

Two views of the completely uncovered skeleton which show great refinement of detail

# Build and Fly This Famous Racer

OF ALL the French racing ships of the "Caudron" type, the plane from which the accompanying drawings are copied is the most outstanding, for it holds the present "world's landplane speed record."

There are several interesting features in this ship; namely, an unusually short wing spread; and in contrast, an unusually long fuselage. Also, when in flight the landing gear, which consists of two "half pants," folds inward into the bottom of the fuselage and wing-root. Aside from the above features, it is a cleanly designed ship, having full monocoque plywood construction.

The top speed is over 300 m.p.h. over a measured mile course.

An interesting feature of its facsimile is the speed at which it travels on eight strands of  $\frac{1}{8}$ " flat rubber, although not quite duplicating that of its large counterpart to scale.

The plans for this model are full-size and every part is thoroughly described both on the drawings and in the following instructions, so you should have no difficulty in building as good a model as the one shown in the accompanying photo.

Before starting to cut any parts, you should first make a template for each piece, a list of which follows:

- 1—Wing ribs and wing tips
- 2—Fuselage bulkheads
- 3—Head-rest formers
- 4—Tail ribs and tail tips
- 5—Fuselage, tail and nose blocks
- 6—Landing gear
- 7—Belly radiator formers

These templates may be made from cardboard, bristol board or any other stiff material.

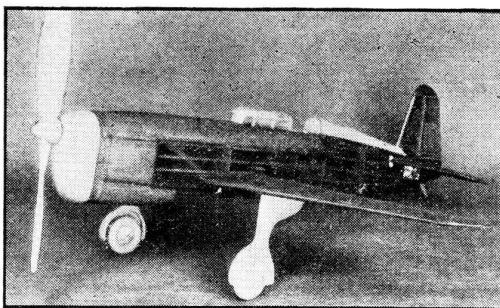
First trace the above parts on transparent tracing paper. Then turn the tracings over on the template paper with the penciled side down. This done, re-trace the lines again and when finished you will find that the pencil marks have been transferred to the stiff paper. When this procedure has been finished, cut around the outlines and place each completed template aside.

## The Wings

When finished with all the templates, take out the wing rib templates and trace the shape of each one onto  $\frac{1}{16}$ " sheet

How You Can Construct a Flying Scale Model of the Record-Breaking Caudron C.460 of Unusual Grace and Quality

By JOSEPH BATTAGLIA



Though a fast ship, the large propeller insures unusual duration and long flights

balsa. Trace all the parts on their respective sizes of wood and then start cutting each one out.

When through with this operation, put aside all the wing ribs.

The front wing spars are made of  $\frac{3}{32}$ " x  $\frac{3}{8}$ " at the root, tapering in plan only, while the rear spar is made from  $\frac{1}{16}$ " x  $\frac{3}{16}$ " balsa, tapering only at the outside top to accommodate rib No. 8 as shown in front view.

Cut the spars to the above dimensions and lay them on the top view of the wing panel. Now mark off each rib station on them. When this is done place a sheet of waxpaper over the drawing, lay the spars on it and stick straight pins on either side of them to keep them upright in place.

This done, slide each rib into place and cement it. As one panel is drying, go on to the next, and when you're through with it, place it aside.

By this time the first one should be dry, so take two pieces of  $\frac{1}{8}$ " x  $\frac{9}{32}$ " x  $\frac{9}{16}$ " balsa to form the leading edges. Taper these pieces according to the leading edge size of each rib and cement them onto the front ends of the wing panels. To hold them in place, you can either wrap a rubber band around the wing from the leading edge to the rear spar or drive pins through the leading edge to two or more ribs.

While one panel dries, work on the other, and when this is finished and the first one is dry, take a strip of balsa  $\frac{1}{8}$ " x  $\frac{3}{32}$ " for the trailing edge, cut it to the proper length and cement it in place, holding it temporarily with pins. Do the same with the other and allow each to dry.

Now make several small gussets from  $\frac{1}{32}$ " sheet stock as shown on top view of wing panel and cement each one in place. While these dry, cut several short lengths of  $\frac{1}{32}$ " square bamboo strips, drive them into their respective positions and apply some cement to each end.

Now take out the wing-tip templates, trace the outline of each on  $\frac{1}{16}$ " sheet balsa and cut out each wooden piece, after which they are cemented to the outer ends of the wings. While these dry, cut out two pieces of  $\frac{1}{32}$ " sheet balsa for the

covering underneath the wing, between ribs No. 2 and No. 4. Cement each of these in their respective places, holding them down with a few pins.

The ailerons are next. Measure off two pieces of balsa  $\frac{1}{16}$ " x  $\frac{3}{8}$ " x  $\frac{1}{4}$ " to form the aileron spars. These taper to conform with the depth of each rib attached to them and with the shape of the wing where they hinge. Cut them to the proper shape and after marking off the rib stations on each, cement them to the ribs.

The trailing edges are made from the same size stock as that of the wing, so cut out two pieces and cement them on. Let them dry, then make the gussets and bamboo strips and cement these on also.

By now the wing panels should be thoroughly dry, so take each one in rotation and sand the tips, leading and trailing edges to the proper shape as shown.

To bring the level of the wing at the rear spar (between ribs No. 5 and No. 8) to that of the aileron, you must cement a  $\frac{1}{16}$ " balsa strip (being  $\frac{33}{32}$ " deep where it meets rib No. 5 and  $\frac{3}{64}$ " deep where it meets No. 8 rib) to each spar at that point on each panel and allow each to dry.

The next step is to join the two halves of the wing at the center. Trace from the front view the correct angle of dihedral and cut two pieces of  $\frac{1}{16}$ " sheet balsa

(Continued on page 28)