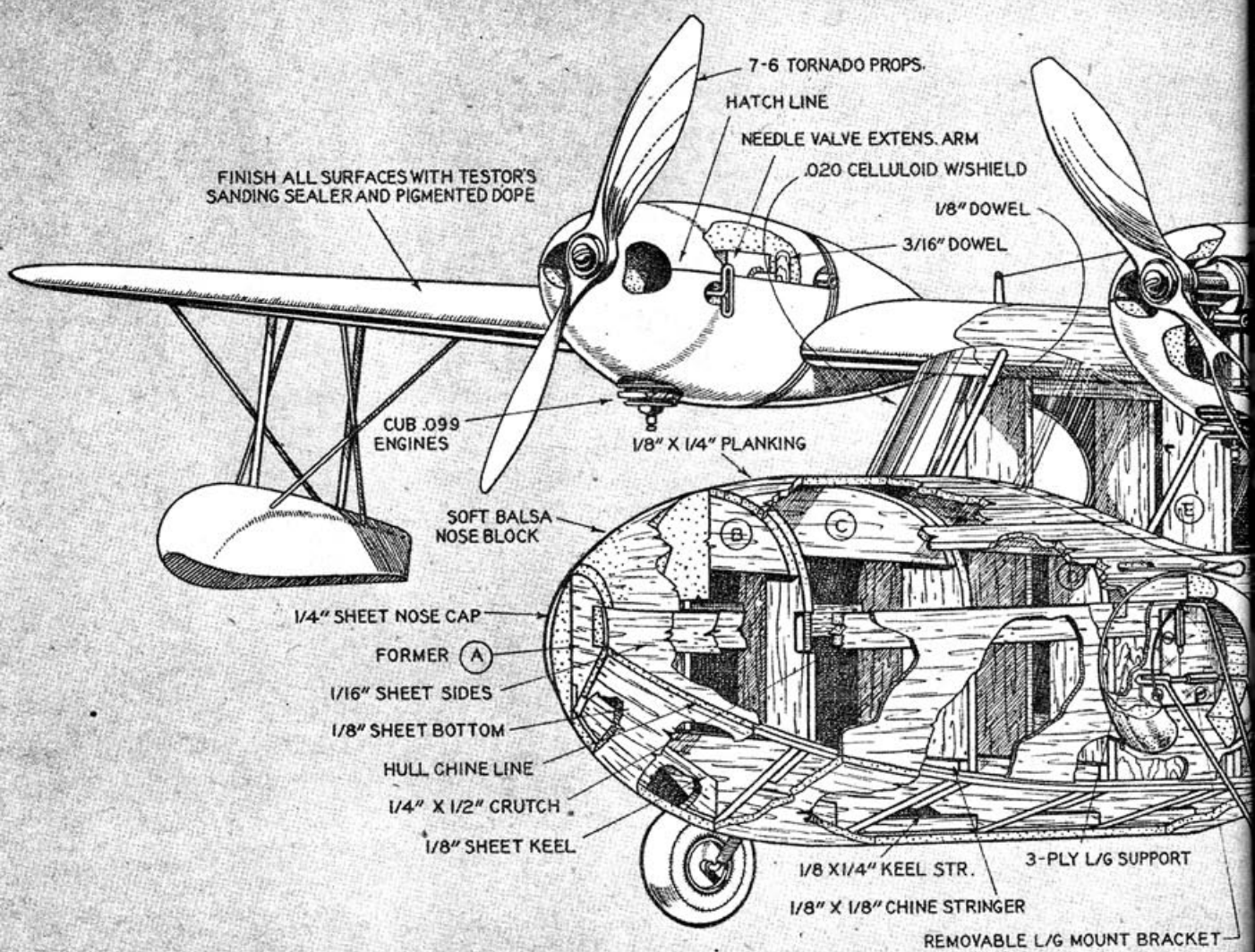




PAUL J. PALANEK'S

# Trimmer Amphibian



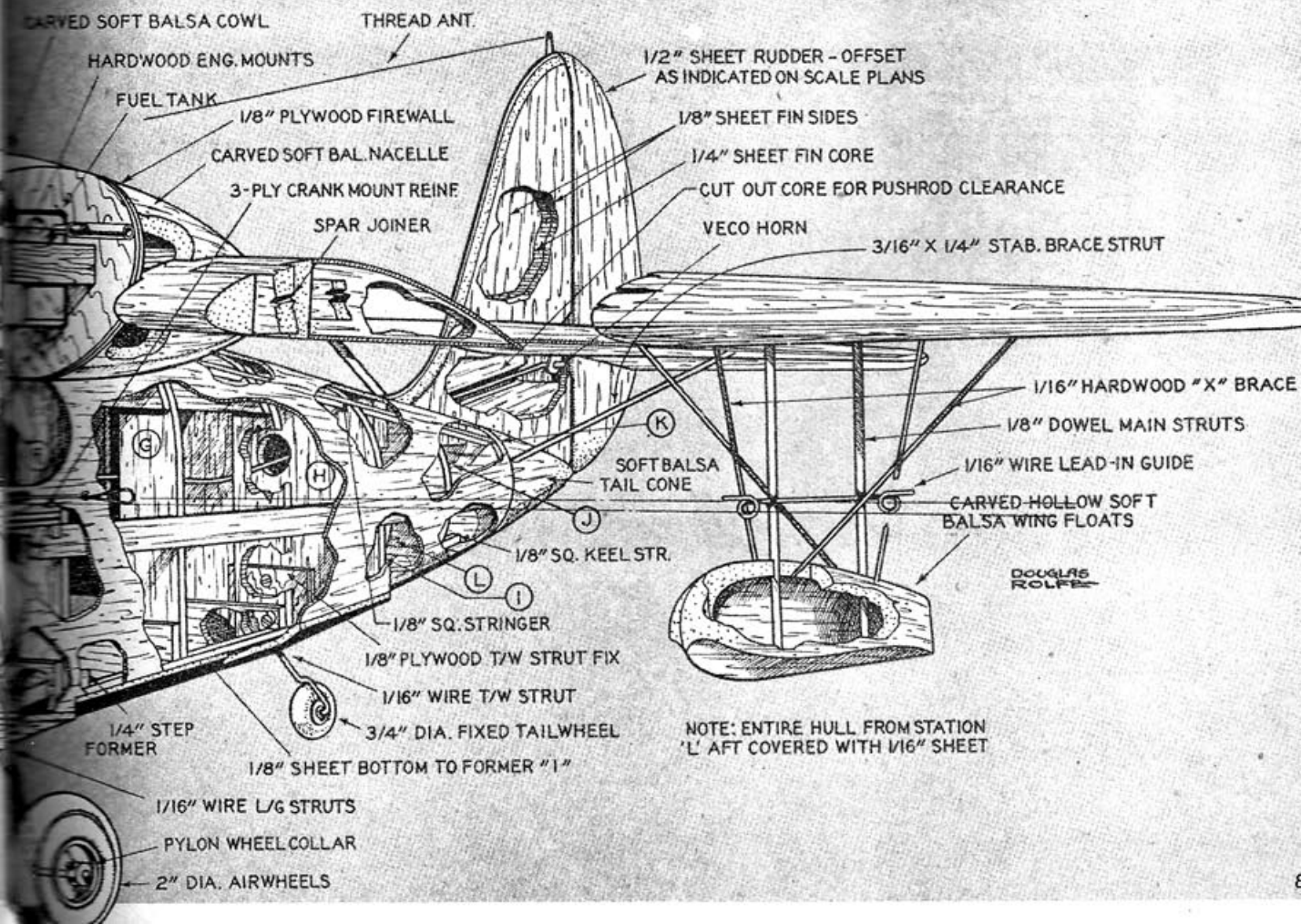
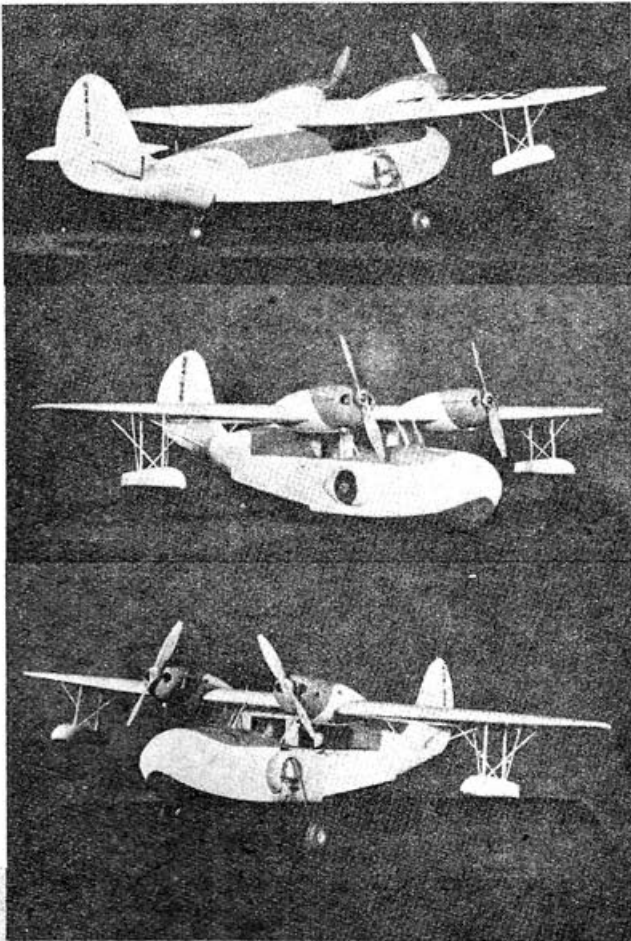
## Unusual and interesting is this C/L flying scale for land and water work

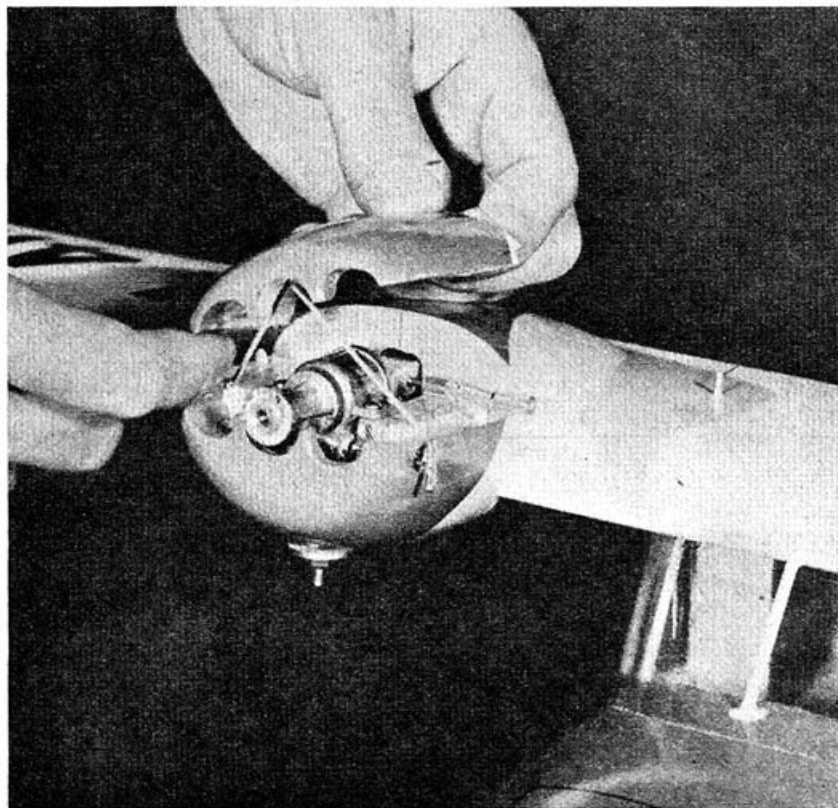
■ An amphibian is not an amphibian if not functional, and our model is no exception. Land and water flights are what the Trimmer model is designed for. A screw driver is the only conversion tool required.

Modeling proved simpler than first anticipated. Using select woods and cutting corners here and there brought the overall weight well within performance range of the two Cub .099s. With moderate modifications, engines up to .29 disp. can readily be substituted.

Construction begins only after full study of the drawings and building technique. The hull formers should first be laid up. On the drawing is shown an exploded view of the bulkhead. All are built up, using  $\frac{1}{8}$ " sheet stock lap jointed and securely cemented. All notches are cut out at this point.

A modified crutch system is employed, measuring  $\frac{1}{4}$ " x  $\frac{1}{2}$ ", using strip balsa. To this member are fastened all formers starting with "D," "E," and "F", working fore and aft. Notice that former "L" is fastened to the back of former "I". This ends the hull and starts the tail cone section. The keel is inserted using  $\frac{1}{8}$ " x  $\frac{1}{4}$ " strip balsa and  $\frac{1}{8}$ " sheet balsa up front. All stringers are installed.





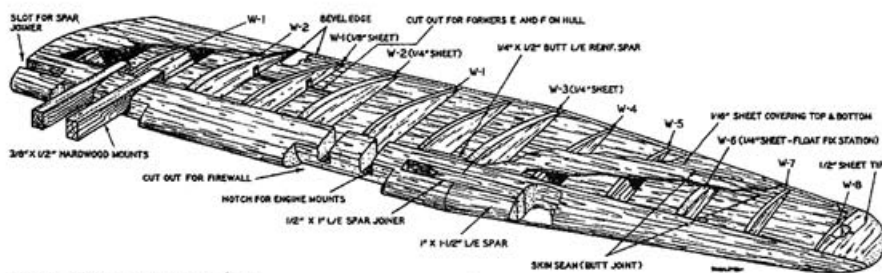
Dip the stringers in warm water to aid bending. Next is the  $\frac{1}{8}$ " planking, covering the forward portion of the hull, followed by  $\frac{1}{16}$ " sheeting on the sides. Allow sufficient time to dry thoroughly for perfect results.

A sheet of  $\frac{1}{8}$ " plywood is secured to insides of hull, to which are fastened the landing gear bolts. Be liberal with cement since this member carries most of the load on rough landings. When dried, fasten the  $\frac{3}{16}$ " plywood bellcrank platform to the main crutch as shown. A hard wood strip measuring  $\frac{1}{2}$ " x 1" is fastened to the bottom of this platform which carries the pivot bolt for the bellcrank. While working in this area, complete the reinforcing work between formers "D" and "F". Add the  $\frac{3}{16}$ " sq. strips across the fuselage, and then install the  $\frac{3}{16}$ " sheet just aft of the bellcrank support.

Before continuing with the covering, install the tail wheel as shown, securing in place with 8-32 bolts, over which a layer of cement is added. The lower portion or hull bottom is covered with  $\frac{1}{8}$ " sheet balsa. It is important that all your seams and joints be good matching joints. This reminder is extremely important owing to the fact that on hard

Very little of the Cub .099 protrudes from nacelle. Designer Palanek says that engines up to .29 can be used—with cowl modification, of course. Model spans 42½ inches; planking on model follows big plane's plywood design.

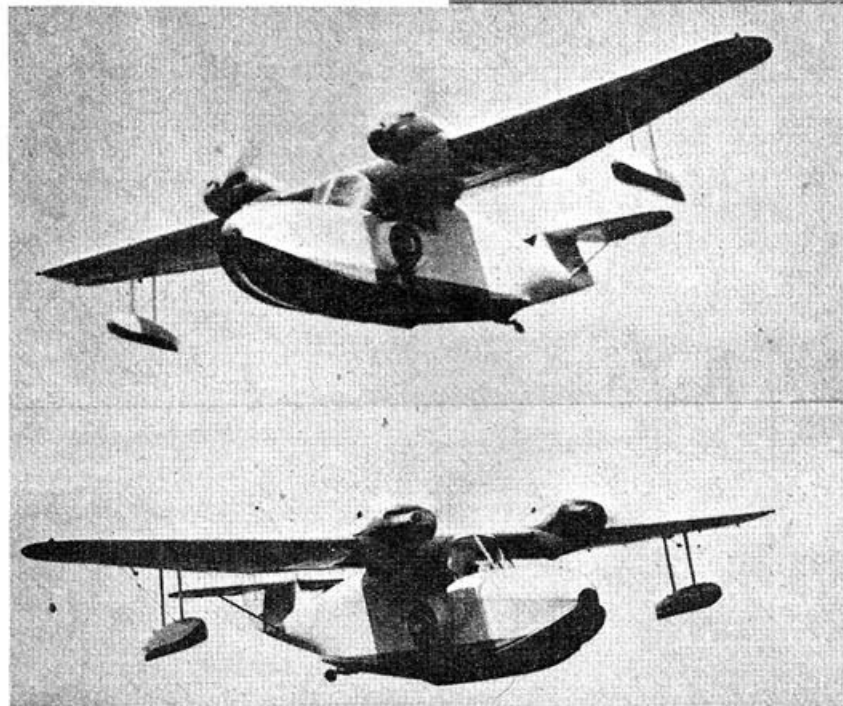
Two 85 hp Continentals power the full size plane (below). The Trimmer spans 35 feet, 6 inches; model is scaled slightly larger than 1 inch to foot. Mooring gear is carried in forward hatch; entrance is behind the wing.



Port Wing Construction

landings certain strains are introduced on the hull, and if a bad seam is present it will just give and before long a troublesome leak will result.

Using warm water, and applying it to outer surfaces only will help greatly in making the sharp hull bends. All sheeting can be done, except the tail cone areas—save these for later. The nose blocks are cemented in place; when dried sand both the blocks and the planking to their proper contours. Set the fuselage aside and proceed with the lower fin. Note the method of assembly for greater strength and permitting a groove for the pushrod. The core piece, which carries the groove, is made from  $\frac{1}{4}$ " sheet. The lower fin carries back to the tip of the tail cone. Fasten on either side of the core  $\frac{1}{8}$ " sheet balsa, building up the total thickness to  $\frac{1}{2}$ ". When dried, cement to the hull, but first cut away a portion of the formers to recess the fin. At this point be liberal with the cement. While this is drying fasten the shaped tail cone block in place. Before



# Trimmer

continuing with the covering, bend the 1/16" pushrod wire as shown, and install. Allow space for the fairing that rides on top of the wing, once fastened to the cabin.

*Complete building details are available on the full-size plans.*

## Bill of Materials

*(Balsa unless otherwise specified)*

**Wing.** 2 pcs. 1" x 1½" x 36" med., leading edge. 2 pcs. 1¾" x 3½" x 6½" med., lower nacelle block. 2 pcs. 1¾" x 3½" x 6½" med., upper nacelle block. 4 pcs. ¾" x 1½" x 6" med., wing tip floats. 1 pc. ¾" x ½" x 24" hardwood, engine mounts. 1 pc. ½" x 20" dowel, float struts. 1 pc. 1/16" sq. x 36" hardwood, float braces. 5 pcs. 1/16" x 3" x 36" med., wing covering. 1 pc. ½" x 2" x 36" med., wing ribs. 1 pc. ¼" x 2" x 36" med., wing ribs. 1 pc. ½" x 1½" x 12" med., leading edge joiner. 1 pc. ¼" x ½" x 12" med., leading brace. 1 pc. ½" x 3" x 12" med., wing tips.

**Tail Surfaces.** 1 pc. ½" x 3" x 36" med., stabilizer, elevator, fin (upper half) and rudder. 1 pc. ¼" x ½" x 18" med. hard, elevator hinge member. 1 pc. 3/16" x ¼" x 18" med. hard, stabilizer reinforcing strut.

**Fuselage.** 2 pcs. ¼" x ½" x 36" med., fuselage crutch. 3 pcs. ½" sq. x 36" med., stringers, fuselage and hull. 2 pcs. ½" x 2" x 36" med., formers and fill-in. 1 pc. ½" x 3" x 36" med., formers and fill-in. 6 pcs. ½" x ¼" x 36" med., hull stringers and deck planking. 1 pc. ¾" x 3" x 12" med., wheel wells. 2 pcs. ¾" x 2" x 3" med., tail cone block. 1 pc. ¼" x 3" x 18" med., lower fin core piece. 1 pc. ¼" sq. x 12" med., hull step rein. 1 pc. 1½" x 2" x 4" med., nose block. 1 pc. ½" x 20" dowel, cabin struts. 1 pc. ¾" x 1" x 6" hardwood, bellcrank reinforcing. 1 pc. 3/16" sq. med., bellcrank and cabin reinforcing. 1 pc. 3/16" x 3" x 6" med., cabin reinforcing. 1 pc. ½" x 3" x 18" med., lower fin lamination. 2 pcs. ½" x 3" x 36" med., hull covering (bottom). 4 pcs.