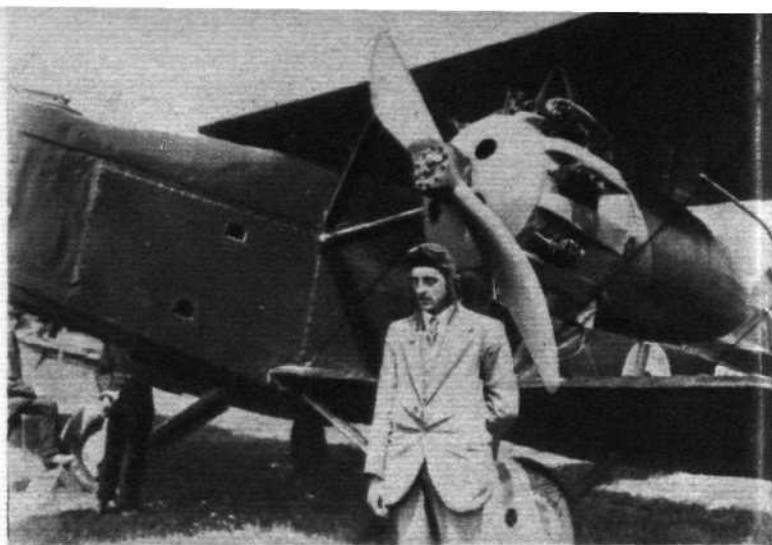
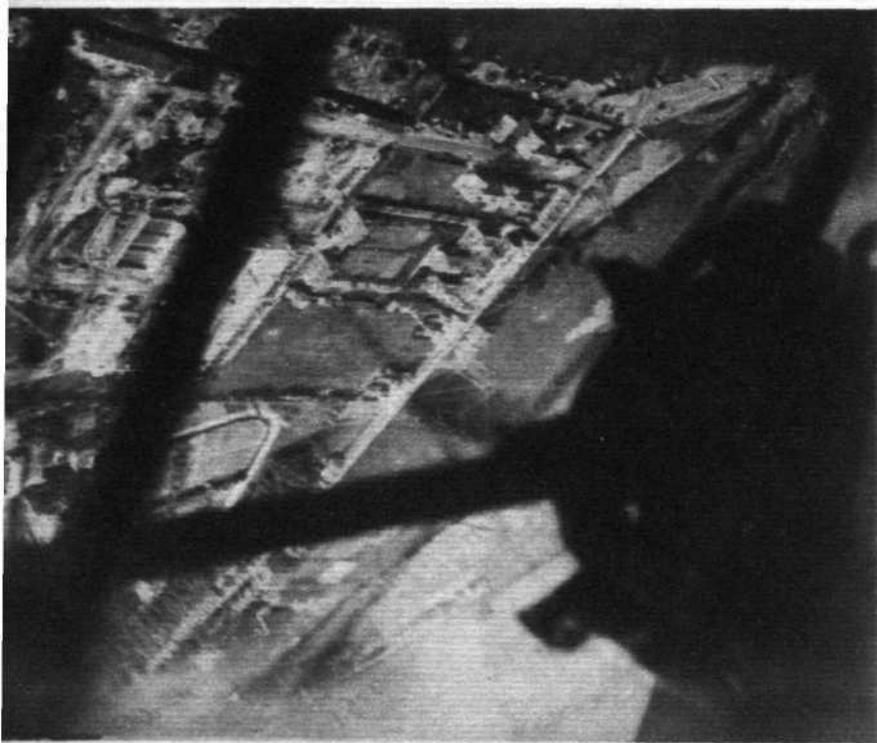
IN the spring of 1918, whilst stationed at London Colney, I was asked by the Air Ministry (or whatever it was called at the time) if I would like to go to Boulton and Paul at Norwich as Air Force test pilot. It sounded like a cushy job and I grabbed it. Actually it turned out to be something much better than that, for it led to many years of some of my most varied and interesting flying experiences, as well as extremely pleasant personal associations—which still continue.

When I went there I was not quite a stranger, for John D. North, their chief engineer, had been chief engineer at the Grahame-White Company at Hendon where I had been an apprentice before World War I. North had his own peculiar methods of instructing apprentices: a sarcastic approach which made one feel a complete damn fool unless one completely grasped the point at issue; and it was not until I was sent to Farnborough in 1916 that I realized how much I had learned from him at Hendon. I now hoped to learn a lot more from him at Norwich—and I did.

My first job was to continue the tests of the Bobolink, a single-seat fighter which lost out to the competitive Sopwith Snipe. My principal project was, however, the forthcoming Bourges, a twin-engined bomber which was the precursor of the Sidestrand, Overstrand and other related aircraft. Hindsight rarely awards much credit to aircraft designs—one can always see five or ten years later how much better one could have done a job—but the Bourges continues to stand out in my mind as a remarkably excellent piece of work for its time. It is certain that, but for the aviation slump of the 'twenties, the Bourges (or at least its descendants) would have attained historical renown.

The Bourges was designed for two A.B.C. engines of (I think) some 350 h.p. However, production lagged and these engines were not forthcoming (as it happened, they were no good when they did turn up). So, rather than let the Bourges sit around doing nothing, it was decided to take the questionable course of fitting two B.R.2 rotary engines of much lower power in order at least to get some flight tests done. The Bourges responded unexpectedly and magnificently, and it still remains one of the four landplane types which I have most enjoyed flying (the others being the Camel, the Bristol Fighter and the Siskin).

Aerobatics in the Bourges I—a 1919 "Flight" picture by John Yoxall.



Great pilot, great aeroplane: Frank Courtney with the Bourges I in 1919.



Taken especially for "Flight," this picture shows Frank Courtney (left) as he is today. On the right is Bill Nicholls (formerly of Boulton Paul and "Flight") and in the centre "Skeets" Coleman, pilot of the Convair XFV-1 v.t.o. Pogo-Stick. Courtney and Nicholls are members of Convair's engineering department.

The performance of the Bourges was excellent, and its handling qualities (which are a function of general design and not merely control design) were astonishing. As a result, I was able to make its structural qualities speak for themselves. Starting off with a few loops, I soon found that I could make the Bourges perform like an oversized Camel. By shutting off one engine or the other, or by varying throttle settings, I managed to make differential thrust compensate for any sluggishness due to greater dimensions; and, as in the case of the Camel, one could use the gyroscopic effect of the rotary engines for added yawing or pitching forces. Thus the Bourges could be thrown around in loops, spins, rolls or any other freak manoeuvre that one could think up, without any special effort at all. I gathered that my show at Hendon, at the reception for Commander Read and his transatlantic NC-4 flying-boat crew in 1919, caused something of a sensation as to what a twin-engined bomber could do. A couple of years ago I had dinner in Washington with Admiral Read and we did a little more hangar-flying in the Bourges.

Another project of B. and P. gave me much interest, fun and excitement. The American Army Air Corps had bought a bunch of Gnome Monosoupape 150 h.p. engines and wanted to put them into Camels. B. and P., who were building Camels in production, got the job of revising and producing a line of them with that noisy, temperamental and (when it ran) powerful engine. I got the job of testing them, and American headquarters in London suggested that I keep one practically for myself so that I could "run the hell out of it" for test purposes. (Incidentally, my American connections on that project resulted directly in my eventually coming to the U.S.A.)

The history of the Mono Camel was brief but highly eventful; B. and P. built wonderful Camels, but they could not control the mixed marriage with the Monos, and this was one more problem which was removed by the ending of the war. For myself, I got a lot of fun out of it. Among other strange features was the fact that this Mono was "throttled" by a selector switch which progressively cut out one cylinder after another, until it was fully throttled by running on one cylinder only—with a noise exactly like the firing of a machine gun. One day, having a lunch appointment at Harling Road, I turned up by diving on the hangars with