

In the Hart, the Hawker company had produced the fastest bomber of its time. All that was now required was a fighter that could catch it. This month John W. R. Taylor tells the story of the

FURY

AMONG the many achievements that could be claimed by the old Hawker company and their great chief designer, Sir Sydney Camm, was that they produced the first R.A.F. combat aircraft able to exceed, successively, 200 m.p.h., 300 m.p.h. and 400 m.p.h. The machine which started this unique string of 'firsts' was the Fury biplane.

In the August 1966 *Meccano Magazine*, I told the story of the Hawker Hart bomber. When this entered service, it was so fast that it could outfly even the best R.A.F. fighters of the time. It was so good, in fact, that the Air Ministry had to scrap the whole generation of new prototype fighters that had been designed to Specification F.20/27. With their bulky radial engines, they would clearly have been no match for bombers like the beautifully-streamlined Hart.

This was fine for Hawkers. Having produced a bomber that could outstrip all the fighters, they next offered the Air Ministry the only fighter able to catch their bomber.

They did this by redesigning, at their own expense, the little single-seat biplane that they had built to the original F.20/27 Specification. Instead of the clumsy 450 h.p. Jupiter radial engine, they fitted a 490 h.p. Rolls-Royce F.XIA water-cooled in-line engine. The result, inevitably, looked like a scaled-down Hart, but with only one seat and without any sweepback on the top wing.

Named the Hornet, the new fighter was displayed in public for the first time at the 1929 Aero Show at Olympia, side-by-side with the Hart, and became the star of the show. After its original engine had been replaced by a supercharged F.XIS, it proved capable of 205 m.p.h. in level flight at a height of 13,000 ft. The Air Ministry decided at once to buy the prototype, which became J9682, and official trials at Martlesham Heath experimental station showed that the Hornet's handling qualities were as pleasing as its appearance and performance.

Comparative trials against the Fairey Firefly IIM convinced the Air Ministry that the Hornet was the new fighter it needed for bomber interception duties, and Hawkers received an initial contract for 21 in August 1930. Before any of these had been completed, their chief test pilot, 'George' Bulman, flew out to Yugoslavia in the prototype and landed the first export order for six Furies.

Nowadays, when it takes anything up to six years to develop a fighter and get it into squadron service, it is a little startling to realise that Hawkers flew the first production Fury (K1926) on March 25, 1931, a mere eight months after the contract was placed. What is more, the other 20 R.A.F. aircraft and the six Yugoslav machines all made their first flights within the following three weeks!

There could be no better indication of the simplicity of the Fury's design. Its fuselage—like that of the Hart—consisted of a 'box' made

up of round-section steel and duralumin struts, each rolled to a square section at the ends, so that they could be bolted or riveted between flat side plates at the joints. The wings had metal spars and spruce ribs and were fabric-covered, like the rear fuselage and tail unit. Armament, unchanged since the 1914-18 War, consisted of a pair of Vickers machine-guns mounted in the upper part of the front fuselage.

If we take a photograph of the Fury and cover up its fixed undercarriage, it looks elegant and speedy even by modern standards. In the early 'thirties when retractable undercarriages were almost unknown, it was as exciting as the most advanced supersonic research aircraft of the present time.

No. 43 Squadron, first to get Furies in May 1931, demonstrated the capabilities of their new mounts in the annual air exercises which took place soon afterwards, by intercepting far more of the 'attacking' bombers than did the more numerous Bulldog fighters of other squadrons. In the following year, a Fury of the Royal Yugoslav Air Force won the speed contest at the Zurich International Aircraft Meeting by racing round the Alps at 201 m.p.h.

At the annual R.A.F. Displays at Hendon, Fury Squadrons took over from Gamecocks and Siskins as the crack aerobic teams. No. 25 Squadron, in particular, thrilled the crowds by completing their entire routine, from take-off to touchdown, with their Furies tied together by elastic ropes with coloured streamers attached.

The first Furies flown by the R.A.F. had 525 h.p. Rolls-Royce Kestrel IIS supercharged engines. A total of 117 were built between 1930 and 1935, and were followed by 98 Fury II's with a 640 h.p. Kestrel VI engine and wheel spats. Top speed of the Fury II was 223 m.p.h. and it had, for those days, a phenomenal rate of climb of 3,200 feet a minute. Even this did not represent the limit of the design potential, as the experimental High-Speed Fury (K3586) of 1933 could fly at 250 m.p.h.

Except for its spatted undercarriage and sweptback top wing, the High-Speed Fury looked little different from the R.A.F. Fury I, but the versions sold to some foreign air forces introduced so many changes that they were hardly recognisable as Furies. The Persians, for example, bought 16 in 1933 with American Pratt & Whitney Hornet

radial engines, which not only spoiled the aircraft's fine lines, but proved troublesome in service. The engines suffered from overheating in the Middle Eastern climate and the radial-engined Fury also tended to be nose-heavy. On one occasion, a Hornet-engined Fury tipped forward on to its nose while taxi-ing at Martlesham Heath.

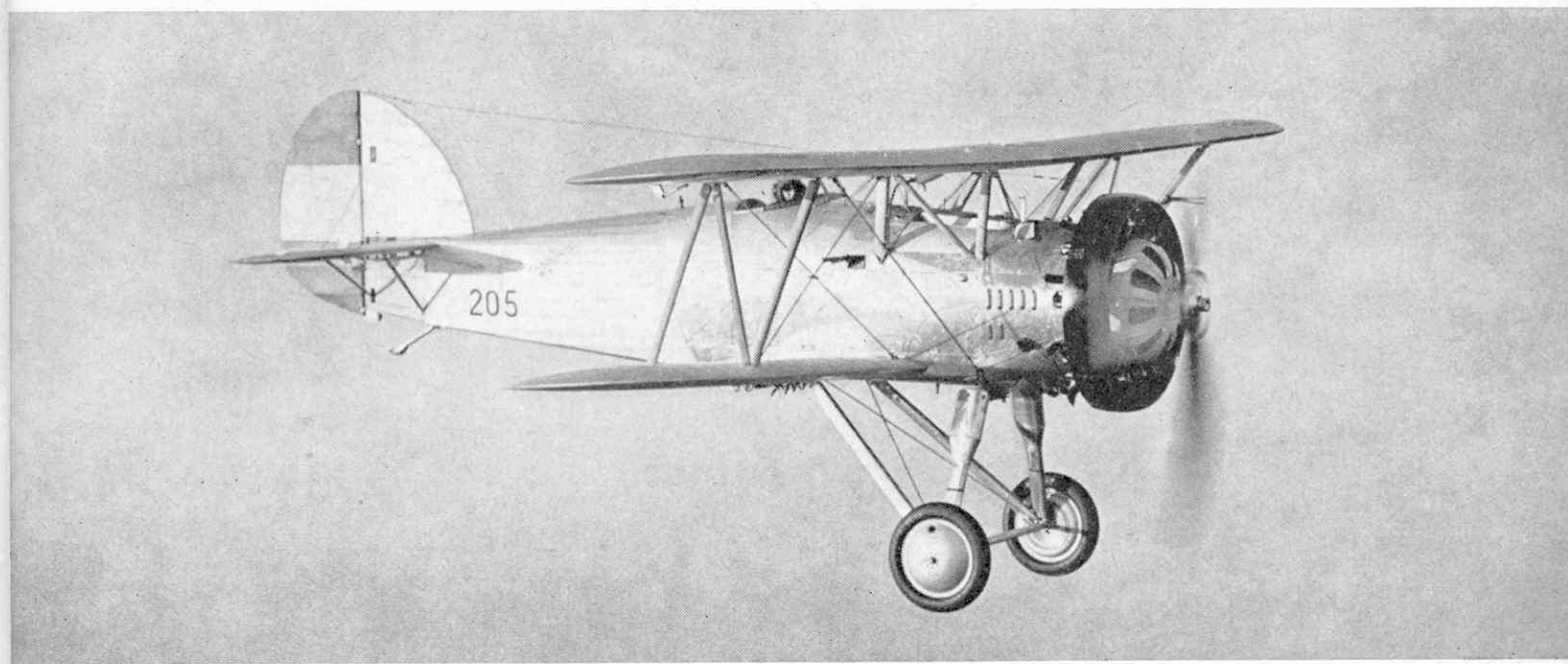
The Persians bought a second batch of Furies later with less bulky Bristol Mercury radials, and these proved more popular, remaining in service until well into the 1940s. But the finest of the foreign Furies were undoubtedly the second batch ordered by Yugoslavia in 1935. Instead of the old V-strut undercarriage, these had neat cantilever main legs, internally-sprung wheels and low-drag radiators, giving them a top speed of 242 m.p.h. Their armament could also be doubled, by installing a pair of additional machine-guns in fairings under the bottom wings.

Three similar aircraft went to Spain, with 700 h.p. Hispano-Suiza engines instead of the usual Kestrels. They arrived just before the outbreak of the Civil War in 1936 and achieved the rare distinction of serving with both the Government and Nationalist air forces. One aircraft is even reported to have changed sides several times, which shows that it must have been regarded pretty highly as a fighting machine.

However, the best tribute to the Fury was probably paid much more recently. Back in 1960, John Isaacs of Southampton was looking for a suitable design for a single-seat light plane that he could build at home. He hit upon the idea of scaling down the Fury design, and the seven-tenths scale Isaacs Fury flew for the first time on August 30, 1963, powered by a 65 h.p. Walter Mikron engine. As one would expect from such a thoroughbred design, the little biplane flies beautifully. Plans are available to other amateur constructor-pilots, and we may yet see whole squadrons of Furies in the air again, as in those days when the full-scale version represented the peak in world fighter design.

Data (Fury Mk. I): Span, 30 ft. 0 in.; length, 26 ft. 8 in.; height 10 ft. 2 in.; wing area 252 sq. ft.; weight empty, 2,623 lb., loaded, 3,490 lb.; maximum speed, 207 m.p.h. at 14,000 ft.; climb to 10,000 ft. in 4 min. 25 sec.; service ceiling, 28,000 ft.; range 305 miles.





Top: probably the finest of the foreign Furies, the batch delivered to Yugoslavia in 1935 had very neat cantilever undercarriage legs and low drag radiators. Top speed was 242 m.p.h.

Centre: a Persian radial engine Fury

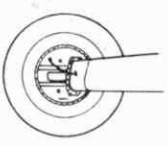
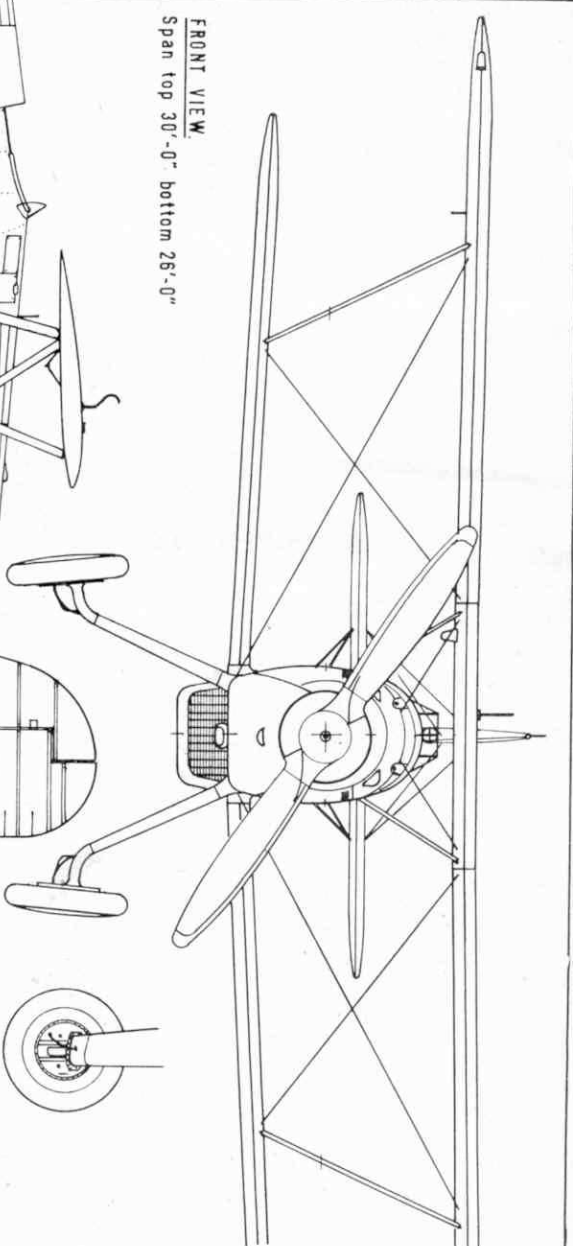
Opposite page: built by John Isaacs of Southampton, this seven-tenths scale Fury first flew in August 1963. A 65 h.p. Walter Mikron engine supplies the power

The Bleriot Militaire XI which was described in John Taylor's article last month, together with a 1/48 scale plan by Ian Stair

**FURY
FURY
FURY!**

PLAN OVERLEAF

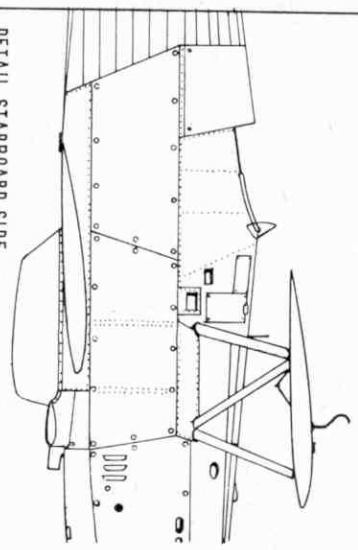
FRONT VIEW
Span top 30'-0" bottom 26'-0"



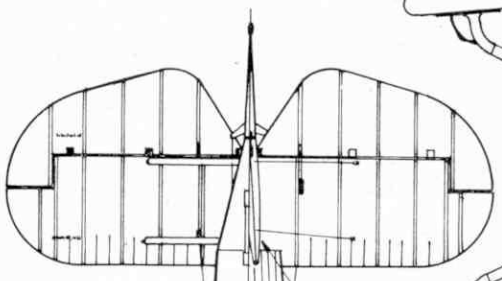
DETAIL INSIDE WHEEL

Fin offset to port.

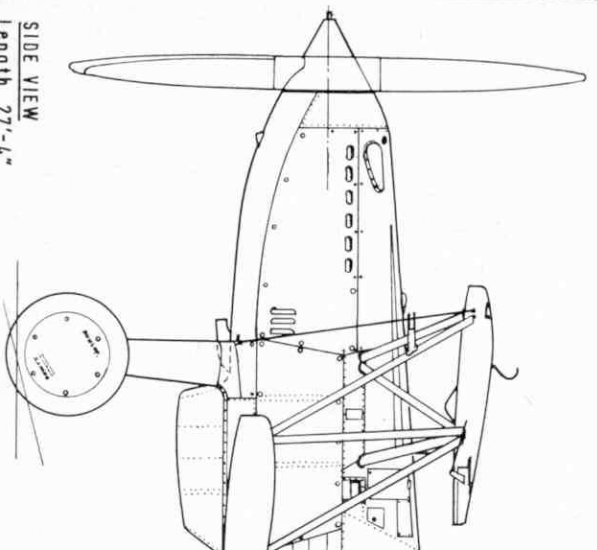
DETAIL STARBOARD SIDE



PLAN



SIDE VIEW
Length 27'-4"



HAWKER FURY.
745 h.p. ROLLS-ROYCE KESTREL XVI
Yugoslav Military Air Force.

Mass balance

Max. light.

Navigation light

COLOURS—
Fabric covered areas—
Silver doped.
Metal cowling
undercarriage etc.—
Polished aluminium.
Red.
Blue.
White with black edge.
Rudder - Blue top,
white and red bottom.
Aircrew - dark wood.

1 2 3 4 5 6 7 8 9 10 Scale feet.