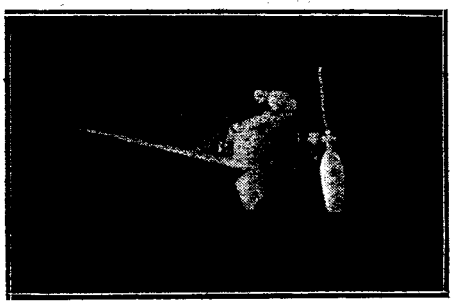
Build the Northrop XFT-1

By Alan D. Booton and Ralph Pickard



Here's a photo of the completed model of the Northrop whose plans appear in the next few pages. Compare it with the actual ship shown below, and you'll see what a neat job it is!

The latest design in Navy Fighters—the Northrop XFT-1, which is being tested by Uncle Sam's sky sailors. With the plans and directions printed here, you can build a flying scale model of this splendid new fighting ship.

THE Navy has been testing the Northrop XFT-1 Fighter for several months. It is a snappy little ship of 30' span and 20' length, and boasts a top speed of nearly 300 m.p.h. since a twin-row Wasp 14 cylinder engine was installed. The armament consists of two Browning machine guns of .30 and .50 calibers.

Several recent changes in the XFT-1 are also in the model, so you are getting the latest design. The finished model is a beauty, and flies as a scale model, with only the propeller oversize. It is stable, and glides in for good landings. The design looks heavy, but the original weighs but two ounces fully rigged, powered and doped. The distribution of weight has been carefully figured and should not be altered in a flying model. Several difficult patterns have been developed for you on the plates, but your model may vary slightly, so you had better make test patterns to check before cutting costly material.

Fuselage

THE formers are cut from 1/16" thick balsa plywood that you make. Before starting, place waxed paper between the work and the drawing. The right half of the fuselage is made on the drawing, and taken up to cement the parts of the left side to it.

In building the right half, cut the top and bottom longerons from 1/16" sheet balsa, pin them on the proper lines and cement the formers in place. Bend the two other longerons to lay in the former slots before cementing, because the spring-parts will warp the frame when unpinned. When the left conforms with the right, add 1/32" bamboo fairing strips, as designated by the dots on the former patterns. The balsa cockpit parts, including the headrest-raft part, are cemented on.

Build the fin and rudder assembly and cement it in place, then the hollow tail block under it. Cover the fuselage with white tissue, except the portion between formers A and D below the middle longeron. The tissue wing fillet goes on between B and D, and the space between A and B is covered after the center-section is cemented on and the remainder of the curved pieces cemented between A and B. The fin is covered with red tissue and the rudder with Navy stripes.

Center Section and Wing Panels

BEFORE starting on the center-section and the wing panels, note that the flaps are workable and are hinged their full lengths with tissue. The trailing edges over the flaps are slotted in on top of the ribs to make room for the flaps. The leading edges all along are covered with 1/64" sheet balsa. On the center-section, 1/32" sheet balsa covers the spaces between the A' ribs and the first and second bottom spars.

Here's the actual ship itself—the snappy Northrop Fighter with which Uncle Sam's Navy has been experimenting. A great ship!

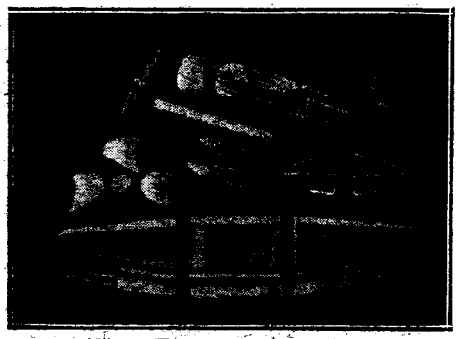
The trailing edges of the ailerons are cut from 1/16" sheet balsa. The aileron spars, and spars of the wing, to which they are hinged, are set under at an angle that makes the bottom spar edges angle back slightly from the rib D. The tips are scant 1/16" bamboo and can really take it. Cement the wing panels to the center-section with the tips up 1¾". Cover the top surface with yellow tissue and the bottom with white tissue. Cement to the fuselage as shown on plate 1.

Horizontal Tail

BUILD two halves like the one illustrated and cover them with white tissue. Cement them in position on the middle longeron of the fuselage at zero incidence. Four tissue fillets made from the pattern on Plate 4 make a neat job if applied carefully.

Landing Gear

THE landing gear fairings are carved from 11/16" x 2½" x 3" blocks, sanded and then split apart and hollowed to 1/16" walls and cemented together again. Make two stream-lined wheels 1-7/16" in diameter and ⅝" thick. Insert paper bushings, dope black tire and gray disks, and then install in the fairings. Cement the landing gear to the center-section.



Put 'em all together, and they spell Northrop XFT-1. The picture above shows you the various framework parts of this model before it is assembled.

Cowl and Dummy Motor

THE shell is shaped from a medium balsa block 2¼" x 3" x 3" and hollowed out cylindrically. The ⅛" sheet disks have oversize ⅜" holes cut in them before being cemented in place in the shell. The dummy crankcase also has that size hole, in which the "L" slots are cut 1/32" deep and 1/16" wide before cementing to the front disk, along with 7 half dummy cylinders. The cylinders, the disk and the inside of the shell are doped black before adding two aluminum doped push rods to each cylinder.

Motor Tube and Propeller

THE motor tube is made by rolling a wet sheet of balsa 1/32" x 1¾" around a ⅛" rod and drying while rolled. The edges are cemented, butt-joined, and the ends are coated with cement to take torque strain. Two slots are at each end to receive the pegs extending from the end plugs.

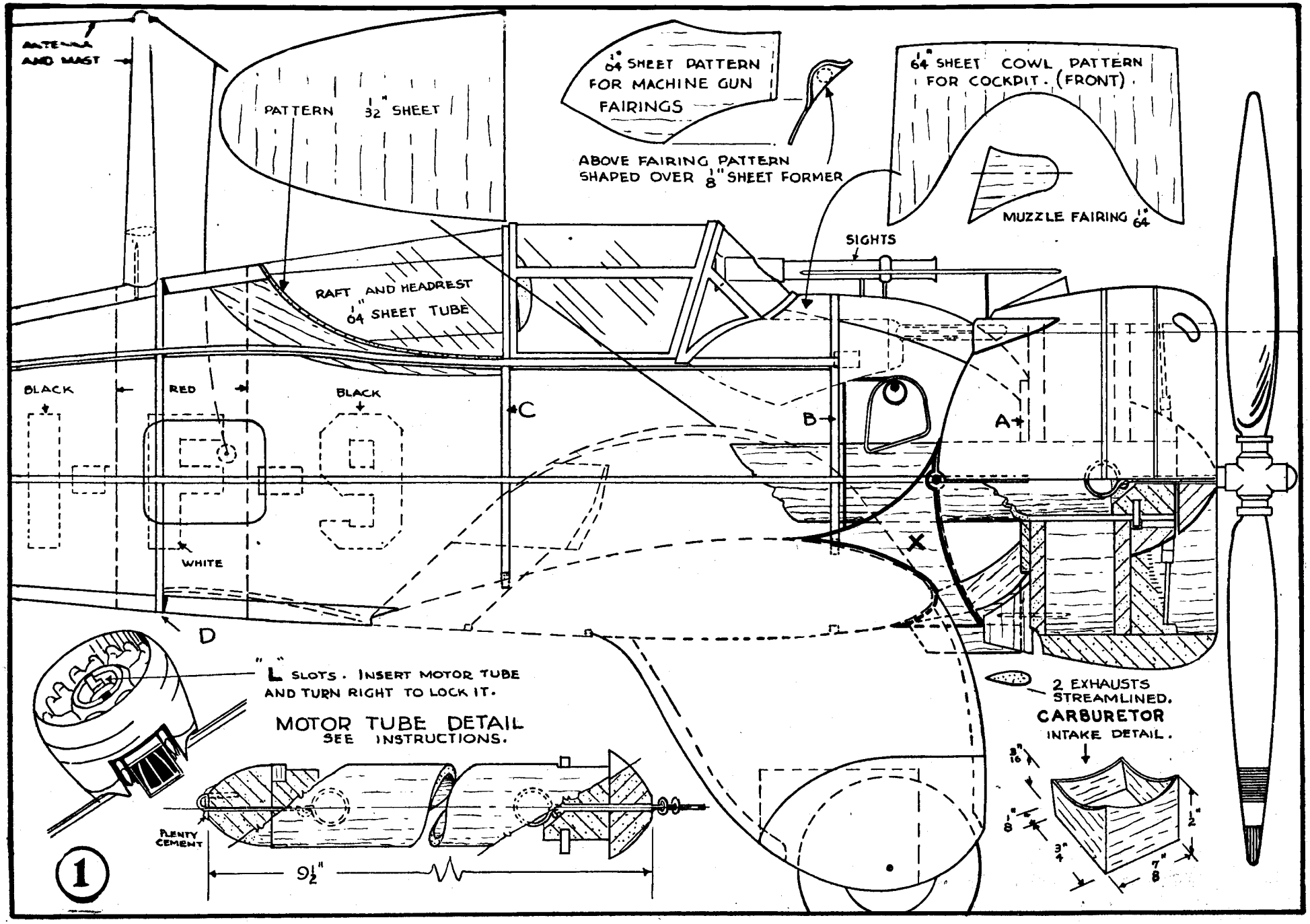
The pegs on the front extend 1/16" out of the slots of the tube to engage in the "L" slots of the dummy crankcase. The large part of the front plug is the remainder on the dummy crankcase. The rear hook is attached as shown.

The propeller is carved from the curved blank design on Plate 2 and is attached to the propeller shaft and inserted through the hole in the front plug. This prop is better than just satisfactory. A motor 12" long, made up of 3 loops of ⅛" flat rubber, lubricated, is the best power for the model.

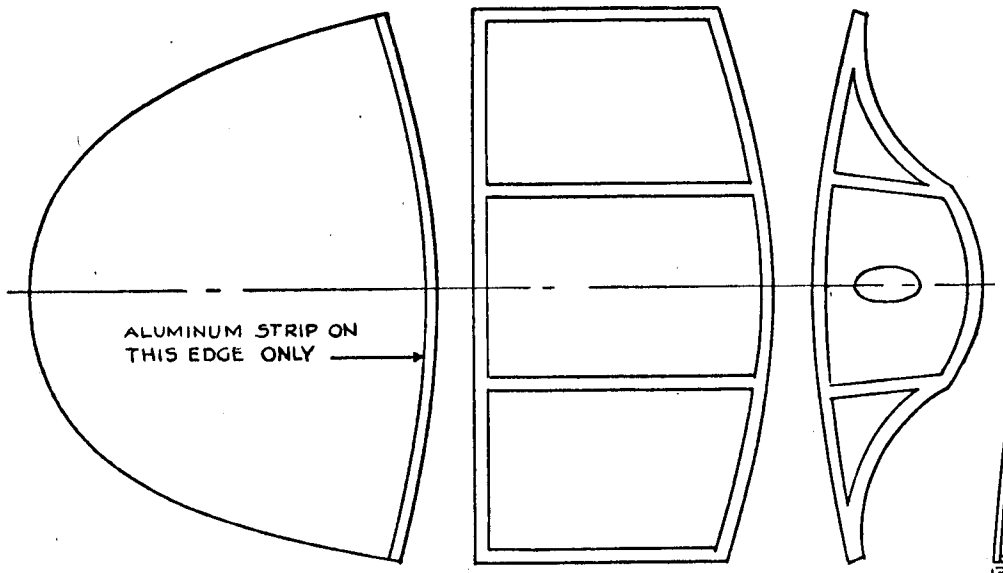
Completing the Model

CEMENT the cowl to the fuselage, using the motor tube as a jig, and fit the "X" fairings so that from butt joints to the cowl, they continue the line of the cowl. Now add the remaining

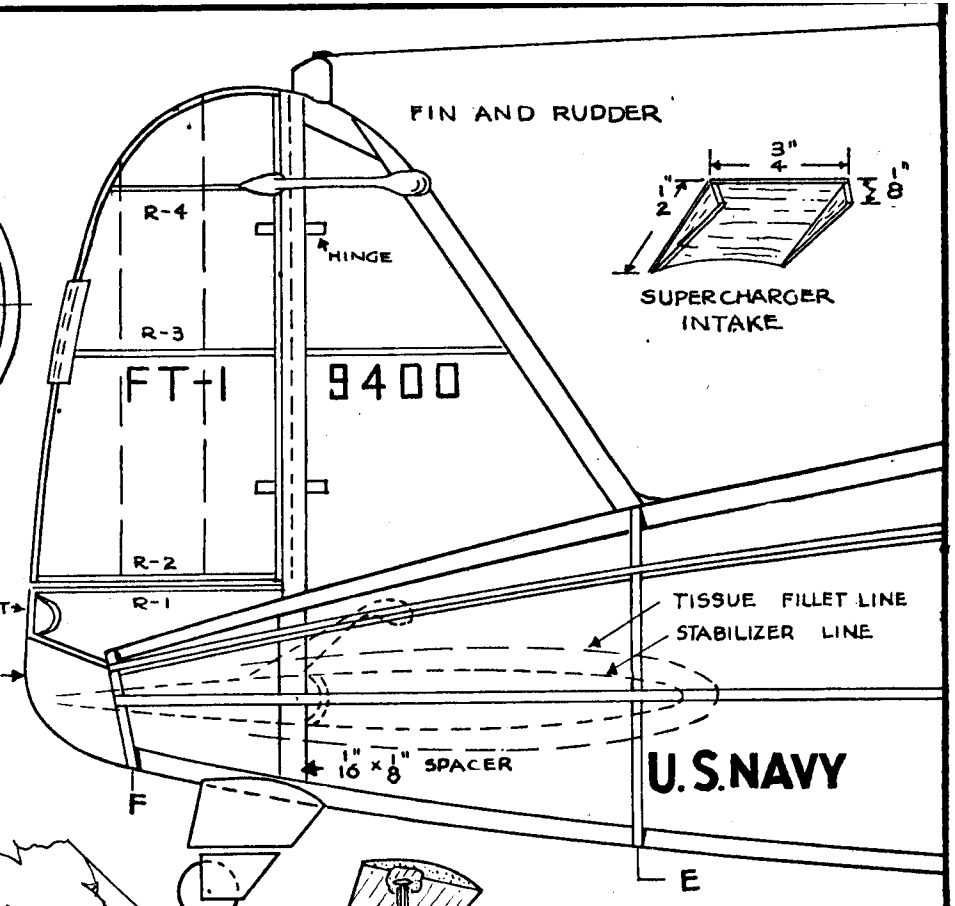
(Continued on page 41)



NORTHROP XFT-1—Plate 1



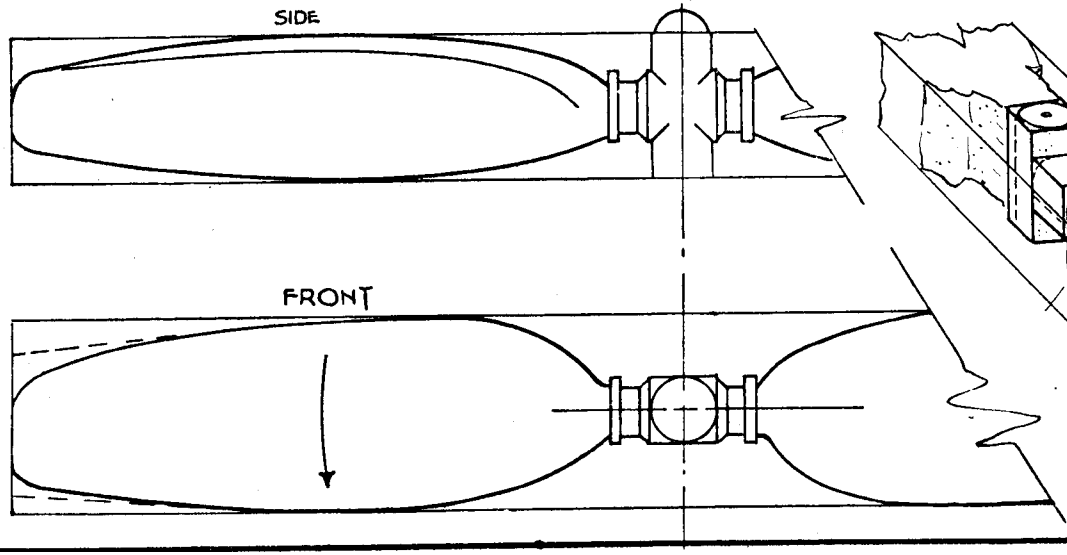
COCKPIT COVER FRAMES AND CELLULOID PATTERNS

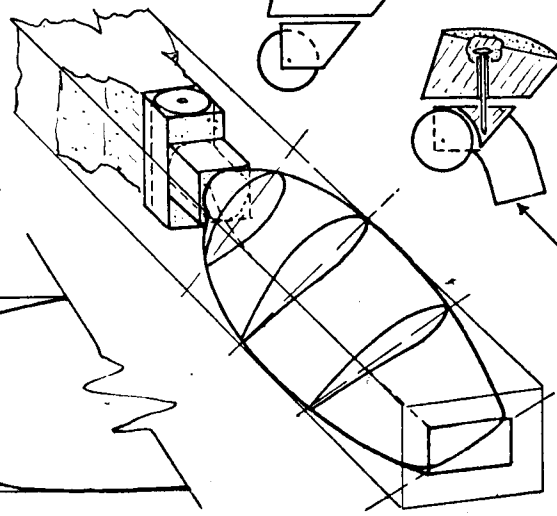


SUPERCHARGER INTAKE

HALF PROPELLER DESIGN

CUT FROM MEDIUM BALSA BLOCK 3/4" x 1" x 7"





CASTER WHEEL DETAIL
UPPER - STREAMLINED BLOCK WITH ALUM. TUBE BEARING.
LOWER - SHEET ALUM. PATTERN COVERING FILLER BLOCK AND HOLDING WHEEL.

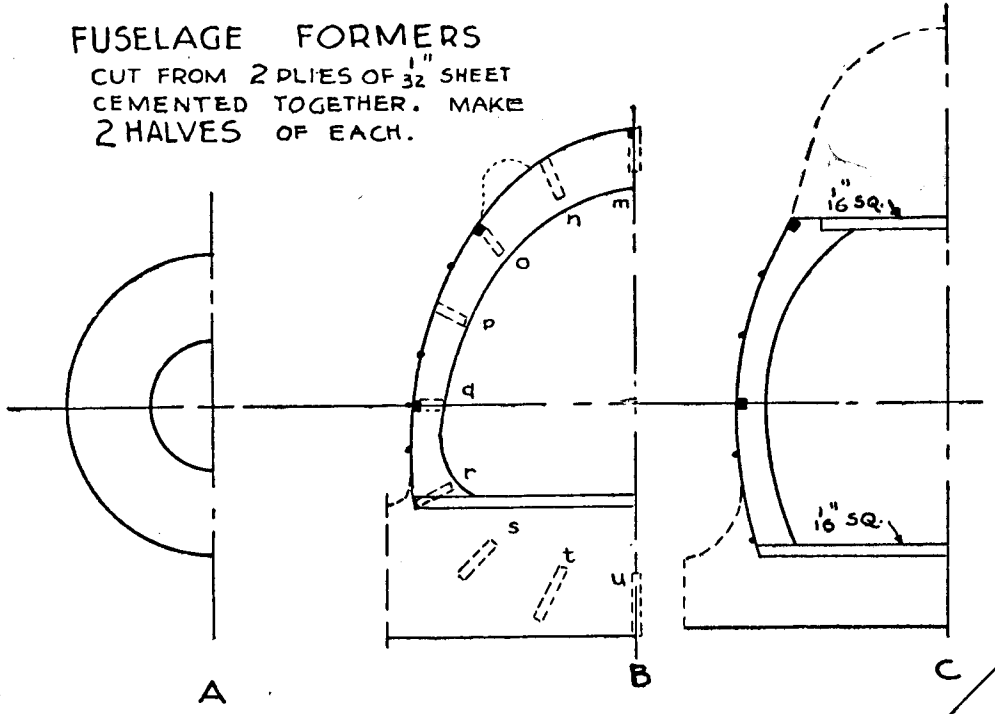
ALUMINUM PATTERN

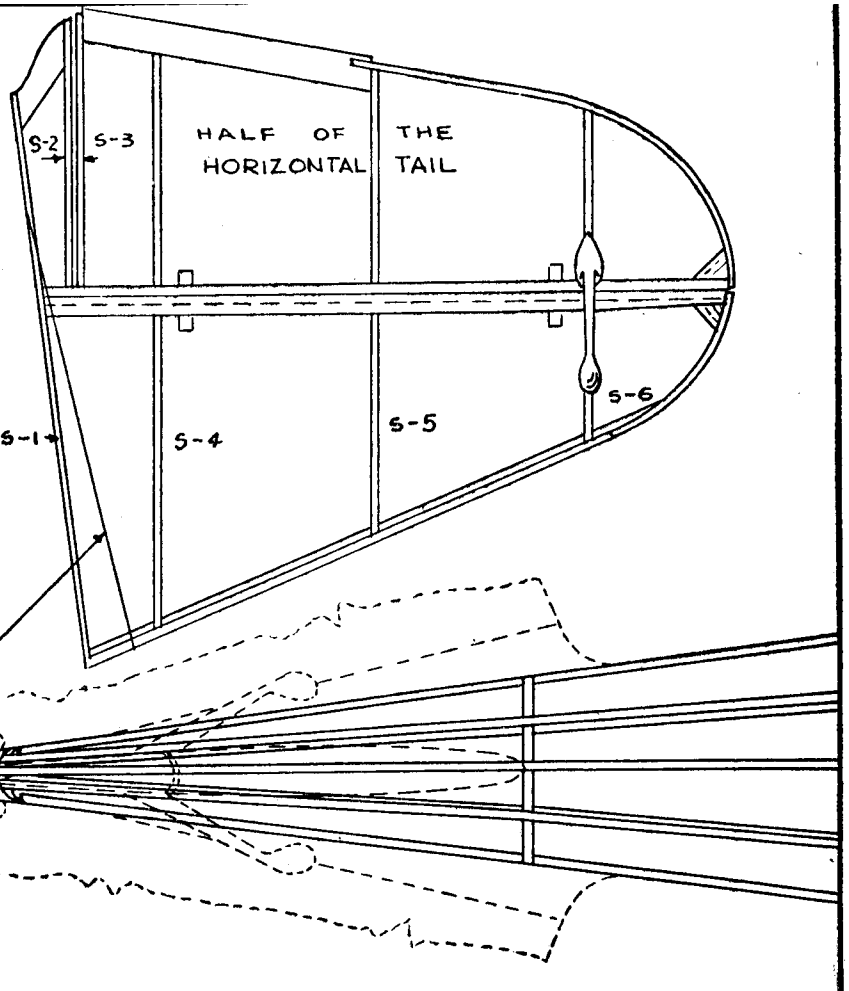
PHANTOM VIEW OF ONE BLADE OF PROP. SHOWS THICKNESSES OF BLADE FROM BOSS TO TIP. NOTE HELICAL PITCH.

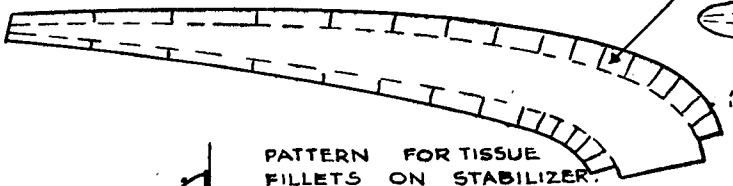
2

FUSELAGE FORMERS

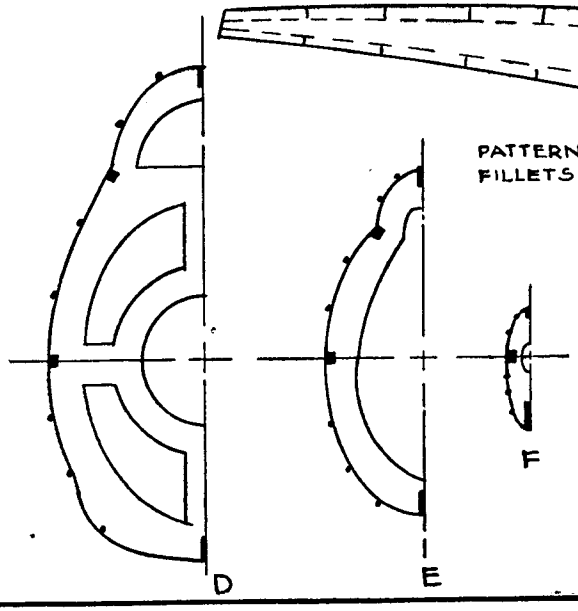
CUT FROM 2 PLIES OF $\frac{1}{32}$" SHEET CEMENTED TOGETHER. MAKE 2 HALVES OF EACH.

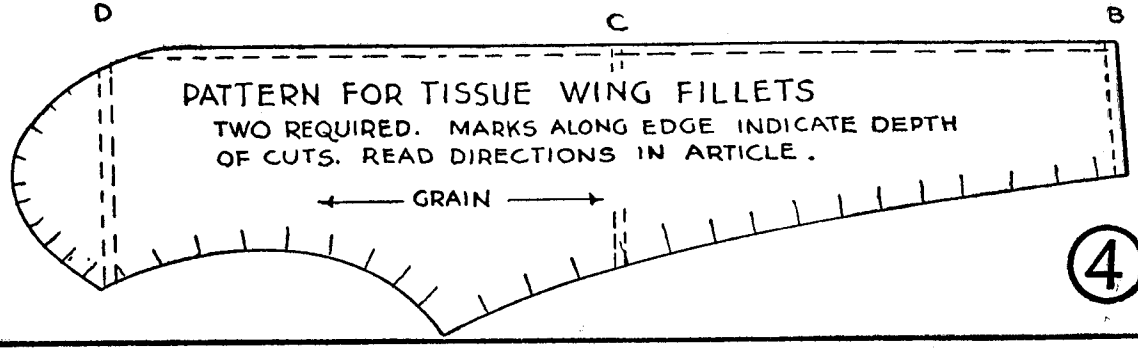






PATTERN FOR TISSUE FILLETS ON STABILIZER. 4 REQUIRED.





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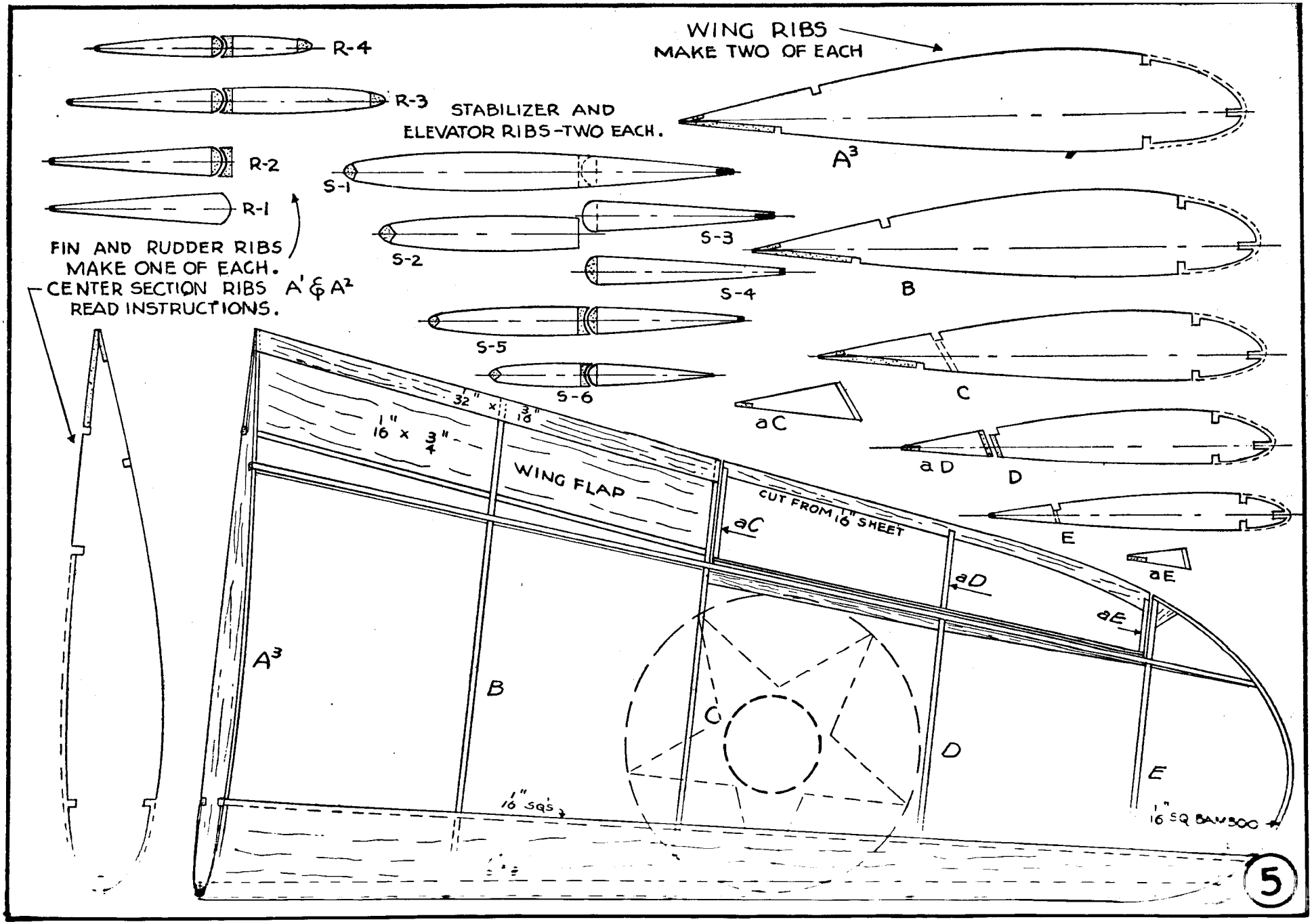

WING RIBS
MAKE TWO OF EACH
R-4
R-3
R-2
R-1
STABILIZER AND
ELEVATOR RIBS-TWO EACH.
S-1
S-2
S-3
S-4
S-5
S-6
A³
B
C
aC
D
aD
E
aE
FIN AND RUDDER RIBS
MAKE ONE OF EACH.
CENTER SECTION RIBS A' & A²
READ INSTRUCTIONS.
1" x 3/4"
16
32" x 3/16"
WING FLAP
CUT FROM 16" SHEET
1" SQS
1" SQ BAMBOO
5

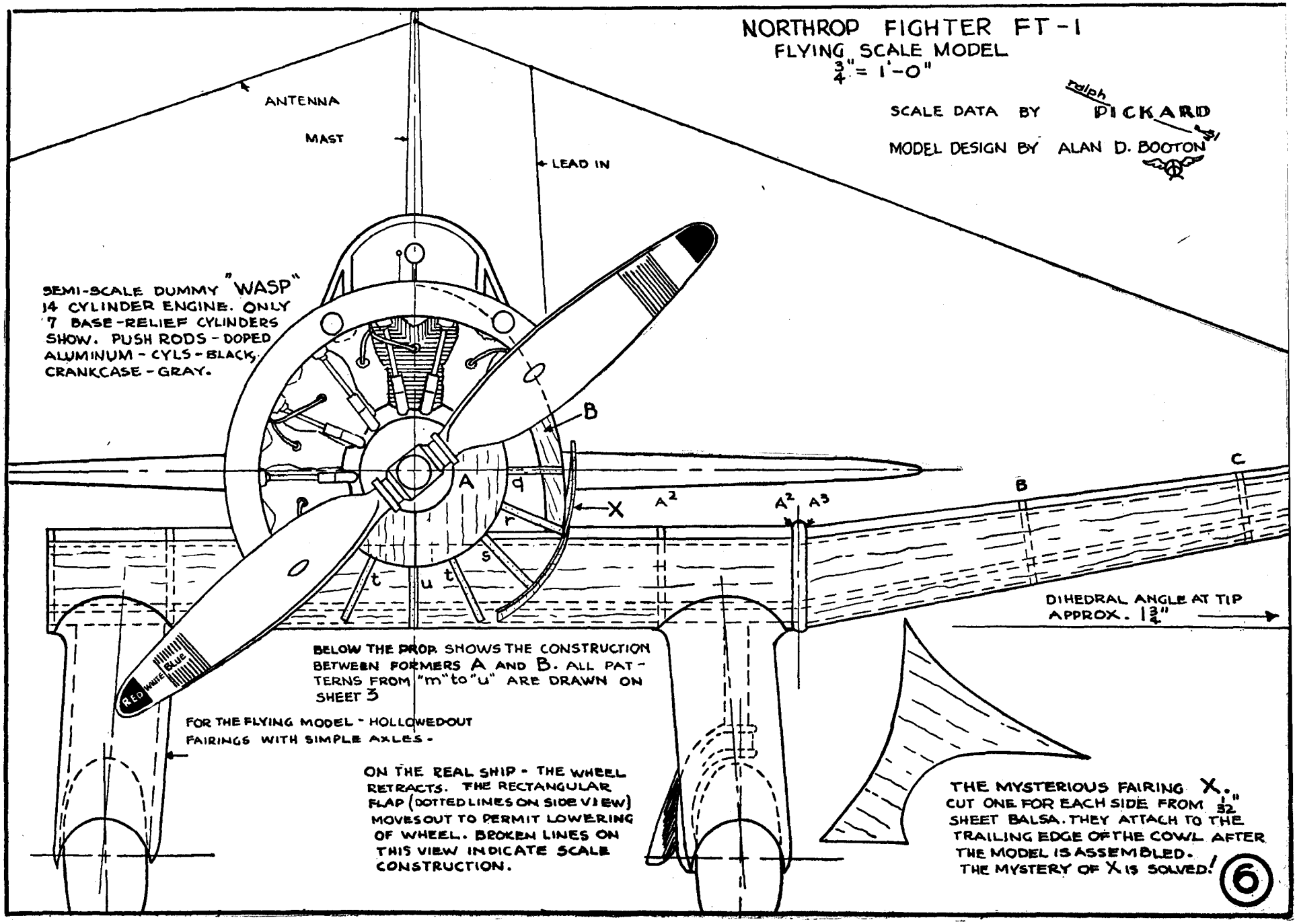
NORTHROP FIGHTER FT-1

FLYING SCALE MODEL

$\frac{3}{4}$" = 1'-0"

SCALE DATA BY ralph PICKARD

MODEL DESIGN BY ALAN D. BOOTON



The Northrop XFT-1

(Continued from page 28)

parts designated on the various views.

Spray the model with a fine mist of water and then apply the following color scheme: top of wing, chrome yellow; bottom of wing, horizontal tail, landing gear, static balances and fuselage—except band—gray; cowl, fin and band on fuselage, red. Lettering is black except the white F on the band.

Flying the Model

THE model should balance at points slightly forward of the wing tips when lifted there. Fasten the flaps up securely and glide the model into tall grass. Adjust the controls to suit, and then repeat with half-power until it acts right. Then give it full gun for a R.O.G. Good luck!