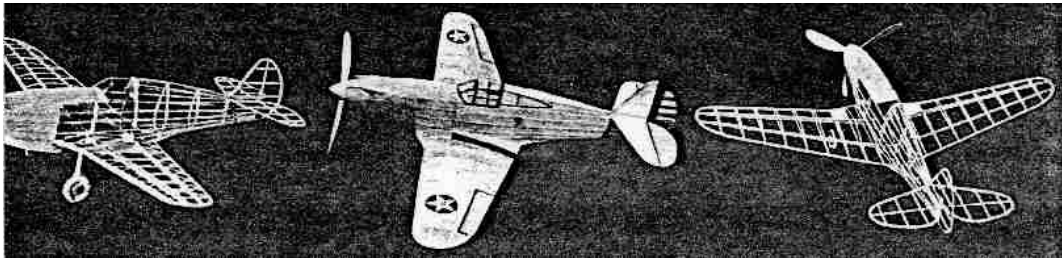


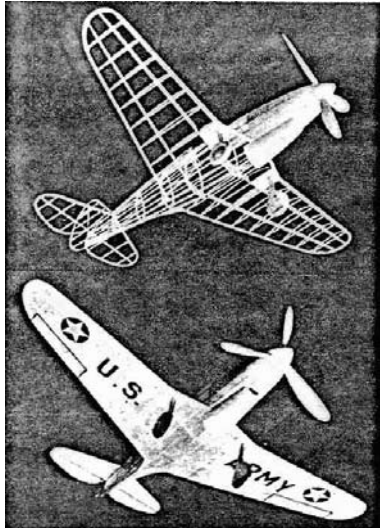


Tops in flying scale models is a design by Gough. His rendition of the P-40 fulfills N.A.A. weight rules and flew 45 seconds.

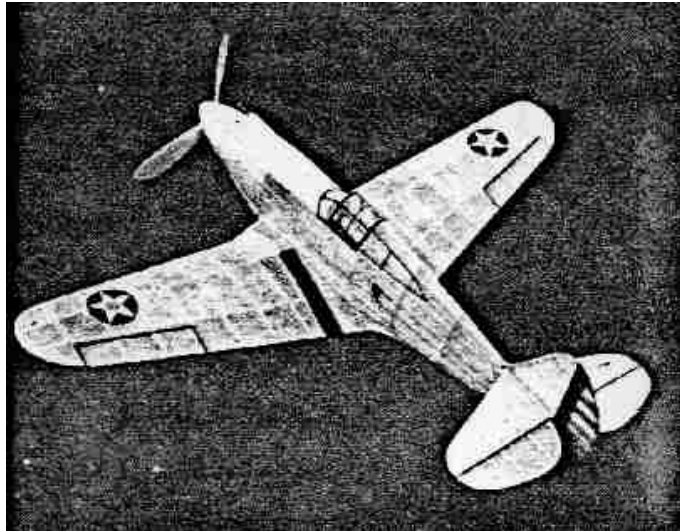


Any questions? You'll find all the answers in these photos. Details are apparent.

PLANS BY PAUL PLECAN



Fuselage built in two halves, directly over plan, using top and bottom keels. Model looks, flies like the real thing!



All's well that ends well. For a happy ending follow the directions. They will help a lot. Note rib construction.

AS designs go, the new sleek Curtiss 1'-40 is tops in streamlining. Its power unit consists of an Allison motor of 1,090 h.p. Specifications: Wing span, 37' 3-1/2"; length, 31' 8". Rumor has it that this new pursuit's speed is 400 miles per hour.

Our model retains the streamlines and attractive appearance of the original and a great effort has been made to simplify the construction procedure as much as possible for accuracy and flyability. The original model consistently flew 45 seconds, which is excellent considering the fact that it has been designed according to the N. A. A. weight ruling of three ounces per 100 square inches of wing area.

CONSTRUCTION

The fuselage is built in half shells. One shell is composed of the top and lower main keels, formers, Nose piece and stringers. The rudder is built directly on the side-view plan of the fuselage for accuracy. Remove the fuselage half and cement the identical formers, et cetera, to the other side. Fill in the nose between the stringers with 1/16" soft balsa. The complete fuselage is constructed of 1/16" sheet, strips, medium and hard as noted on the plans. For the nose piece, select two blocks of soft balsa 1/4 x 1-1/2 x 2-5/8" and cement them lightly together. Using cardboard templates, cut to required nose shape. Now slit the block at the cement joint and hollow each half out to a thickness of 1/8". The radiator is built in the same way. When the fuselage is completed, sand it smooth and cover the cockpit with thin celluloid. Cement the two 1/16" hard balsa plates in place at Section A-7; 3/32" holes are drilled in them to hold the aluminum rubber tube.

We come to the wing. Pin and cement the leading edge, trailing edge and tips together on the plan. Raise the leading edge up about 3/32" and glue the bottom ribs in. Using a template, cut sixteen 1/16" square top ribs. Glue the front tip of each in its place on the leading edge and trim and cement at the rear. Cut two landing-gear ribs and notch spar holes in them.

Slide the two center spars in, one wing-half at a time. Glue in next to the landing-gear ribs two 1/8" hard balsa plates. Sand the wing lightly with fine sandpaper and cement it to the

fuselage, measuring 2" of dihedral at each wing tip.

The stabilizer leading and trailing edges are of 1/16 x 3/16" strips. Center spar and ribs are 1/16 x 1/8". When completely dry, sand it to a streamline section with a sandpaper block. Cut the rudder spar out at the post where the stabilizer slides into the rudder and glue in position.

Make the three-bladed prop out of three medium-hard blocks to the dimensions on the drawings. Cement the blocks together at the center, cut to shape, cover with three coats of silver dope and sand to a smooth finish.

Cut the 1-3/4" round nose plate out of 1/16" hard balsa and cement the 1-1/4" round plug in its center. Drill or punch a small hole in the center to take the prop shaft. Glue a large washer on each side so that the prop will turn over easily. Slide the arrangement over the .040 wire and glue the prop securely.

The landing gear is simple, composed of two 1/4"-diameter dowels with a piece of .040 wire inlaid in each to hold the wheels. Spats or side shields of thin aluminum cut and bent to shape over the wheels and gear. 1/32" balsa may be used instead. The machine guns are 1/8" tubes placed into soft blocks.

COVERING

Cover the whole model with hakone or superfine tissue. The original plane is covered with sheet metal. So, if your model is to fly, don't cover it with 1/32" sheet balsa, for its weight will be one third greater.

Cover the fuselage first, using small pieces around curved surfaces and larger pieces on the more level spots. Overlap each piece 1/16" over the other as the papering progresses. The under-wing surfaces are covered with one piece. Cover the top side of each half wing in two pieces—one from the landing-gear rib to the tip and the other from the fuselage side. Spray a fine mist of water onto the completely covered model. While it is drying, watch that the tail surfaces do not warp out of alignment. For decoration, your model should have the regular United States army letters on the underneath surface of the wing plus the rudder striping, stars on the wing and cockpit trimming. All this can be done with colored tissue. Thin strips of black or blue tissue should be doped to the covering to represent control surfaces.

FLYING

Test your ship by gliding it from a height of three feet after the rubber motor of eight strands of 3/16" flat and eighteen inches long has been installed. The c. g. should come about one third back of the leading edge of the wing. Holding the model at the wing tips, the nose should be very slightly down. Try several glides; it may be necessary to add a small amount of clay just inside the nose block for balance.

Wind the rubber motor to one hundred turns. It should take off the ground on these turns and fly to about ten feet up. If it does, after a few adjustments to the surfaces such as warping the rudder for the turn to the right, take out the old winder device and grind her up to the limit.

BILL OF MATERIALS

- 3 1/16 x 2 x 36" medium balsa wing ribs, wing spars, keel strips, tail outlines
- 20 1/16 sq. x 36" hard balsa fuselage stringers
- 1 1-9/16 x 2-9/16 x 2-1/2" medium balsa nose block
- 1 1-1/8 x 2-1/16 x 4" soft radiator block
- 1 1/4 sq. x 36" soft wing leading edge
- 1 1/8 x 3/16 x 36" medium wing trailing edge
- 1 1/8 sq. x 18" tail surfaces leading edges
- 1 1/16 x 1/8 x 36" elevator spars and ribs
- 3 3/4 x 1-1/8 x 4-7/8" prop blades
- 1 1-5/16 x 1-3/4 x 1-3/4 " prop spinner
- 1 12" x .040" diameter spring steel wire prop shaft, landing gear axle, and shock absorber.
- 1 6" x 1/4" diameter dowel, landing gear struts
- 1 1/8 x 2 x 3" hard balsa, landing gear supports
- 1 3-1/2 x 4 x .010" or .016" sheet aluminum, l.g. spats
- 2 1-3/4" wheels and 1 5/8" diameter tailwheel
- 1 1" length aluminum tubing, rear motor plug
- 1 1 short piece of lollipop stick, 3/32" or 1/8", tailwheel work

Two sheets white tissue for covering. cement, clear dope, small strip of black tissue for cockpit trim and "U. S. ARMY" letters on bottom of wing, 12 feet 3/16" flat rubber

Scanned from January 1941

Air Trials