

FIGHTER GLIDER

BY "F/Lt."

IN the May issue of the AERO MODELLER, Mr. Jones stated that he preferred using his model Halifax as a tow-line glider. This set me thinking.

Elastic is hard to come by and balsa wood is even scarcer. A glider seems the answer. It is a well-known fact that a moderately loaded model glider is more efficient than a lightly loaded one, and here the use of harder woods becomes an asset. Again, the modern aircraft looks much better with its undercarriage retracted, and in the case of a flying model (unless some very complicated gear is used for lowering the undercarriage) the propeller is liable to be damaged.

Therefore, working on these facts, I prepared a lay-out for a free-lance low-wing monoplane fighter glider. I was a bit dubious about a low-wing glider, unless excessive dihedral was used, but my fears were entirely unfounded, and the completed model glides as well as any pukka glider I have built, and looks far more impressive as can be seen by Mr. C. Rupert Moore's painting on the cover.

The main particulars are as follows: Span, 42 ins.; length, 31 ins.; wing area, $1\frac{1}{2}$ sq. ft.; wing loading, 8 ozs./sq. ft.; all up weight, 12 ozs.

CONSTRUCTION.

(Plan appears on pages 90 and 91.)

Obecchi wood, $\frac{1}{16}$ in., is used for the formers which have their centres cut out. The stringers, thirty-two in number, are $\frac{1}{16}$ in. square birch. The tailplane and fin is made up of $\frac{1}{4}$ in. square and $\frac{1}{4} \times \frac{3}{8}$ in. soft balsa outline, sanded to shape, with $\frac{1}{16}$ in. sheet balsa ribs. Rudder and elevators are hinged, with soft wire. The nose block, which fits into a square cut out of the nose former,

and is detachable, forms the spinner of the aircraft. It is hollowed out and lead shot is poured in through a hole in the back to obtain trim. Two launching hooks are cemented to the bottom of the fuselage. The cockpit cover is moulded out of transparent plastic material.

A single deep $\frac{1}{4}$ in. hard balsa sheet main spar is used, with balsa wood ribs of Clark Y section. The leading edge is $\frac{1}{8}$ in. square birch or $\frac{1}{4}$ in. balsa, and trailing edge $\frac{1}{2}$ in. by $\frac{1}{8}$ in. balsa wood sanded to conform to the section. The leading edge as far back as the centre of pressure, top and bottom, is covered with $\frac{1}{32}$ in. Obecchi wood. The mainplanes have two $\frac{1}{4}$ in. birch pegs which fit into paper tubes well cemented and braced across the fuselage. These protrude about $\frac{1}{2}$ in. in each side and are covered in to form the wing root fairings and fillets.

The whole aircraft is covered with bamboo paper, and from the rear of the cockpit cover forward, a double covering is used. Two sorts of clear dope are applied, and then the fighter scheme camouflage is sprayed on, complete with all "trimmings." Undercarriage covers are thin card pasted on the underside of the wing.

As I have stated previously, the glide is extremely good, although for hand-launching a fairly hefty shove is required, but with a slight breeze blowing there is a strong tendency to soar.

This type of glider seems to open up a new field for competition, and perhaps after the war we may see full scale models of all the modern fighters and bombers being flown as gliders, and a very pretty sight too!

I, myself, am starting on a 1 in. to 1 ft. fully detailed model of a Mosquito.

