

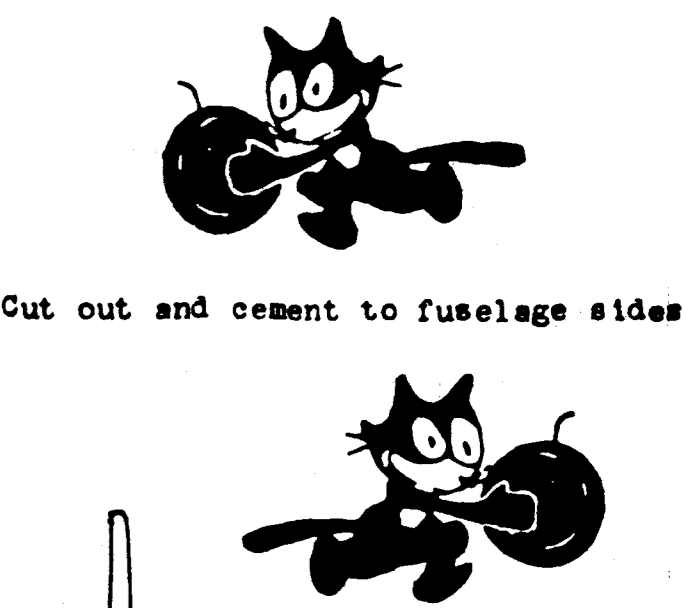
**COVERING**  
 Wings and tail can be covered with one piece of tissue on each side. Fuselage will require covering in small sections from one former to the next covering from top keel to bottom keel in each section at one time.  
 The tissue is cemented to the frame with the clear paper adhesive furnished in the kit.

Wings (Upper and lower)  
 Piece wing plan on smooth board and cover plans with wax paper.  
 The size of the necessary wood for spars etc. are given on each part on drawing.  
 Pin the spars directly over the drawings. The leading and trailing edges are pinned over the drawing and are raised on corups of balsa to the heights given on drawing.  
 Ribs and wing tips are cut from the printed balsa sheets and are then cemented in place.  
 When the wings are dry, remove from the drawing and cement the 1/32" sheet balsa leading edge covering in place. After this is dry the entire wing should be sandpapered smooth and the leading and trailing edges carved and sanded to the shape shown cross-sectioned on side view of fuselage.  
 Wings are now ready for covering. Do not dope bottom wings until they are cemented against the fuselage.

Color  
 Fuselage, wings - Grey.  
 Top of top wing - Yellow.  
 Rudder, Fin, Fuselage stripe and V on top wing - Red  
 Details - Black.



Cowl  
 Formers #1 and 2 are connected together by means of eight (8) pieces of 1/16" square 1-1/2" long. This frame is covered with 1/16" sheet balsa. Leave this strapping long enough to extend 3/16" in back of #2. Cement the turned cowl front to the #1 former. Sand smooth and give several coats of paper cement before doping. The rocker arm streamlines are carved from scraps and cemented in place. Cylinders are cemented in place and painted. Push-rod is cut from music wire. Cement cowl in front of the fuselage.



Glue the nose button from the printed sheet, sand the nose button in coal front round cement in coal front.

Out fore and keel pieces from the printed sheet. On the printed sheet, the four keel pieces are drawn overlapping at only one of each end. On the printed sheet, the four keel pieces are drawn overlapping at only one of each end. On the printed sheet, the four keel pieces are drawn overlapping at only one of each end. On the printed sheet, the four keel pieces are drawn overlapping at only one of each end.

Full surfaces  
 Cut the ribs and curved parts from the printed sheets. Spar and leading edge sizes are given on the drawing. Cover the drawing with wax paper and pin above the drawing and sandpaper entire units to a smooth even surface. Remove from the drawing and sandpaper entire units to a smooth even surface. Remove from the drawing and sandpaper entire units to a smooth even surface. Remove from the drawing and sandpaper entire units to a smooth even surface.

Leading edge is joined at the center. Joint is braced with same material.

Block leading edge up 1/8" when assembling

1  
 Cut from drawing and cement to wing

Block trailing edge up 1/32" when assembling

The leading covering is cut from the 1/32 x 3 x 18" balsa in the kit.

The inner end of the 1/16 x 5/16" spar is cut up like this.

Hand holds painted on bottom wings.

1/16 x 1/8" blocks each side of rib at the bottom for strut supports.

Green wing light.

Cross-section of blades

Bearing button

Scale propeller

Blades and hub cut from the printed balsa sheets. Note that the hub is made of two pieces of the 3/8" thick wood (the excess is cut away) with a center piece of 1/16".

N-Struts

Make two from the strip balsa as given. The striped tube (made from music wire) is cemented to the right strut only. Sandpaper the pieces to the streamlined shape shown by the cross-sections before the struts are cemented together.

Power model with eight to twelve strands of 1/8" rubber

Prospective Views #1 to #5 give proper steps in building the landing gear portion of the fuselage

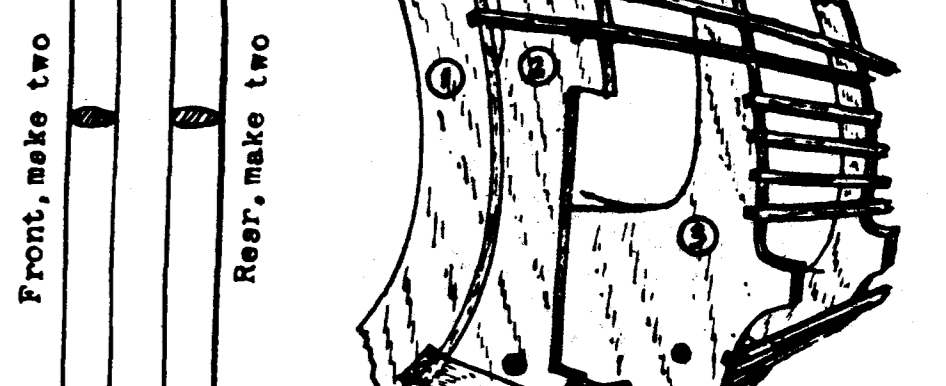


Fig. 1  
 Bare fuselage, balsa blocks at bottom of formers #2 and #3 have been cemented in place and shaped.

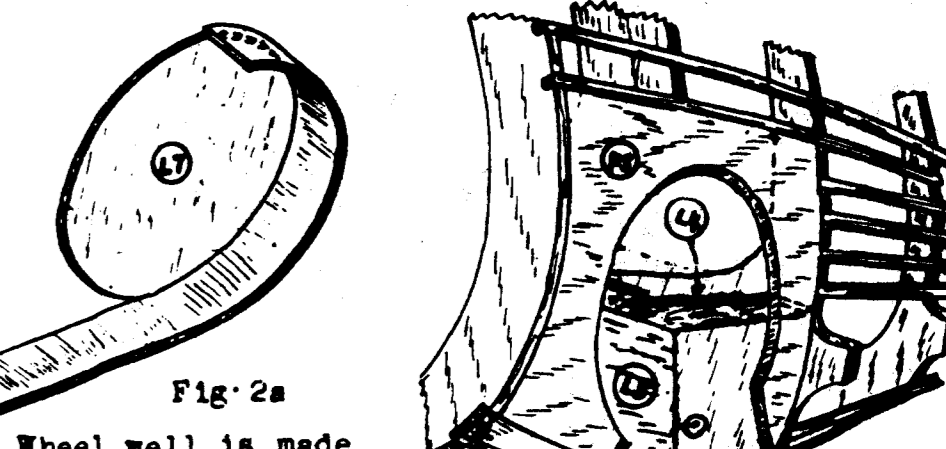


Fig. 2  
 The 1/16" sheet balsa has been added. See front view of after well is cemented in place and shaped.

# U.S. NAVY

## 6-F-1 6-F-1

Cut from drawing and cement to the bottom of the bottom wings after doping.

Cut out and cement to sides of fuselage.

This side shows non-folding gear for flying models. The only difference being in the simplicity of the struts. All joints are cemented rather than being pivoted.

This half of front view shows the folding landing gear and is a cross-section at #2 former.

All brace wires are thread sewed in place. The flying and landing wires are double spaced 1/4" apart.

Small arrows show direction landing folds.

Pivot points are marked x. Use common pins for pivots.

Full size layout for either non-folding (below) or folding (above) landing gear. For a flying model, make the non-fold gear. Use the 1/8" and 3/16" dia. dowels for the landing gears.

Tin clamp for hinge at C-A

**GRUMMAN F3F-1 SHIPBOARD FIGHTER**  
 SPAN 32 1/2" LENGTH 22 1/2" WT. 7 OZ.  
 MINIATURE AIRCRAFT CORP.  
 83 LOW TERRACE, NEW BRIGHTON, N.Y.

**MODEL BUILDER** magazine  
 Plan No. 680-C.R.A.

Cover model with tissue, using pieces as large as will go on without wrinkling. Spray with water and allow to dry before doping.

Rudder and fin may be doped and lettered before cementing fin to fuselage

Refer to the three views on drawing and to sketch #5 for proper position and other details.

Use made by Frank T. Roberts, Jamesburg, N.J.

Miniature Aircraft Corp.  
Gruman F3F-1  
One required of 1/32"

