

DIMINUTIVE TYPHOON

BY R. COLEMAN

ON my next leave I determined to try out an interesting experiment which I had kept tucked away in the back of my mind ever since reading it in Zaic's 1937 Year Book. I always supposed it would work O.K. and anyway while there was plenty of balsa wood to use, why go to all that trouble.

However, times have changed, and balsa just doesn't grow or hedges any more, so it's about time I gave the pet idea an airing.

The experiment was completely successful, I turned out a neat little model of the "Hawker Typhoon" all complete with its monocoque brown paper fuselage. How much? Come again! Yes! I said, BROWN PAPER fuselage! Well! brown paper and plenty of glue.

Clever, eh? That's what I thought when I read Zaic's book, and for those readers who haven't got the 1937 copy here's how it's done.

A solid wood former is curved to the exact shape and size of the fuselage in the same manner as if you were making a solid model. After sanding, the former is waxed all over with candle wax by holding above a stove or similar source of heat and rubbing the candle along as the wax melts into the wood. Make sure that when finished there are no blobs of wax on the surface, any uneven parts can be smoothed out with a hot knife.

The waxed former should then be mounted on a couple of bearings, one each end so that it can be rotated. I mounted mine between a couple of lathe centres.

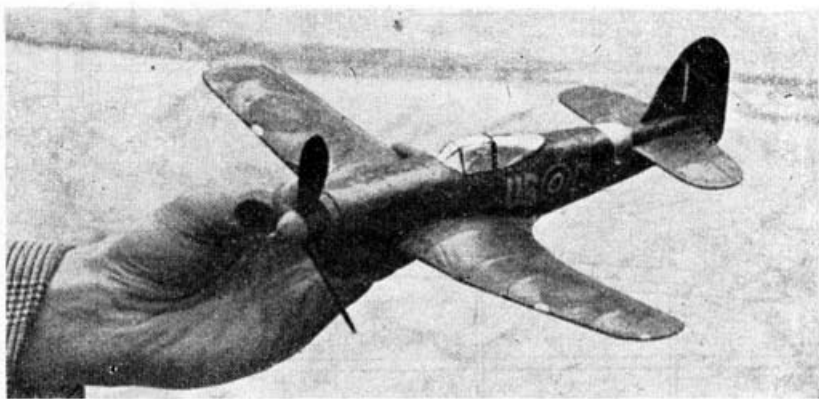
A number of $\frac{1}{8}$ in. wide strips of strong brown paper are now cut and soaked in water to soften them. Drain off the surplus and wind a strip diagonally round the former, starting at the nose end; overlap the joints about $\frac{1}{16}$ th. Cover the whole former with one layer of strips well pressed down to the fuselage contours. You will find that odd triangular pieces of paper will be required here and there and some strips will need tapering. It's a tricky job to avoid tearing and to get the wet paper to stick down to the wax.

Now give the whole a coat of strong water glue—Certifix or Lepages or similar, and put on the second layer of paper strips. This should be easier with the glue to hold things together, then another coat of glue and a final paper layer from the nose back to the cockpit. Thus the front half has three thicknesses, and the rear half has two thicknesses with a coat of glue all over.

Put aside for a day or two to dry out thoroughly; then cut down the centre line, top and bottom, and the two halves should come away without much trouble.

Two bulkheads and a rearpost are fitted inside the fuselage besides the weight box in the nose, and the motor anchor plates in the tail.

All these are shown on the drawing and should be carefully cut and tried in the two halves of the fuselage. When they fit snugly, cement them into one half and make up the weight box in the nose. When set join on the other half (in similar matter to an Easter egg) with slow drying glue. If you made the centre line cut



carefully with a razor blade, and the parts have not gone out of shape at all, when the glue is smoothed off the joint should be almost invisible.

Wings.

The wings and tailplanes are quite simple and present no difficulties. Considerable care and attention should be paid to the fitting of them to the fuselage. The wing centre section is covered with stiff notepaper between the two base ribs. Holes are cut with a razor blade in the fuselage sides using a base rib as a rough guide to the correct camber. Be careful to get the correct incidence angles and positions so that the wings, etc., are not mounted lop-sided. Notice the centre bulkhead has to be cut through to allow the wing to slide through and be careful not to slice through the rear post when cutting the holes for the tailplane. Slide wing and tailplane through the fuselage, cement and wedge with small balsa wedges, add wing fillets of paper and balsa and fill in all holes with a cement fill. A 1 mm. ply facing is cemented to the nose bulkhead.

The fin and rudder is cemented to the rear post and top tail end of the fuselage.

Covering.

Cover the wings and tail assembly with jap tissue spray with water and when dry give one coat of clear dope all over, then two of camouflage colours followed by all the usual finishing details for a scale model. For a lighter model and better performance do without the coloured dopes, etc.

Airscrews and Flying.

The prop. shown on the drawing is a three bladed 4 in. dia. \times 4 in. pitch. The blades are curved separately and fixed to the centre spinner. The shafts should be off-set to the right in the nose block to counteract torque which can be rather severe at top number of turns on the motor. The motor was made up of 4 strands of $\frac{1}{8}$ in. rubber 13 in. long.

The model will probably be tail heavy with the motor fitted so it will require lead shot in the nose weight blocks (drill $\frac{1}{8}$ in. hole in radiator bottom and plug with balsa) to obtain the correct balance for a flat glide.

Remember to launch fast, as in flight the model lives up to the name of its big brother—as regards speed anyway. With the 4 inch prop. she gives quite good flights of about 15 seconds so far. Be careful of the torque, increase incidence on the left-hand wing if necessary. This Baby Typhoon should be quite suitable for R.T.P. flying, and I intend to try this out next time.