

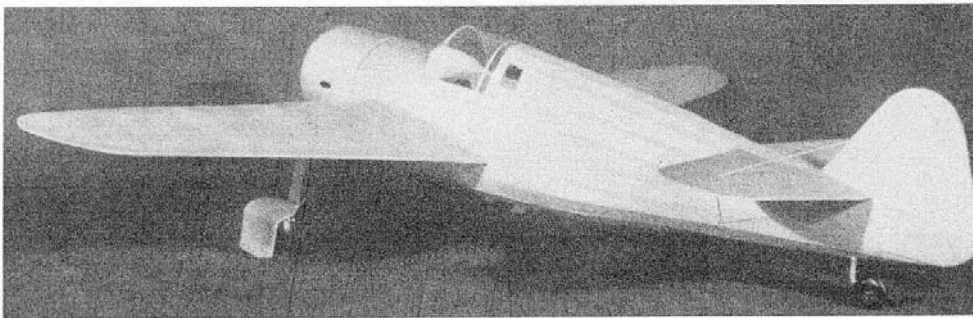
# FLYING DUTCHMAN

A FLYING SCALE MODEL OF THE KOOLHOVEN FK-58, A HIGH-SPEED FIGHTER BUILT IN QUANTITY FOR THE FRENCH GOVERNMENT.

by Alan D. Booton

THE Koolhoven FK-58 is a new Dutch fighter similar in appearance to many American sport planes, especially the Warner-powered Ryan SC. Four machine guns are carried, two in each wing beyond the landing gear retracting mechanism, and there is a small bay in the fuselage bottom in which light bombs may be carried.

The model is to scale, except for the flying propeller, and duplicates the prototype in miniature as to lightness, speed, and grace.



## FUSELAGE AND COWL

Prepare a 6 x 8" plywood sheet by cementing 1/32 x 2" sheets together, cross-grained, and let dry several hours under the pressure of books or other weights; then cut out all the formers except those noted.

Only the left side of the fuselage is built on the plan. This includes only the three 3/32" square longerons and the short 1/16" square piece and the formers. Pin the top and bottom longerons and keel form over the drawing (waxed paper between) and cement the formers over their respective stations. Where no longeron is present under a former, block it up the proper distance. (A coat of cement on former C where the bend is to come will probably make the bend just right.) Prebend the mid longeron and cement it in place. When dry, remove the left

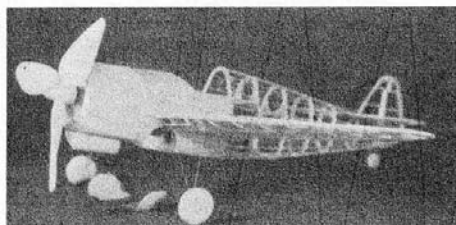
half from the board and build the right half up to the same stage directly to the left half, then cover the front with 1/32" sheet as indicated and run the bamboo sliver fairing strips onto the rear. Rubber bands will hold the strips while they are being lined up to the dots on the formers.

(Note: If bamboo is split by starting the split in the exact center of each piece and succeeding pieces, and guiding the split by exerting pressure to the thicker side, uniform slivers fine as thread can be produced, if desired.)

The curved sheet covering of the bottom and bottom edges can be managed more easily by using narrow staves, which are cut one by one, as the fitting demands.

Fit the sheet cover snugly around the root ribs.

Install the rear hook.



*The uncovered framework reveals the accurate construction. The design of the model is realistic, yet yields high performance.*



*With the landing gear retracted, the FK-58 displays th: sleek lines that make the real plane fast. Ship is practically a midwing.*



*A real flying scale, if ever there was one. Note push-rods, oil-cooler tunnel beneath cowl and workable retracting landing gear.*



*You can rest assured any model of Booton's is really flyable! Here, the model Koelhoven goes through its paces. It's stable, too.*

## WINGS

**A** reversed wing sketch must be made for the right panel. Assemble the parts of both wings simultaneously, holding the dry parts in place with pins until all are lined up, then apply cement to each and every joint. The ailerons are not included at first, so after the frames are set, cut through the ribs and fit in the aileron spars, extra ribs, and wire hinges, and then cut through the trailing edges.

## TAIL SURFACES

The tail-surface frames are assembled with standard stock. After drying thoroughly they are then sanded to the proper streamline. Note that the horizontal tail frame is a unit, which makes it easier to line up to the two degrees positive incidence.

## LANDING GEAR

The retracting landing gear has been reduced to the simplest form, and is very neat when a good job is done, and can be made automatic by referring to the flying-scale articles in the 1937 January and February issues of Air Trails. In this case, a forked wire would push forward and engage the two 'a' strut wires next to the axles. See front view for this.

No. 12 music wire is used for all the wire parts, which are shown in detail— 'a' is the main strut wire and the most complex set to bend. It is covered either with balsa or rolled paper, and is hinged on to 'd', 'b' and 'c', with the formed-in stop hinge 'f', forms the folding diagonal brace, hinged at the top in 'e' and at the bottom in an eyelet formed in 'a'. The 'a' and 'bc' struts are all held down by the rubber bands stretched between the arms at the top of 'a' 'abd' 'bc'. Be sure to make the landing parts left and right-handed. The landing gear is held up with the small "latch button" pinned to the keel form. One-and-one-quarter-inch rubber airwheels are the most suitable. The landing gear covers are cut-outs carefully cut from the wells and wings and cemented to the struts. Aluminum sheet could be substituted. The adaption may vary slightly with the individual builder, so judgment must be used.

## PROPELLERS

The spinner shown is used for both the scale and flying blades. The blades are merely pushed into the sockets and adjusted to suit. The fit must be snug, however.

## ASSEMBLY AND FINISH

**B**efore covering, sand all external parts with fine sandpaper to remove roughness and projections, then pin the parts together for a final check-up for fit, dihedral, and landing-gear test. The top longeron must be loosened and raised at the rear to insert the stabilizer. Dismantle after checking and cover all exposed frame with silver tissue. Dope the wood surfaces with clear dope and sand with fine paper. Reassemble the parts with cement this time and spray the tissue with water. This tightens the tissue when dry. Give the wood surfaces two coats of aluminum dope and the tissue one. Fit and cement the celluloid cockpit inclosure on.

Add the Dutch insignia to the wing tips and stripe on other detail if desired.

## FLYING

**P**ower the model with seven feet (three loops) of 1/8" flat rubber, lubricated. If tall grass is not available to make the first tests in, gradually add turns to the motor until the model makes short hops. Adjust for better flights between hops until a full power flight can be safely made.

## MATERIAL LIST

### Blocks

- 3 3/4 x 1 x 3 3/8"
- 3 3/8 x 1/2 x 2 3/8"
- 1 7/8 x 7/8 x 1"
- 3 1/4 x 1/4 x 2 3/4"

### Sheet

- 6 1/32 x 2 x 18"
- 1 1/16 x 2 x 18"
- 1 1/8 x 2 x 4"

### Strips

- 8 1/16sq x 18"

6 3/32sq x 18"

**Miscellaneous**

1 oz. cement

1 oz clear dope

1 oz silver dope

1 sheet silver tissue

4 1/16 x 1/4 x 10" bamboo

4 x 4" sheet celluloid

1 pr 1 1/4" airwheels

36 in #12 music wire

7 ft 1/8" flat rubber

4 thrust washers

REMAINDER OF FRONT VIEW DRAWING

M1  
M2  
& M3

A 1/8 SHEET

M4

D

E

F

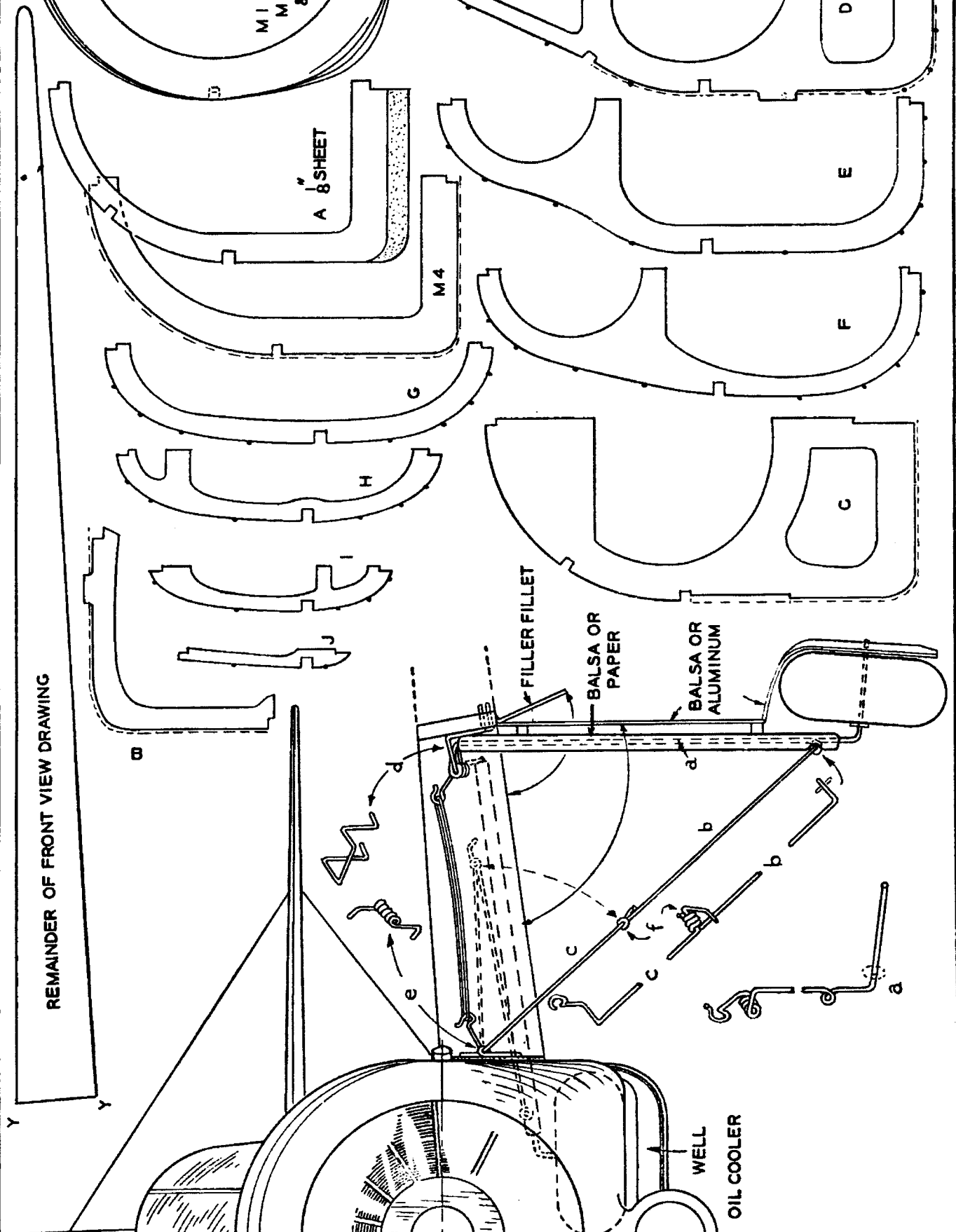
C

FILLER FILLET

BALSA OR PAPER

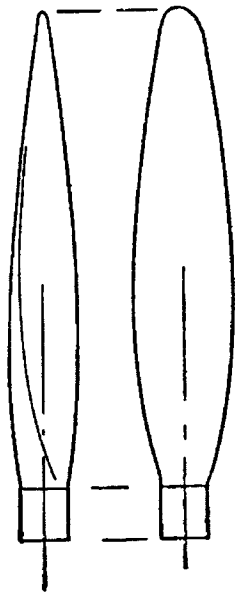
BALSA OR ALUMINUM

WELL  
OIL COOLER

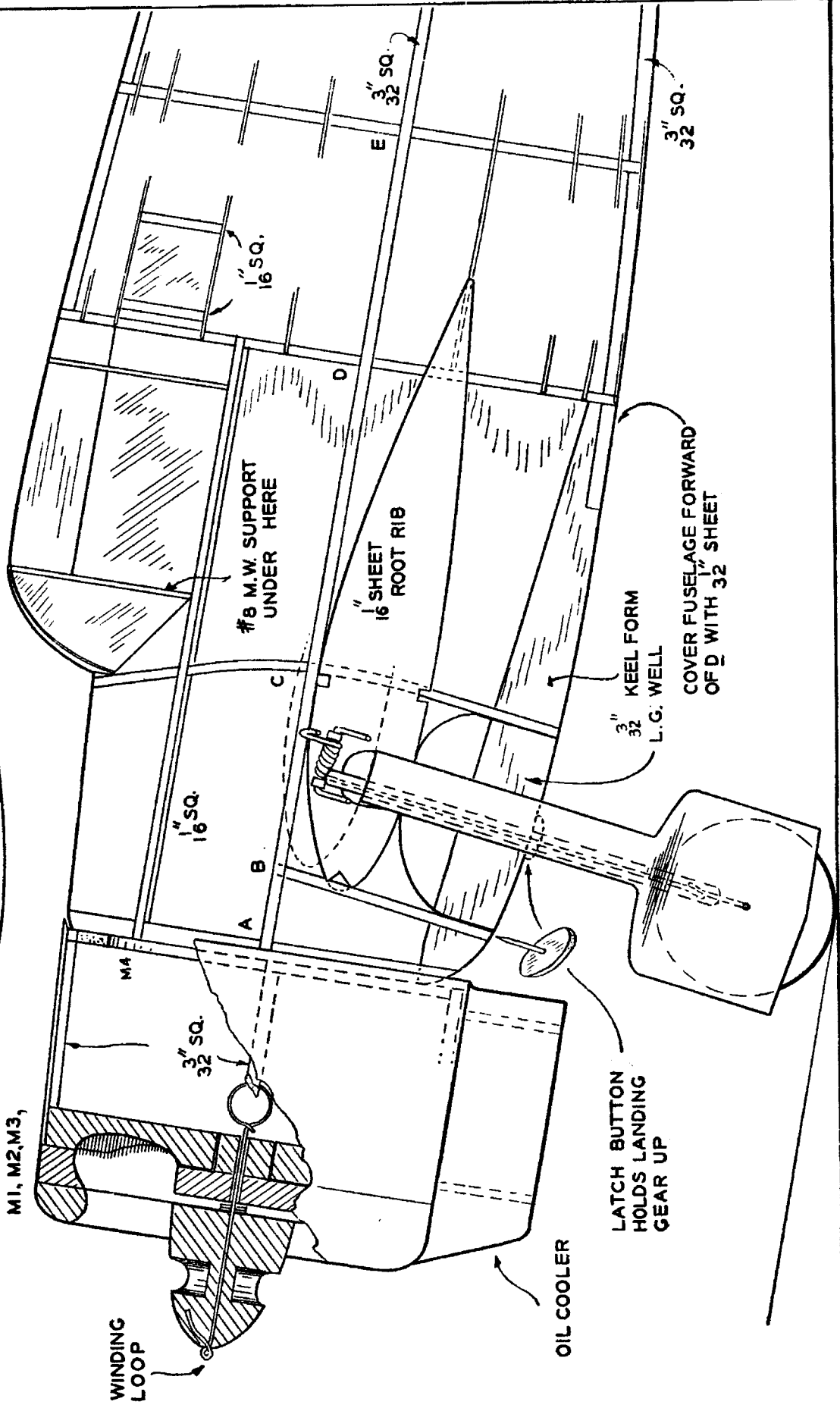
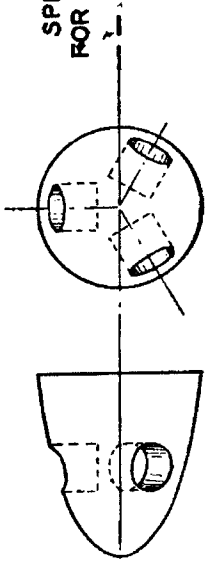


# FLYING DUTCHMAN

SCALE BLADE DESIGN  
INTERCHANGABLE WITH  
FLYING BLADES



SPINNER  
FOR 3 BLADES



WINDING LOOP

M1, M2, M3, M4

3" SQ.

1" SQ.

A

B

C

D

E

#8 M.W. SUPPORT UNDER HERE

1" SHEET 16" ROOT RIB

3" SQ.

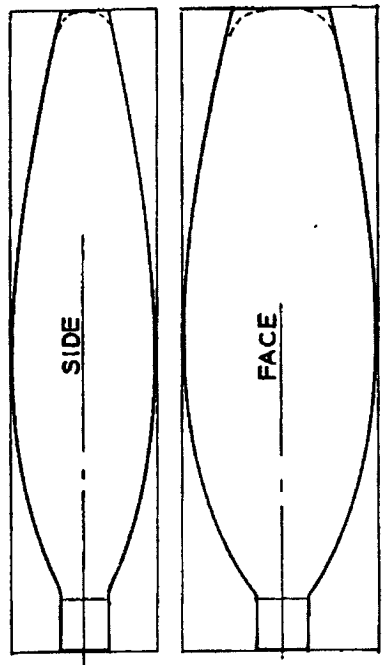
3" SQ.

OIL COOLER

LATCH BUTTON HOLDS LANDING GEAR UP

3" 32 L.G. WELL

COVER FUSELAGE FORWARD OF D WITH 1" SHEET



FLYING PROP  
3 BLOCKS -  
3" X 1" X 3/8"

TRIM TAB  
(BLACK INK)

1" X 16"

1" X 3" RIBS  
32 X 16

SOFT WIRE HINGES

1" SHEET  
.16

SOFT BALSA

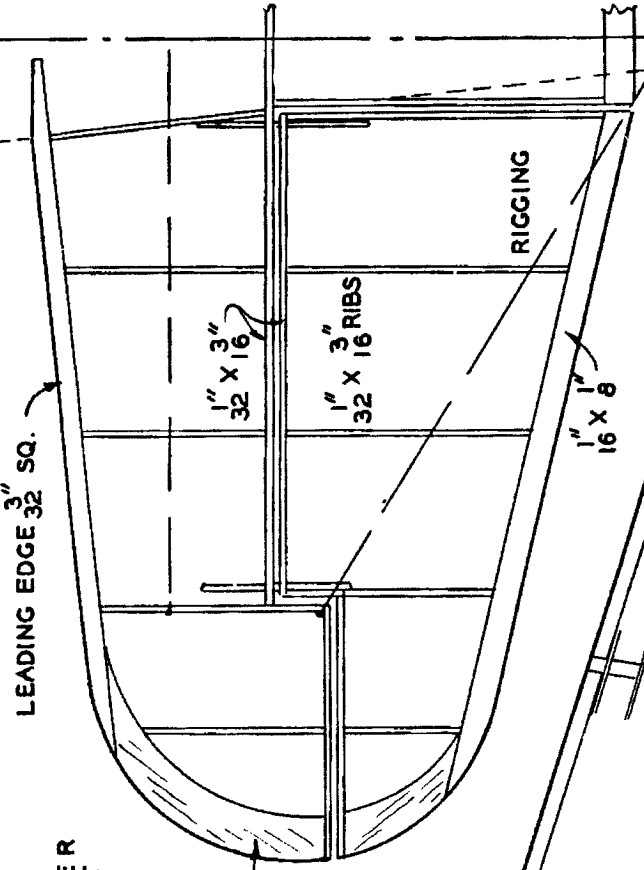
1" SHEET  
.16

3" SQ.  
32

1" X 3" RIBS  
16 X 16

STABILIZER  
POSITION

TAIL  
WHEEL  
ASSEMBLY



STABILIZER  
BUILD UP UNIT

1" SHEET  
.16

3" SQ.  
32

H

1" ROUNDED  
32 BAMBOO

F

G

REAR AND  
"S" HOOK  
ASSEMBLY



# FLYING DUTCHMAN

