



## BREWSTER "BUFFALO"

By W. R. JONES

THE "Buffalo" is one of the United States single-seat fighters ordered by the R.A.F. for Fleet Air Arm use. The maximum speed is given as 310 m.p.h. at 15,000 feet, cruising speed range is 2,500 miles. The model is designed to give a fair performance and still retain the lines of the full-size aeroplane. This required a lot of hard work and thought in the initial stages on the drawing board. I think that the result is quite pleasing and the performance, although not up to super-duration standard, is quite satisfactory. Longest flights to date have been around the 30 sec. mark with suitable weather conditions. The "Buffalo" can be relied upon to give fast steady flights up to 25 sec. Flying has to be done with great care because the model takes after the full-size plane and needs to be handled gently.

The construction of the "Buffalo" has been kept as simple as possible, in fact a beginner could tackle it with perfect confidence. The plans and perspective drawings give most of the information necessary to complete the model, so these instructions will be kept as brief as possible. I know from long experience in the "model" business how boring instructions can be. Individual modellers all have their "pet" ideas and "wild horses" will not make them change.

The FUSELAGE is quite simple to build. The top and bottom sections are built up and then joined at the keels. Draw a centre-line on paper first and then pin down the keels equally spaced from this line. Glue on the top former first and when dry remove from plan and start building the bottom section in the same way. When the two sections are finished, glue together at keels and glue former No. 1 in place.

*Note.*—This former must on no account be fitted before the two sections are fitted together.

Build up FUSELAGE TUBE. Insert into SPARS after these have been fixed as shown. Build up MOTOR TUBE and COWLING as shown.

*Note.*—That REAR HOOK is "looped" to take piano wire pin just forward of former No. 7.

When all these details and the braces have been fixed in position, the fuselage is covered with  $\frac{1}{2}$  in. sheet balsa in 1-in. wide strips. Fit celluloid as per instructions on plans. These notes apply to ALL difficult details. Build up the WINGS, RUDDER and TAILPLANE as shown on the plans, using the wood stated on drawings. Notes are given for *vudder* and *tailplane* outline construction. The wing boxes should be constructed so that parts "S" fit tightly into same. The UNDERCARRIAGE should be fitted with great care (see drawing on Plate 6 of plans). When it is required to dismantle wings from fuselage the *undercarriage stays* should be withdrawn from the tubes in former "3B." wing ribs and covering must be cut away so that piece "G" fits flush with underside of wing. If the undercarriage requires to be fully retractable, piece "E" should be hinged about the undercarriage stay tube. This allows the wheel to lie flush with the fuselage side. As stated above, the undercarriage fitting operations should be carried out so that everything fits "spot on" (to use an engineering term).

When everything has been completed to your satisfaction, the whole model should be covered with jap tissue, steam shrunk, and two coats of dope (except tail surfaces) applied. Waterproof with banana oil (two coats) and allow to dry. It is not desirable to put "shadow shading" on, if a "super" performance is the objective. If you care to sacrifice a little duration this may be done and will improve the appearance of the "Buffalo" 100 per cent. The underside is doped silver and the national markings are, of course, red, white and blue. Yellow ring surrounds the "rounders" on fuselage sides. Red and blue only on wings (top surface).

Use three or four loops of  $\frac{1}{8}$  in. rubber with free wheel and attach to the PROPELLER, when this component has been carved to shape. Gliding tests should be carried out, and when satisfactory, power flights may be tried, starting with 150 turns on the rubber. The construction will stand "tons" of rough handling and should last indefinitely. The original has completed about 30 flights to date, and although it has hit several things it has not yet been repaired.

