

I 16b RATA

By J. A. F. HALLS

DETAILS of the Rata were given in the November, 1941, **AERO-MODELLER**, and readers who would like to try a model a little out of the ordinary should build this one. It is a very fast flier, fairly heavy (the original weighed about 3 ozs.), and thus balsa is not essential. Approximately 75 per cent. substitutes were used in the original model which, however, was too nose heavy with the undercarriage attached. This was removed for flying and, using a hardwood propeller, the model was strong enough to take the strain of belly landings although it would be better to fly it over long grass. By careful choice of materials, this unbalance could be remedied and an undercarriage permanently fitted.

Fuselage.

Cut out the keels from 3/32 in. balsa or 1/16 in. sheet substitute. As shown in the plan, the bottom keel is made from two parts which should be stuck together and allowed to set on the plan.

The formers are cut from 1/16 in. sheet and slotted to accommodate the 1/16 in. square balsa stringers. A large diameter dowel is used as a building jig—a broom stick will do the job nicely—and the formers are mounted on this in their respective positions. Add the keels and stringers, taking care to get the line-up accurate. For hardwoods, a rather slower drying glue is better than balsa cement.

Wings.

Rib A is cemented to formers 1, 2, 3, 4 and 5 on the fuselage. Build up the rest of the wings on the plan, firstly pinning the spars in their correct positions. Notch the ribs as shown and cement in position on the plan. Finally, add the leading and trailing edges which should be raised slightly by inserting small pieces of balsa between them and the plan. The wing tip is added after the wing has been removed, but be sure to get this true.

Tail Unit.

Layout and cement together the fin outline on the plan and while this is setting, cut out R1, R2, R3, and cement them in position on R4. When the outline has set, remove from the plan and cement in this other framework. Finally add R5, clean up with sandpaper, cover and cement to the fuselage.

The tailplane is built up in an exactly similar manner and each half is cemented to the fuselage in the correct position.



THE 1-16 "RATA"

Span : 31 ft. 3 ins. Length : 21 ft. 11 ins.

Height : 10 ft. 4 ins.

Wing area : 204 sq. ft. (approx.)

Weights : Empty 4,910 lbs.

Loaded 6,100 lbs.

Loadings : Wing 30 lbs. sq. ft.

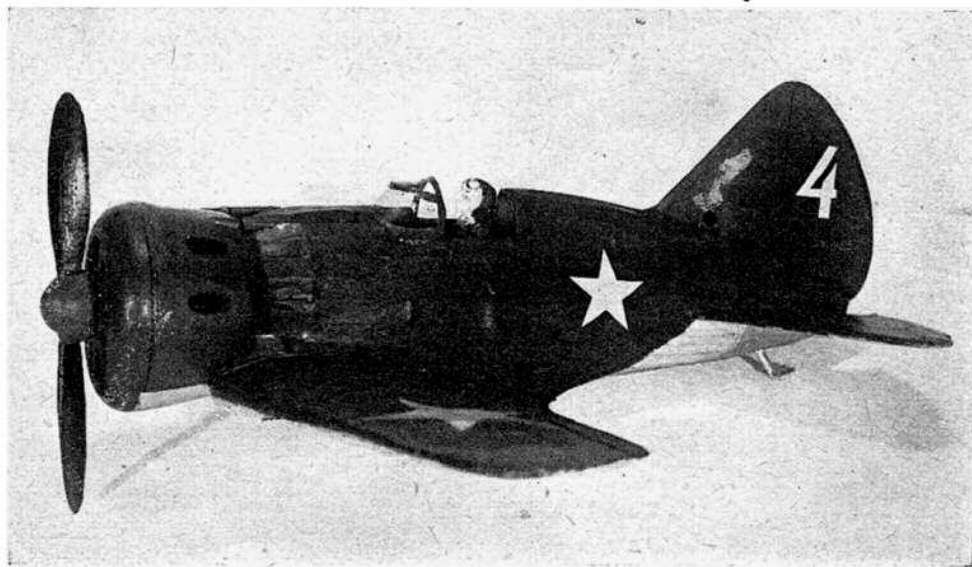
Power : 5.5 lbs./H.P.

Engines : 1-16 — M.25 (Wright Cyclone).

1-16b — M.63 (Wright Cyclone).

Armament : Two machine guns in fuselage and two in wings.

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Mr. Halls is to be congratulated on the excellence of his photographs, which are remarkably fine efforts. Although no great durations are to be expected from a model of this type, it makes a fine, speedy scale flier, fit to add to any collection. Colouring is dark green top surfaces with silver undersides.