

This sleek, speedy, fighting ship is the pride of England's R.A.F. With a reputed top speed of 370 m.p.h. it is just about the last word in military aircraft. Our well built-model captures all the beauty of line of the original. Construct this speed demon of the sky and watch its superior performance.

The Supermarine Spitfire

By William Winter

HERE'S a ship that is admittedly one of the most beautiful planes of the day and supposedly the fastest of England's speedy interceptors. Estimates put its high speed (the Air Ministry has not released performance data) at 370 m.p.h. If that's true, this ship is about 50 m.p.h. faster than our own pride, the Seversky Fighter.

It is significant that this ship, built by the same concern that was responsible for Britain's Schneider Cup Race speed triumphs, utilizes the lessons learned in that competition to outdistance the world in fighter design.

The model captures all the beauty of line of its prototype. In performance, our miniature Supermarine will stack up favorably with any ship you have built.

FUSELAGE

SINCE the sizes of all blocks are given in our bill of materials, which you'll find at the end of this article, they will not be repeated in the directions.

The method of construction calls for the use of four master stringers cut to shape from sheet balsa. To obtain their patterns, trace the side, top and bottom out lines of the fuselage on 1/16" sheet. The bulkheads, like-wise 1/16" sheet, are cut in accordance with the patterns given. Cut only the four deep notches at first, leaving the remaining notches to be cut in a later operation. However, mark the positions of the smaller notches for reference.

Cement the four widest bulkheads in place on the two side master stringers. When dry, add the remaining bulkheads and finally the top and bottom master stringers. Cement the 1/16" sq. auxiliary stringers in place, cutting the notches, which are already marked, with a sliver of a two edged blade.

The nose block is shaped as seen on the plan its rear face matching the No. 1 bulkhead. The amount to hollow out is designated on the plan. So that this block may be hollowed, it will be necessary to cut it in half after the outer carving is finished and to reassemble the halves with cement.

The canopy is constructed of 1/32" sheet balsa and 1/16" small formers.

Using the No.1 wing rib pattern, cut four ribs from 1/16" sheet. Two of these ribs are to be built into the

fuselage to support the wings and to form the fillet. The fillet proper is made of stiff paper which is not cemented in place until the wings are in position. The rear fillet sheet, cut from 1/16" balsa, also is not located until the wings are firm.

The hook which is bent to shape and inserted in the rudder post is of .028 wire, as are all the other wire parts.

To cover, use narrow strips of tissue to prevent wrinkles. Spray the completed covering and give it a light coat of clear dope. Next, carve the scoop as seen on the three views, cementing it in position after it is sanded. Using trial paper patterns, cement the celluloid canopy in place.

TAIL SURFACES

THE frame work of the tail is constructed of 1/16" by y8" balsa, except the curved portions, which are 1/16" sq. bamboo bent by candle flame.

Cover each side of all the units with individual pieces of paper, but attach only the outer edges. To prevent distortion the partially completed units are sprayed and pinned to the bench until dry. Cement the finished units to the fuselage, supporting the stabilizer halves with bamboo cross pegs, as shown in the plans.

WINGS AND LANDING GEAR

THE spars are cut as required by the given pattern. The ribs, with the exception of the innermost which previously were prepared, are of 1/32 " sheet balsa. After cementing

them in place, locate the half rounded 1/8" sq. leading edge and the 3/32" by 3/16" trailing edge. The tips are bent to shape from 1116" sq. bamboo. Slant the inner rib of each panel for dihedral.

The socket for the landing gear is constructed as follows: The portion of the lower surface lying between the inner two ribs and forward of the spar is covered with 1/32" sheet. Two cross pieces, 1/16" by 1/2", are then inserted in each panel as seen on the plan. A block, through which a 3/16" hole has been drilled to receive the single strut, is cemented thoroughly and forced downward between the cross strips already in place.

The upper surface between the same inner two ribs is braced with 1116" sq. The hand grips at the wing tips are built of 1/32" sheet, as called for on the plan.

Use a separate piece of tissue for each surface of each panel. As was done with the tail, attach only the outside edges of the paper. The attached covering is then sprayed and the panels pinned to the bench until dry. After dopping the panels cement each to the built-in fuselage rib, checking carefully for alignment. Next, carve the two tunnel blocks as shown by the details and cement each in its proper position.

The landing gear legs are of 3/16" hard dowels. The wheel well covers are cut from 1/32" sheet balsa. The lower half of the circular portion is bent at right angles and cemented. Mount the 1 3/8" wheels on .028 wire axles, each axle being bent as shown on the front view to make the structure more rigid. The

tail skid is of hard balsa, its pointed end being forced into the bottom master stringer and cemented.

PROPELLER AND MOTOR

SHAPE the nose plug as instructed in the detail. This completed, trim a block to the required prop blank sizes. In carving be careful to preserve the spinner shape. The small nose spinner is an addition. The blade tips are rounded only when the carving has been completed. Balance the prop with precision so that the performance will not be impaired. Sand the finished prop to a satin surface and recheck the balance.

Cut two pronged washers from tin, bending the points at right angles. Force one of these into the rear face of the prop and the other into the front face of the plug. Bending the front of the shaft "U" shape, insert it in the prop hole. Slide a friction washer on the shaft, then the plug.

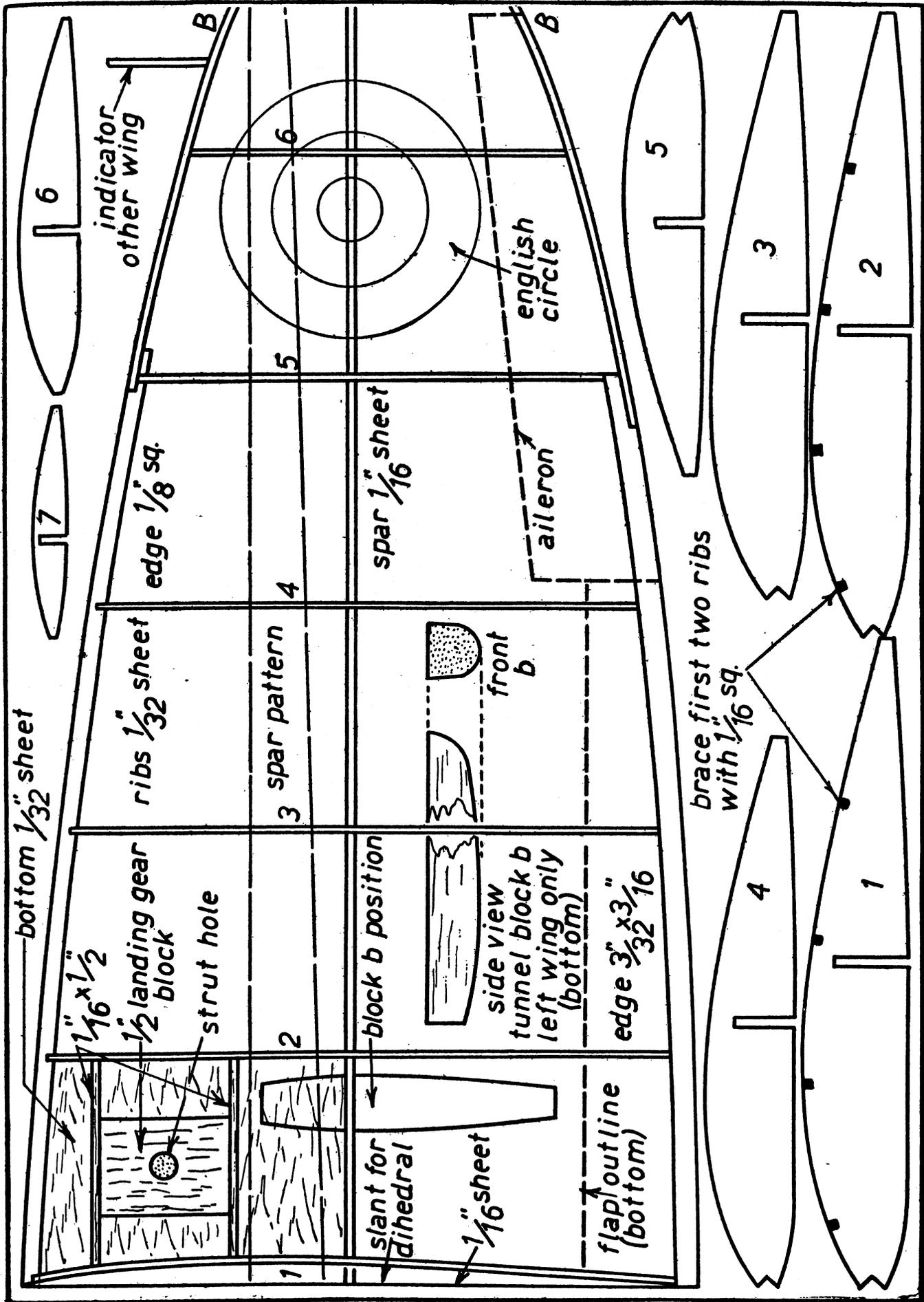
The motive power is eight strands of 1/8" flat rubber.

FLYING THE MODEL

TEST over deep grass if possible. If not, fly the ship R.O.G. on a few turns, gradually increasing the winds to capacity as the correct balance is attained. Add a small lead correction weight if necessary.

BILL OF MATERIALS

Strip Balsa
Five 1/16" sq. by 36"
One 3/32" by 3/16" by 24"
One 1/16" sq. by 24"
Two 1/16" by 1/8" by 36"
Sheet Balsa
One 1/16" by 3" by 36"
One 1/32" by 2" by 24"
Block Balsa
One 3 1/4" by 2 3/4" by 2"
One 5/8" by 1 1/2" by 2 3/4"
One 1" by 3/8" by 7/16"
One 2 1/4" by 1/2" sq.
One 8" by 3/4" by 1 1/2"
Miscellaneous
One 1 ounce cement
One 2 ounce clear dope
Two sheets white tissue
Three split bamboo
Two feet .028 music wire
Eight feet 1/8" flat rubber
Scrap celluloid
Six English circle insignia, two small and four large
One pair 1 3/8" celluloid wheels
Silver bronzing liquid and powder



bottom $\frac{1}{32}$ sheet

$1\frac{1}{16} \times 1\frac{1}{2}$

landing gear block

strut hole

slant for dihedral

$\frac{1}{16}$ sheet

flap outline (bottom)

block b position

side view tunnel block b left wing only (bottom)

edge $3\frac{3}{32} \times 3\frac{1}{16}$

ribs $\frac{1}{32}$ sheet

3 spar pattern

front b

edge $\frac{1}{8}$ sq.

spar $\frac{1}{16}$ sheet

aileron

english circle

indicator other wing

brace first two ribs with $\frac{1}{16}$ sq.

6

5

4

2

1

5

3

2

4

1

6

7

B

B

wire parts .028

exhausts

celluloid

match block to bulkhead #1

2 prong tin hollow bearing

wing pos.

plug

1/32" sheet

master string.

paper fillet

built in rib

scoop

stringers 1/16"

1/2 top view on right wing only

wheel well cover 1/32 sheet

glue at right angle

plug

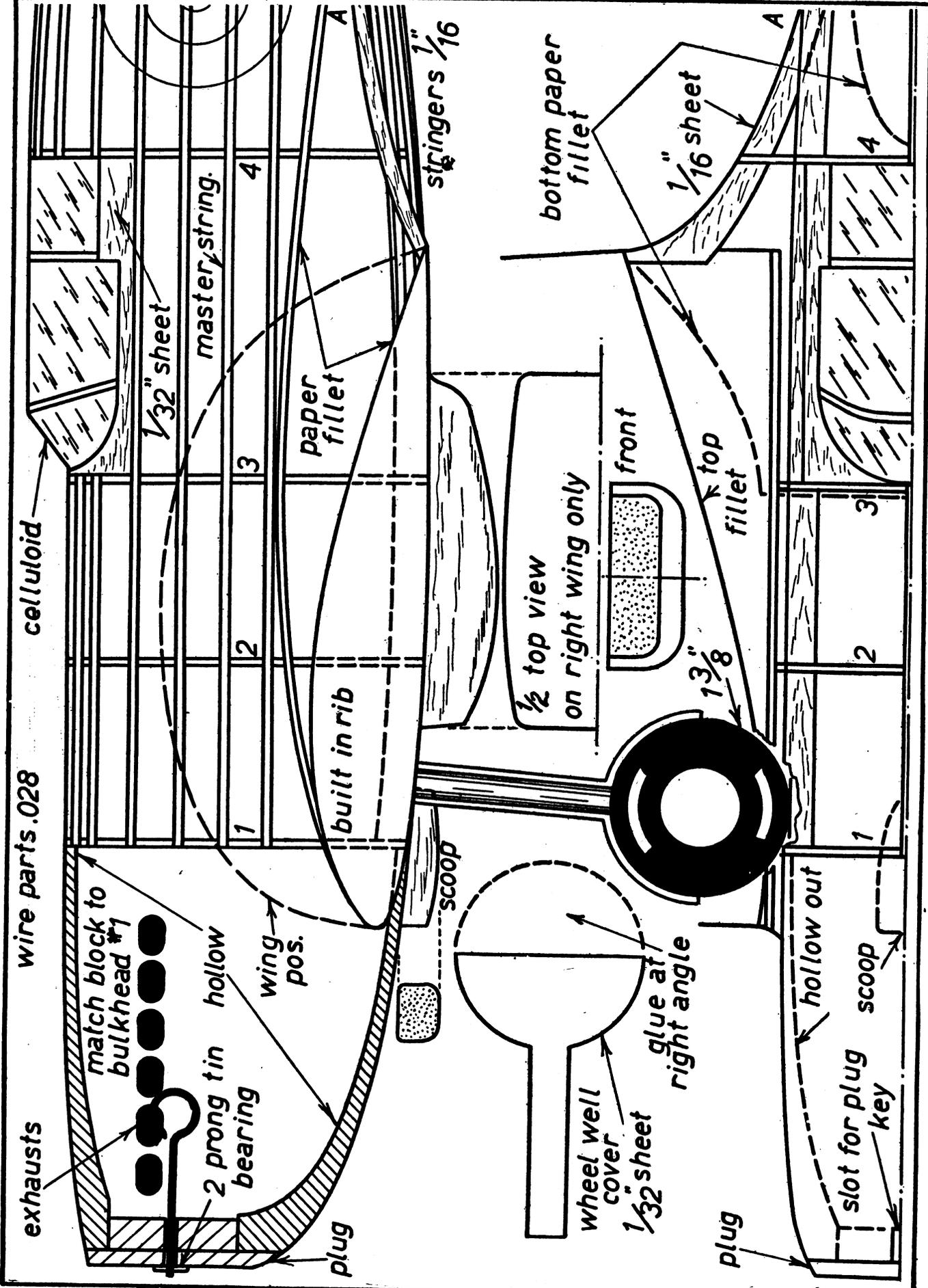
bottom paper fillet

1/16 sheet

top fillet

hollow out

slot for plug scoop key



1

2

3

4

1

2

3

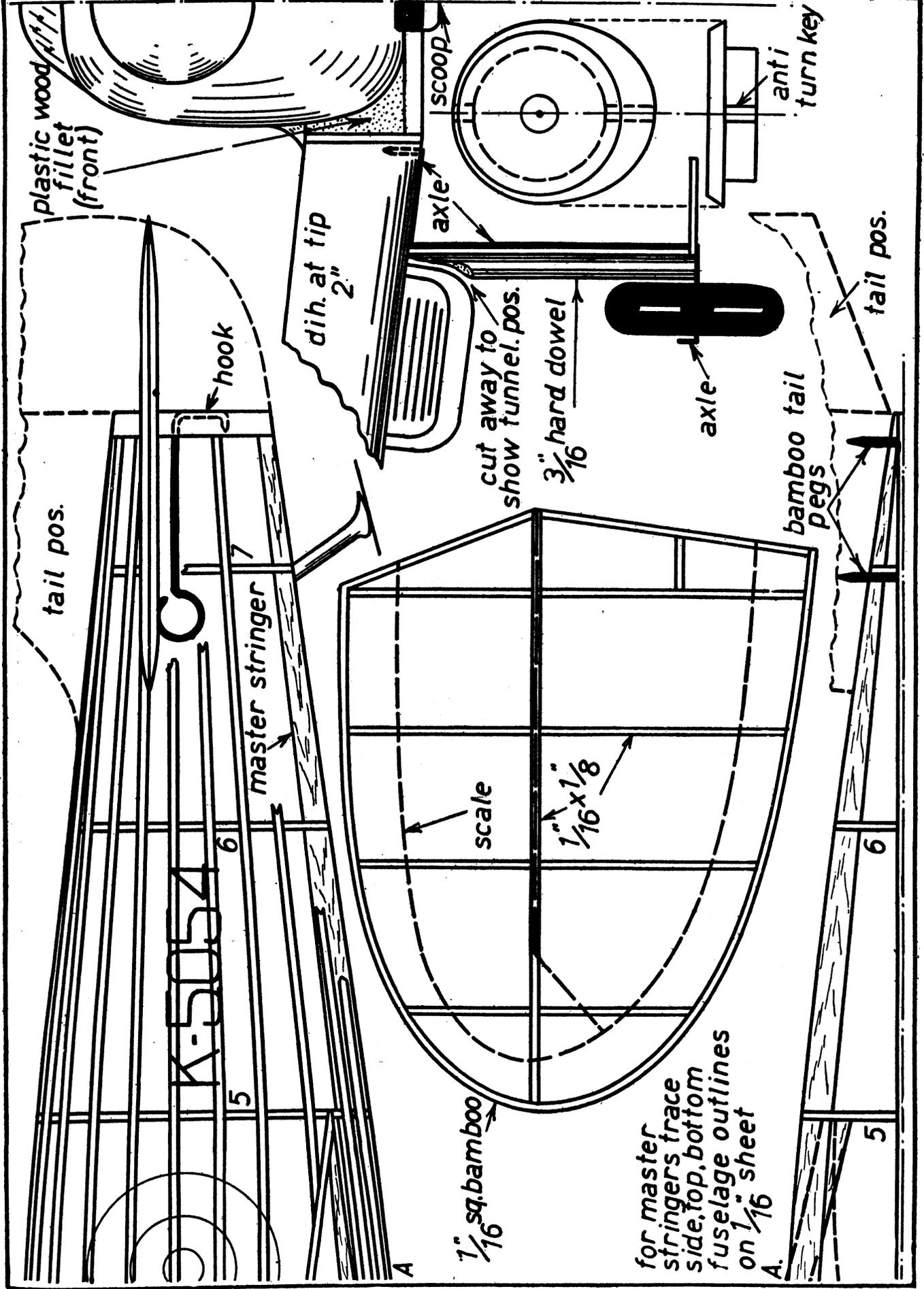
4

A

A

A

A



plastic wood
fillet
(front)

scoop

anti
turn key

dih. at tip
2"

axle

cut away to
show tunnel. pos.

3 3/16
hard dowel

axle

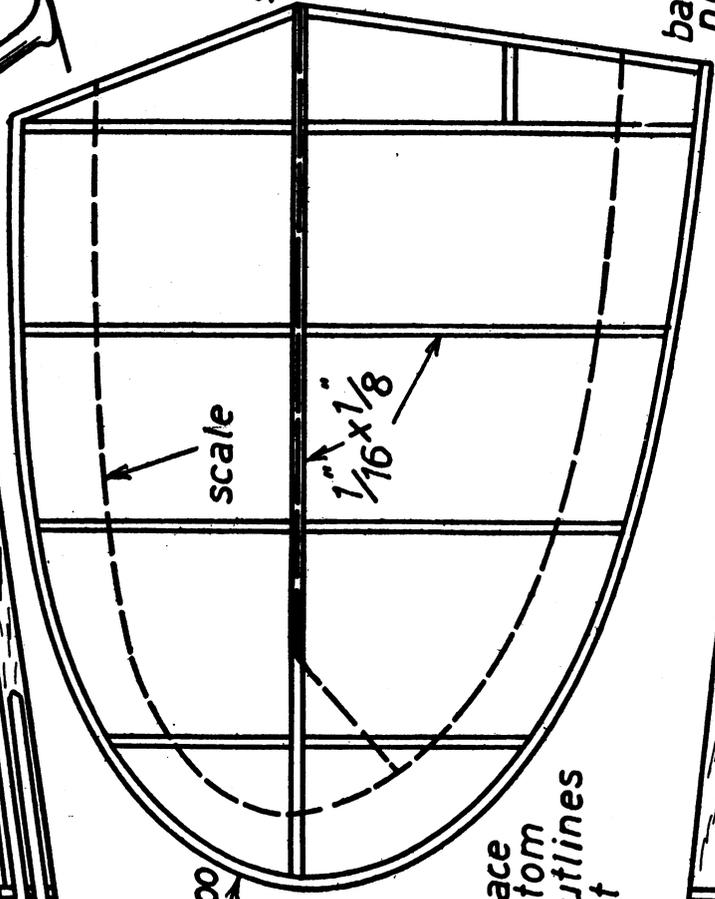
tail pos.

tail pos.

hook

master stringer

bamboo tail
pegs



1 1/16 sq. bamboo

for master
stringers trace
side, top, bottom
fuselage outlines
on 1/16 sheet
A.

6

5

6

5

A

A.

