

**36 inch scale model  
with simple construction  
flies like a sport job**

# AUSTER A.O.P.9

by Ron Moulton

NO OTHER aircraft company can claim the distinction attained by Auster Aircraft Ltd., of Leicester, with its specialisation in light-planes and Military Air Observation Parts. Each one of the Auster breed is given a mark number or name—we have the Aiglet, the Autocar, the popular V and the A.O.P.6, yet they are all known to John Public by one name—Auster. Only small distinction serves to split these types: but the latest of the line, the Mk. 9 joins the fleet as an entirely new design and deserves something more inspiring than a number to credit its proposed lines and high performance. Doubtless the Army, with its famous laxative pill of same Mk. Number will soon find nomenclature suitable for this aeroplane that is sure to get things moving.

Modellers with scale inclinations will already have appreciated the way Messrs. Auster Ltd., have simplified their outline, shortened the tail moment, enlarged the tailplane and reduced the strutter to make the "9" a "perfect subject". It bears sport design proportions, allows tough construction and is delightfully inherently stable. Like the full-size it can be overpowered for performance with a flair for aerobatics or it can fly on minimum power at stooge speed on low level circuits.

Shortening the tail moment of the Auster series—even though by only a slight degree, means that a sheet fuselage is possible as weight can be afforded at the rear to balance a lengthy nose cowling. Thus the 1"-1" scale version presented here is a sheet simplicity job, suitable for beginners or expert and calculated to give a maximum of fun for a minimum of repair work.

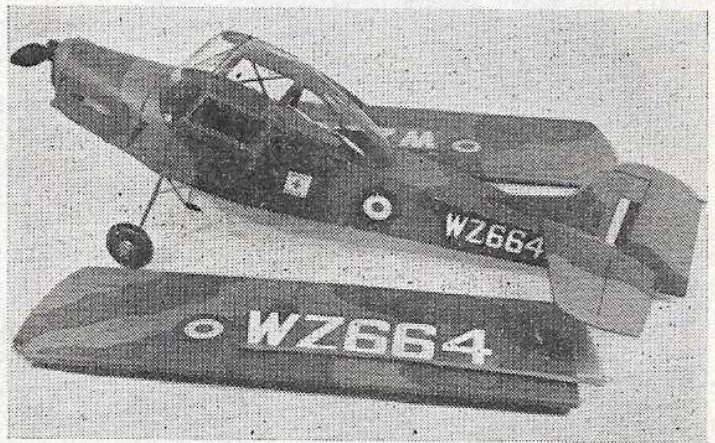
The original weighed 11½ ounces, with a Merlin .8 c.c. diesel and after driving the designer to earth on a first flight loop peaking at 15 ft. altitude and pulling out at scant inches, it was soon tamed for a left hand steeply banked circuit on "recce" over Epsom Downs.

High level flying on a long motor run is followed by a safe and steady rate of descent sufficient to keep the flight within reasonable bounds so that as much as 90 seconds power run is possible in calm to medium wind conditions. And if the motor run is arranged for peak revs during the last steps of the flight, some entertaining loops and etcetera's can be arranged by elevator trim.

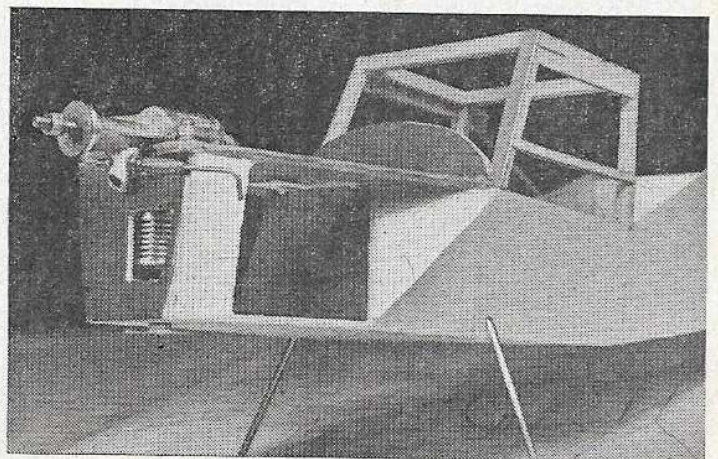
Start with the fuselage sheets, notching at bend lines and applying a cement skin so that sides and bottom approximate the required angles. Assemble F4, F5 onto the 1 mm. ply door frames, noting the difference for the starboard side frame, and fit to sides. Check the incidence against the plan then cement the sides to bottom sheet, after fitting the strut loop wire and  $\frac{3}{16}$ " sq. retainer. Bind the u/c to F.3, using 12 g. wire for scale, or 14 g. if the bends are difficult for you. F.3 on the prototype was made of the new Solarbo "Li-Ply" or  $\frac{1}{8}$ " ply, similarly for F.1 and F.2. Now fit F.3

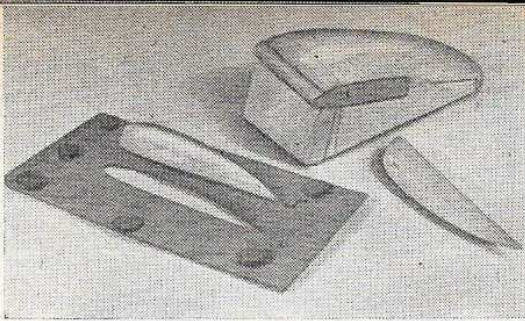


2 in. and  $\frac{1}{8}$  in. Fisher white alphabet transfers give authentic registration over Titanine Dk. Earth and Dk. Green matt camouflage. New K.K. 6 x 4 Truflex is used



Knock-off wings are rigid in flight. Flexible struts save damage, and moulded canopy adds strength. Below, basic structure showing "Li-Ply" bulkheads

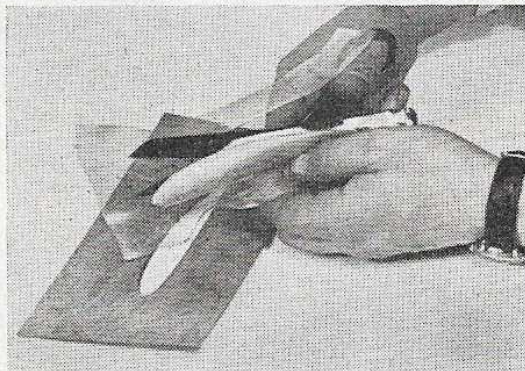




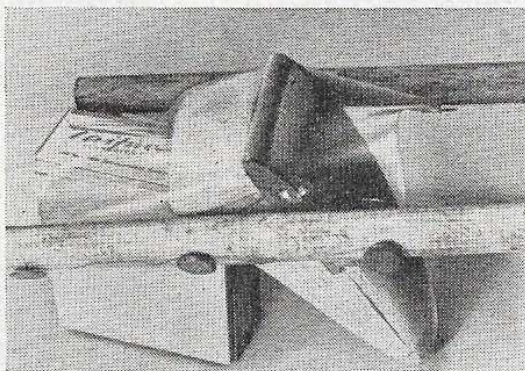
Mock-up for canopy uses part ribs and l.e. section. Tip template has acetate pinned in place with patterns for left and right.



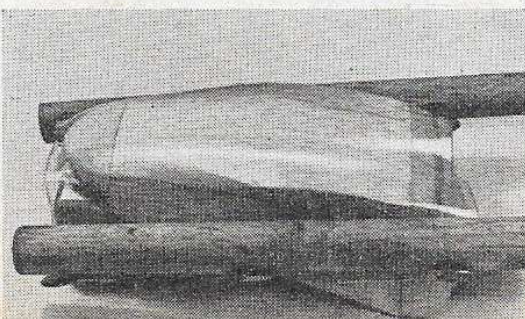
Heat acetate until floppy, with pattern ready for a quick moulding—action must be immediate to take effect



Unpin and trim off excess around pattern, slip over tip rib after removing pattern for final trimming



Canopy is moulded in two stages, afterwards joined. Hot acetate sheet between two stout rods is forced over pattern



in place to set the "bow" of the sides which are pulled in to "square" by adding F.6, then the top. Set F.1 at front, check the thrustline and fit engine plate supported by "doublers" each side at front. Add F.2, F.2a and  $\frac{3}{16}$  sq. cabin structure with  $\frac{3}{16}$ " dowels attached. Fit engine, cutting away F.1 to suit, add hollowed noseblock, complete cowl with sides, detachable planked top and cooling exit sides tapering inwards to F.2. The step, cabin ribs  $\frac{1}{16}$ " dowel or reed cabin struts and 1 mm. ply rear cabin frame, tailwheel and tank detail make the fuselage ready for the canopy and since Wing and Tail assembly is as simple as can be, a special instruction on acetate moulding will not be out of place.

### Canopy Moulding

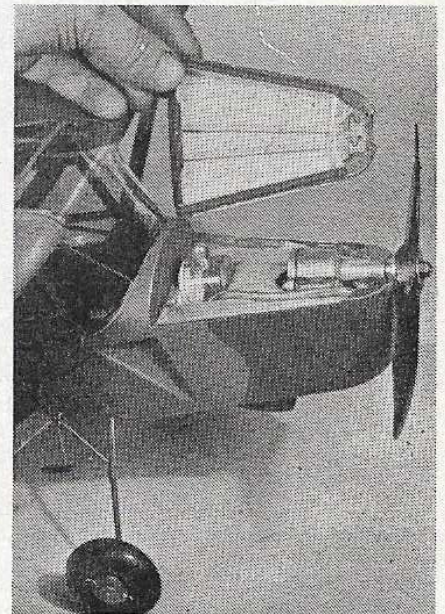
The A.O.P. Mk. 9 Cabin can be made without moulding, but loses its rotund appearance for a series of blunt angular bends. To get scale effect, a block of laminated scrap sheet is carved to actual shape, and the moulding made in two stages. For the prototype, ordinary celluloid with a measured .013" thickness produced good results, though .020" acetate, from some model shops and most handicraft shops is to be advised. To mould the top, cut a sheet of the moulding material approximately 2" over-size in all directions and pin at 2" intervals along a pair of stout sticks. Heat the sheet in front of an electric fire until it becomes floppy and is giving off a steamy vapour. Keep the mould handy and well supported, then, when the sheet is very pliable, force it down in one swift and immediate movement on the mould. A spare pair of hands suitably protected with a rag can force the ends at front and rear. Repeat for the windscreen and join the two with cement.

Tips are made in one by heating the acetate on a ply former with a clearance hole cut for the mould. When floppy, the ply is forced quickly over the mould and the acetate in between adopts the tip profile to perfection. Approx: 1/5th the weight of balsa block, and replaceable with minimum bother, moulded tips are advised for all models, including contest types.

To get best effect, only rough trim the tip mouldings before fitting to the tip wing rib, then, when cemented in place, the excess can be cut away. The result is neater, and far easier to accomplish.

Ideal accessories for the A.O.P. 9 are the M.S. circular plastic tank of transparent material which will just fit in the engine mounting plate hole and their "Airtrap" wheels. Size of the tank is  $\frac{7}{8}$ " diameter, and the wheels,  $1\frac{3}{4}$ ". The latter are to perfect scale in overall diameter and tyre section; but if 12-gauge piano wire is used for the undercarriage, the hubs have to be modified. Remove the aluminium bush by unscrewing in the normal manner, part the outer plastic hub sides, and smear all faces with a reputable cement. Screw up the bush again to pull everything tight, leave for 24 hours, then remove the bush and retain wheels with a large washer.

Assembly and camouflage in Dk. Earth and Dk. Green on all surfaces with white lettering make the Mk. 9 complete. Allow a free movement of  $-\frac{3}{16}$ " for the tailplane until actual setting is found after test flights, and you'll find yourself with a lively stablemate for the Bird Dog, its American equivalent, published last December.



Cowl is retained with crankcase clip. Wheels and tank are by M.S. (Newcastle)