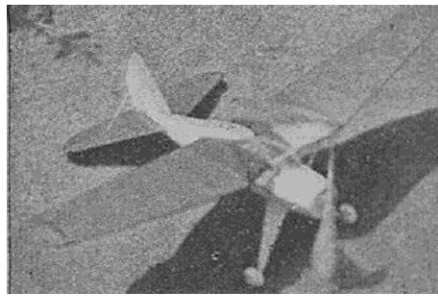


Flying



Auto

THESE are several unusual features of the Fahlin Aircraft Company's Plymacoupe that should make this plane interesting to model builders.

It was built for the Department of Commerce as one of the new light planes that are being sought to encourage private flying. To reduce engine cost—a major factor in keeping airplane prices high—it has a 6-cylinder 80 h.p. water-cooled Chrysler Plymouth automobile engine, geared down for aircraft use, which uses only 4 gallons of gas an hour. The front end of the circular cowling, housing the in-line engine instead of the usual radial type, holds the radiator. The gull-type wing, of distinctive shape, permits wide piloting vision. The ailerons extend all the way from wing tip to root section, serving also as air-brake flaps. The seating arrangement accommodates two persons side by side.

Top speed is 105, cruising 95, and landing with flaps 40. Some of this good performance carries over to our model, so don't be surprised at the angle of climb, stability, and endurance you'll get.

Better look at the drawings on the following pages before getting the listed materials ready. And here's an important suggestion: the first thing to do in the case of oval-sectioned fuselages such as the Plymacoupe's is to make up a sheet of plywood of two 1/32" balsa sheets, cemented together cross-grained. Place it under something heavy to keep it straight during the hour or two it takes to dry well. In the meantime, cut out the ribs, nose block, propeller, landing struts, and bend wire parts, etc.

FUSELAGE

There are seven formers to be cut in halves out of a 4"x6" sheet of plywood, and an additional former (B), making 15 pieces altogether. The best method in building the fuselage is to make half of it right on the side-view drawing, in order to obtain the true fuselage shape. After removing this half, which will be a left one, build the right side on to it. Do not forget to include the 1/8" sq. braces that support the landing gear, because the 1/32" sheet covering at these points will not be strong enough. The rear hook must be cemented in place as former H is being made whole.

WING PANELS

The gull design of the wing will make you think harder while assem-

A government plane for the aerial motorist in a flying scale model.

by Alan D. Booton

and trailing edges on. Line the ribs up carefully by sight and cement every joint. When dry, cement the tips on, and then the special ribs, which are marked 1x, 1y, and 1z.

TAIL SURFACES

The tail surfaces are of the thin, or flat, type, and are easily assembled by pinning the parts right on the drawing and cementing. Cover the tail surfaces according to your color scheme and lay them aside until the fuselage is covered.

LANDING GEAR

Cut the landing gear struts out of 3/32" sheet and sand them to a streamline shape. Note that the lower ends of the struts are jointed. To make a springy landing gear, two wire loops are employed on each wheel. The front loops extend to make the cross struts and down to make the axles. The rear loops are just long enough to be securely cemented. Make the tail wheel with a single wire strut. Use 1" hard-wood wheels on the main axles.

PROPELLER

Blank out a 3/4"x1/8"x1/2" block as shown on the drawing. Carve it carefully to the appearance of a wooden-type job, then sand and dope it several times. Insert the propeller shaft through the nose block (radiator), several washers, and then attach the prop in the usual way.

COVERING AND ASSEMBLING

Start at the rear of the fuselage and cover the bottom between the former H and the tail post and up to the middle longerons, then the top portion, and continue forward a section at a time. To obtain a good covering job, a piece of tissue should be held on the space to be covered, and marked. Leave 1/16" border around the marks when cutting the pattern. Place this pattern back on the place it was (Turn to page 94)

PLYMACOUCPE



Not a dying Plymacoupe or a nose-over landing; just a bottom view of our model.

marked for and dope the edges with a small brush while the pattern is held in place.

Cover the wing panels from the first ribs to the tip ribs, except the portions between ribs 1x and 1y, which, like the tips, must be covered with separate pieces.

Cement model celluloid on the spaces indicated on the drawing and then cement the wings on. The wing beams fit to the back of the former D, which is the main support. The leading edges are cemented to the top corners of former C and the trailing edges to F. Finish covering the space left between the wing panels and the fuselage.

Cement the tail surfaces on and sew the brace thread through the places indicated on the drawings.

Cement the landing gear to the fuselage with the aid of short wire or bamboo pegs to hold the struts while drying. Don't forget the tail wheel.

Spray the model lightly with water to tighten the tissue and then apply a coat of clear model dope. If you consider what color scheme you prefer before covering, the only colored dope necessary is for the cowl and landing gear.

FLYING

With two loops of $\frac{1}{8}$ " rubber, the model should weigh about an ounce. To get the rubber in, fasten an "S" hook on the rubber and tie the strands together with a thin rubber band, then drop the rear end of the rubber into the fuselage and "fish" for the rear hook.

Glide the model and make adjustments to suit the trouble, if any. Try the model under increasing numbers of turns until it is found the model acts well in the air. And by the time you get to the full winds, somebody will be tired from retrieving!

LIST OF MATERIALS

- 1 $\frac{3}{4}$ x1x8 $\frac{1}{2}$ " prop block
- 1 $\frac{1}{4}$ x1 $\frac{5}{8}$ " sq. nose block
- 6 sheets 1/32x2x18"
- 1 sheet 1/16x2x18"
- 1 " 6x6 celluloid
- 1 pc. 3/32x2x4 $\frac{1}{2}$ "
- 18 pcs. 1/16 sq. x18"
- 2 " 3/32 sq. x18"
- 1 pc. $\frac{1}{8}$ sq. x5"
- 4" #10 music wire
- 18" #8 " "
- 2 sheets colored tissue
- 1 pr. 1" hard-wood wheels
- 1 oz. model (clear) dope
- 1 tube cement
- Several washers
- 1 pc. 1/16x $\frac{1}{4}$ x15" bamboo
- Plenty of patience.