FLYING SCALE CURTISS F-11C-4 CYCLONE ENGINE

Span 32" Length 22⅜" Weight 7 oz.

MINIATURE AIRCRAFT CORP.
83 LOW TERRACE NEW BRIGHTON, N.Y.

1F7

Cut out and cement to fuselage sides

1F7

U.S.NAVY

Cut out and cement to bottom of lower wing.

U.S. NAVY U.S. NAVY

Numbers and letters cut out and cemented to tail, wing and fuselage as shown on drawings

Instrument board
Cut out and cement to rear of #5 former.

14 14 14

MODEL BUILDER magazine
521 West 19th St., Costa Mesa, CA 92627

Plan No: 879-01A

Design by: Frank T. Roberts, Jamesburg, N.J.

Landing gear
After fuselage is assembled cement the landing gear struts, made from 3/8 by 7/8" sanded to streamline section, in position in fuselage, struts are slotted to fit over formers #3 & 3a. Cement well. Wheel pants are sanded to shape shown on the three views. Bottom of struts are trimmed to fit against pants, cement in place. Wire axles are cemented in place Wheels are held on by cementing washers on the axle ends. Pants are of the open side type

Outer section spars (from wing tip) are same thickness as thicker part of wing

Cabane struts

1/8 by 3/16" brace

Anti-vibration rods

All brace wires (thick thread are put in with needle as model is built and assembled

Aileron push rod

Streamlined balsa blocks cover the aileron ball-crank and extends slightly below wing surface.

N-strut.

Aileron control link rod

Aileron ball-crank

Wire axle make two.

To aileron ball-crank

Front view at #5 former, showing floor, position of controls etc.

Side view of movable control details.

Rudder push rods

Elevator push rod

Solder this joint

Control horns made of pine.

Detail views of rudder pedals

Cement this block to floor
Rest of unit cemented together and free to rock in the block

Aluminum tube, stick is removable for flying model

Details of control stick and mounting.

Sketch of control stick mounting. make from pine.

Aileron detail

Aileron control link rod

Aileron push rod

All wires are kept from pulling out of the wood places by small drops of cement on ends of the wires. Take care that the cement does not bind the joint.

Aileron control li

Bell-crank detail

Rudder push rods

Elevator push rod

Solder

Rudder push rods

Top view of control details.

To aileron bell-crank

Movable Controls may be placed in a model intended for flying as the control stick is removable. However the controls are a lot of work and not recommended for flying models.
For exhibition models the controls are made from scrap material, either pine or hard balsa. Push rods are music wire.
Detailed instructions are not given for making the controls as the drawings clearly give all details full size.

CONSTRUCTION STEPS

1. Cut all parts from the printed balsa.
2. Build wings and wing struts.
3. Build tail surfaces.
4. Fuselage and landing gear.
5. Cover all surfaces with tissue, after sandpappering.
6. Cement lower wings and tail surfaces to fuselage.
7. Spray all tissue covered surfaces with water.
8. Dope all surface grey, except top of top wing, this is yellow with red stripes. Fuselage has red band around it.
9. Cement cabane struts to fuselage, Cement top wing to cabane struts and fit N-struts in place.
10. Sew in brace wires (thread), put on insignia and other details.
11. Put rubber motor in place.

Detailed instructions will be found on drawing at each point.

Fuselage Construction
Cut all formers and keel pieces from the printed balsa. Cover the drawing with wax paper, pin keel over drawing. Cement formers in place on keel, make sure that the straight parts of the keel are made from 1/16 by 3/16" cut to fit the drawings. Jig is made from scrap waterbirch to hold the keel at right angles to the former (from above) and then the stringers while the formers are cemented in place (side view). The formers are at right angles to the keel when viewed from above) and then the stringers When all possible stringers (1/16" square) are cemented in formers the fuselage is removed from the jig and the remaining stringers may be cemented in the formers. The cockpit sides and landing gear struts are cemented in place.
Cover fuselage with tissue in small pieces. Spray with water to shrink tissue. Color grey with red band around just behind cockpit Details are added and markings are put on with black ink and drawing pen.

Tail wheel fork built up from printed balsa

Tail wheel two pieces of 1/16" cut from printed sheet.

Rubber Hook

Cement base to keep jig up-right

Sketch showing a simple jig to hold the keel in line while the formers are cemented in place. Make jig from any material handy. Sizes are suggested.

Uprights 1/4 x 1/2"

Base 1 by 3" 2 ft. long

Dotted lines show how keel pieces are cut to take the formers.

Up-rights nailed in place

Tail construction. Cover drawing with wax paper, pin spars over drawing. Trailing edge is 1/16" sq. Leading edge 1/8" sq. Cut ribs and tips from printed sheets and cement in place. Sandpaper and cover. Cement in place.

Leading edge 1/8 sq.

Elevator spar

Stabilizer spar

Sketch showing details of tail surfaces hinges.

Landing gear strut pattern. Make two from 3/8 by 7/8" balsa.

Wire hooks are cemented to strut and rib or spar.

Cabane struts made from 1/8 by 5/16" balsa.

N-strut. Make two from 1/8 by 5/16" balsa Sand to streamline shape as shown.

Aileron and tail spars are all made from 1/8 by 1/4". See detail sketches for shape of each spar.

Red stripe around fuselage

Wing construction. Cover drawings with wax paper and place on smooth board. Pin trailing edge and spars to board directly over drawing. Leading edge is raised on blocks of balsa to meet front of ribs Top wing is cut at rib #3 for proper dihedral as shown on front v

Aileron leading edge

Aileron receiving spar

Sketch showing details of aileron hinge

Make celluloid windshield from this pattern

Music wire pins in hinges

Tail and aileron hinges are made and assembled before tail and wing surfaces are covered.

Trailing edge 1/8 by 1/4" shaped after assembly

Red wing light

Position of insignia on top surface

1/8 x 1/4" strip cross set with bottom of rib

Top wing rear spar

Red stripes on top of top wing

32" sheet balsa covering comes back to this line on top of wing.

Top front wing spar

Green wing light

Top wing leading edge cut from 1/4" sheet balsa.

Upper wing spars are cut from 1/16"

Cross section of leading edges shown at each end of pattern, for shaping. Do not shape until wing is assembled

Templates for shaping leading edges of wings

Lower wing leading edge cut from 1/4" sheet bals.

Lower wing spars are cut from 1/16" sheet balsa.

Pattern for seat back, Make from bond paper. Make seat from 1/16" balsa

Wing tips are made of three pieces of 1/16" thick balsa, cut from the printed sheets.

Aileron push rod

Aileron control link rod

Aileron push rod

Cockpit sides made from 1/16" sheet.

Headrest, solid balsa

Cockpit sides

Ventri-tube

Fillet made from scrap balsa.

Streamline plug plates made from 1/8 balsa.

Cut front crankcase piece from 3/8" thick balsa.

Tail wheel pinned in place

Sketch showing details of wing hinges

Aileron push rod

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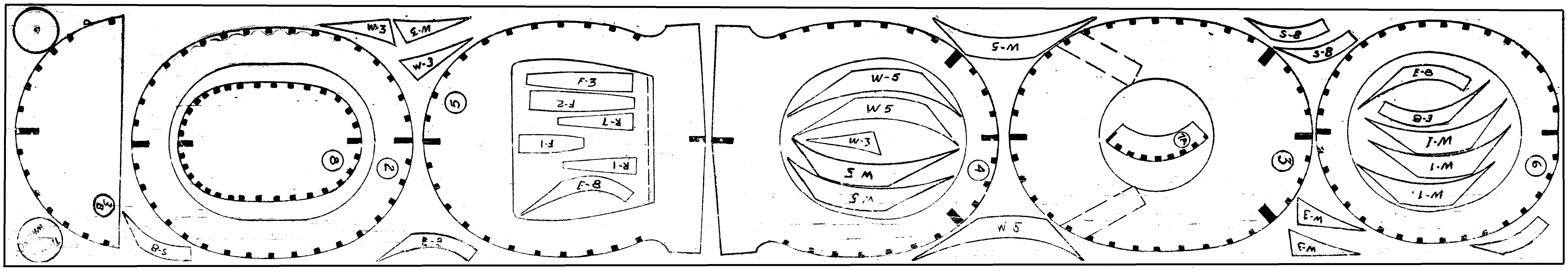
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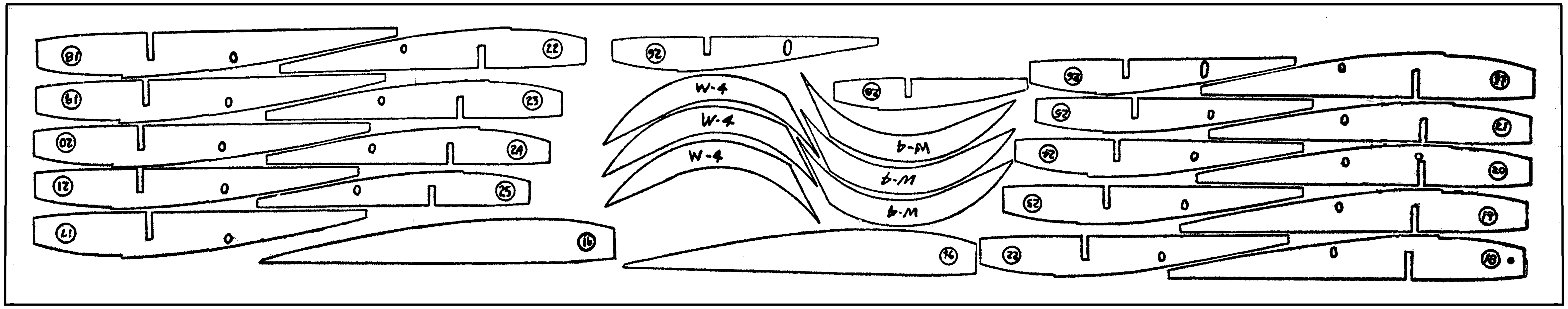
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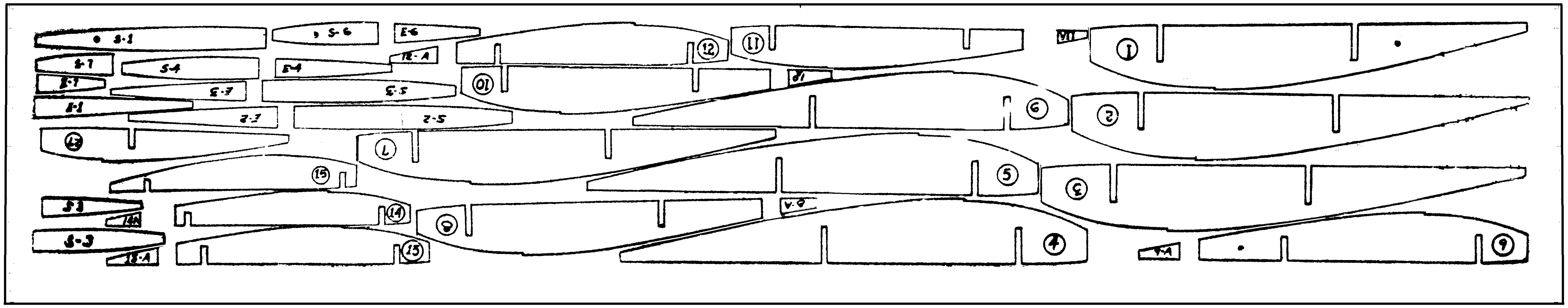
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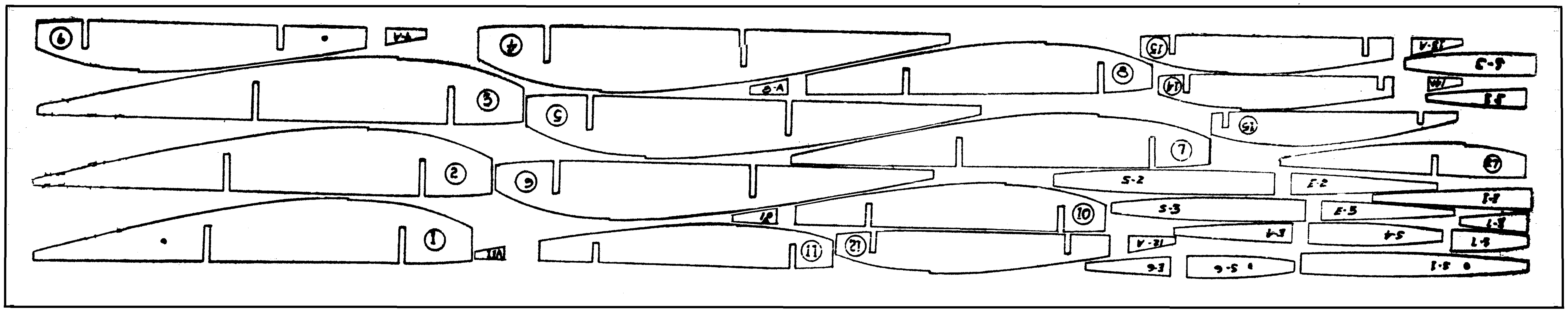
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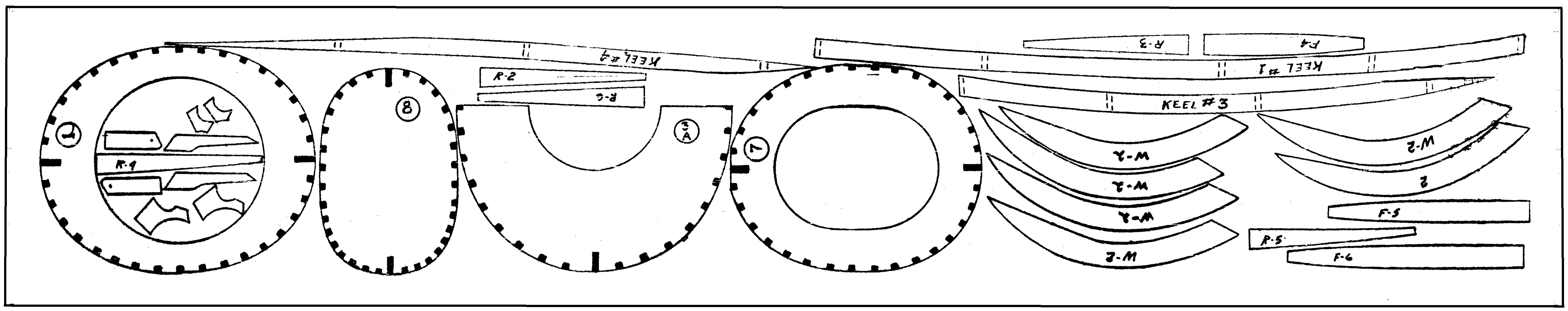
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F-4
KEEL #1
KEEL #3
R-2
R-4
W-2
F-5
R-5
F-6