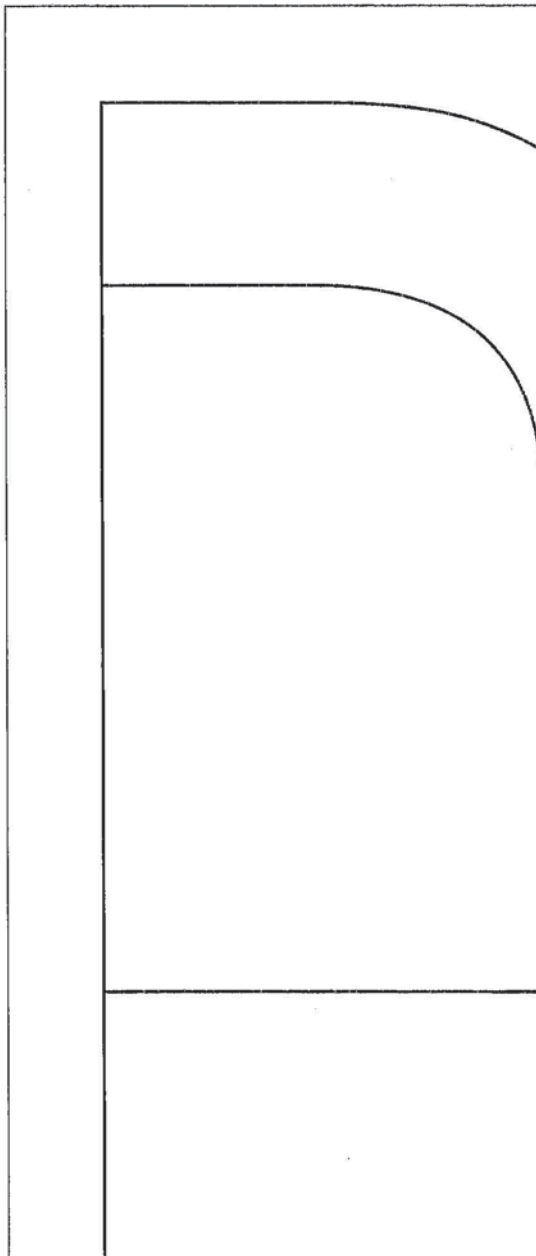
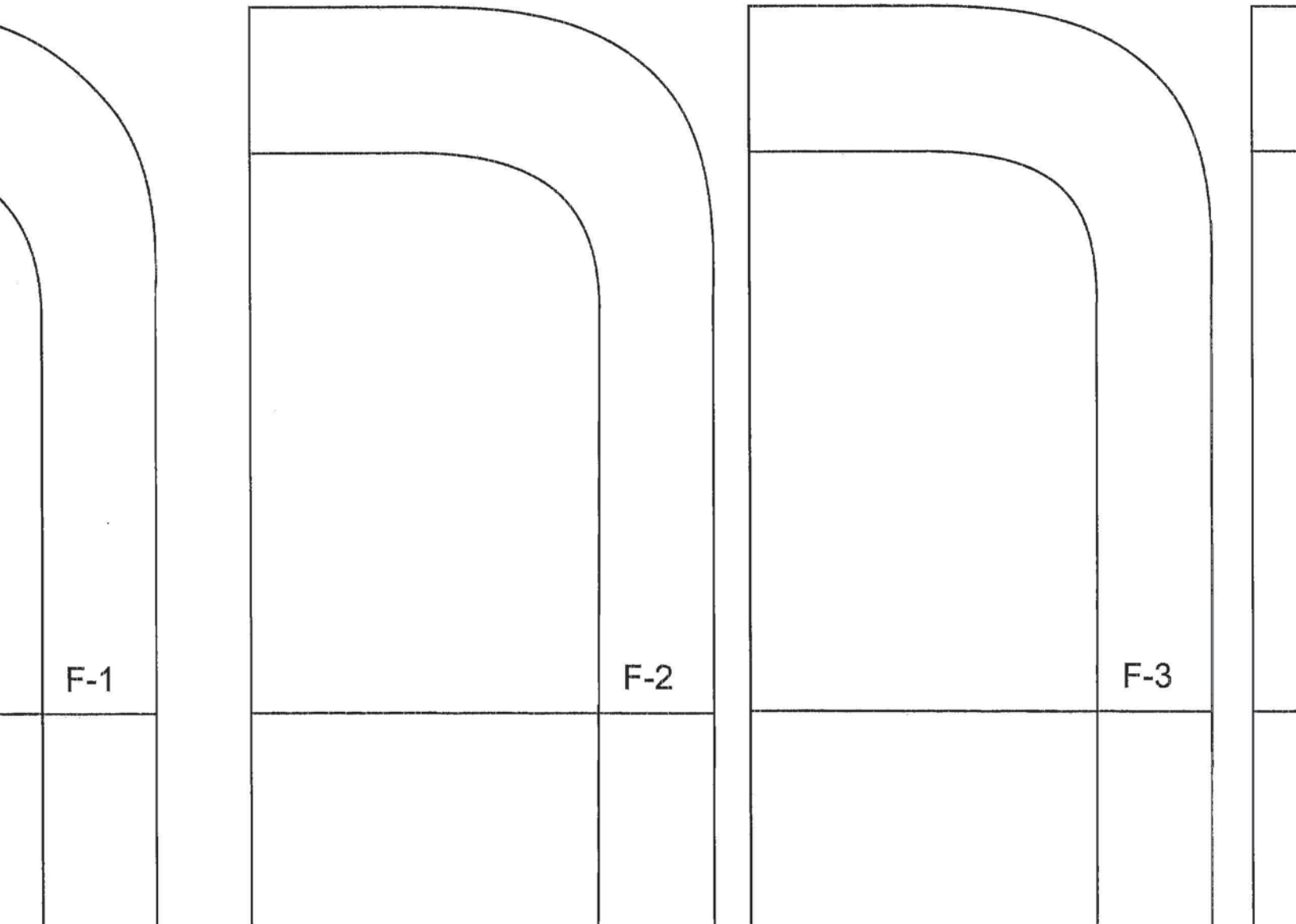
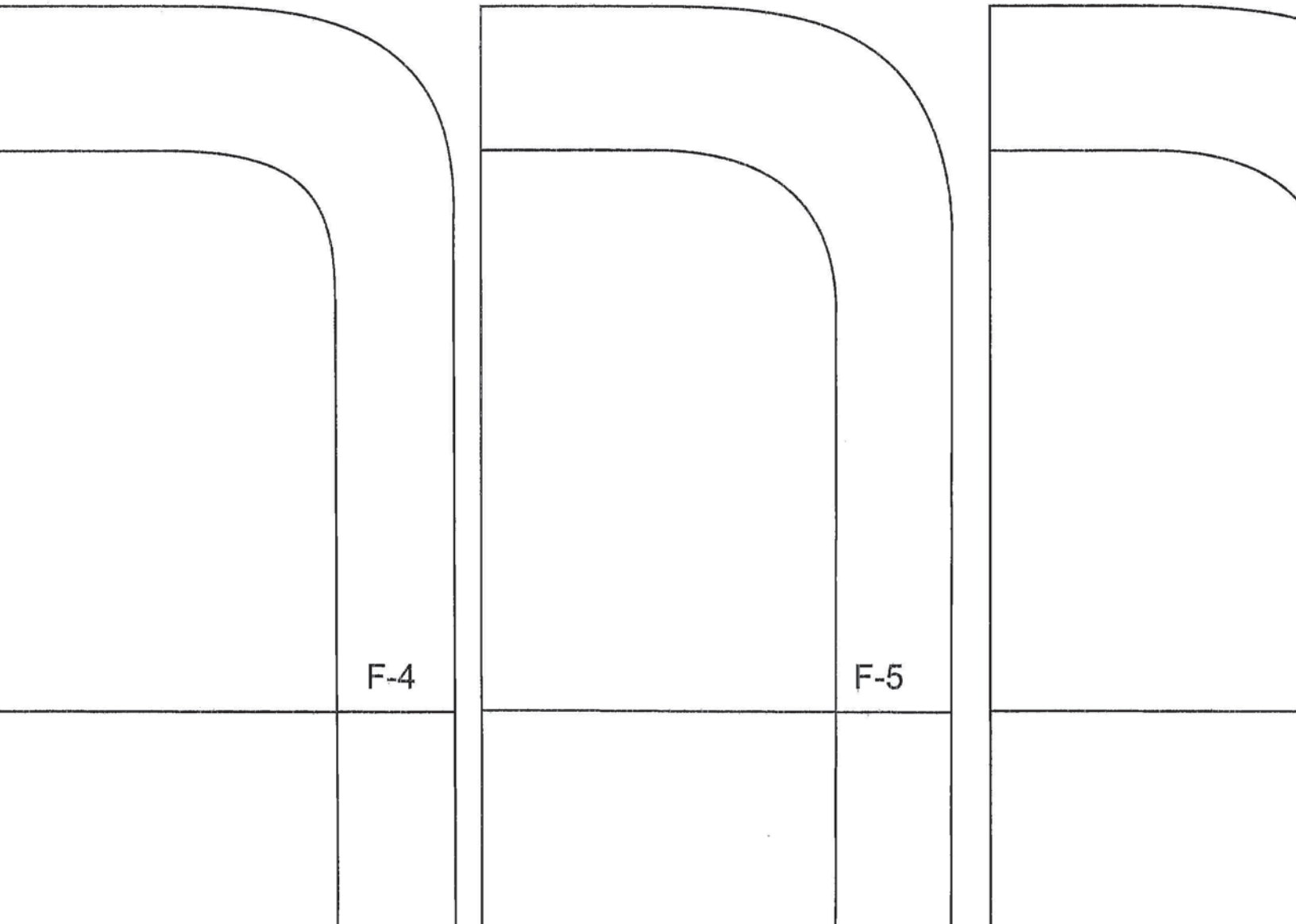
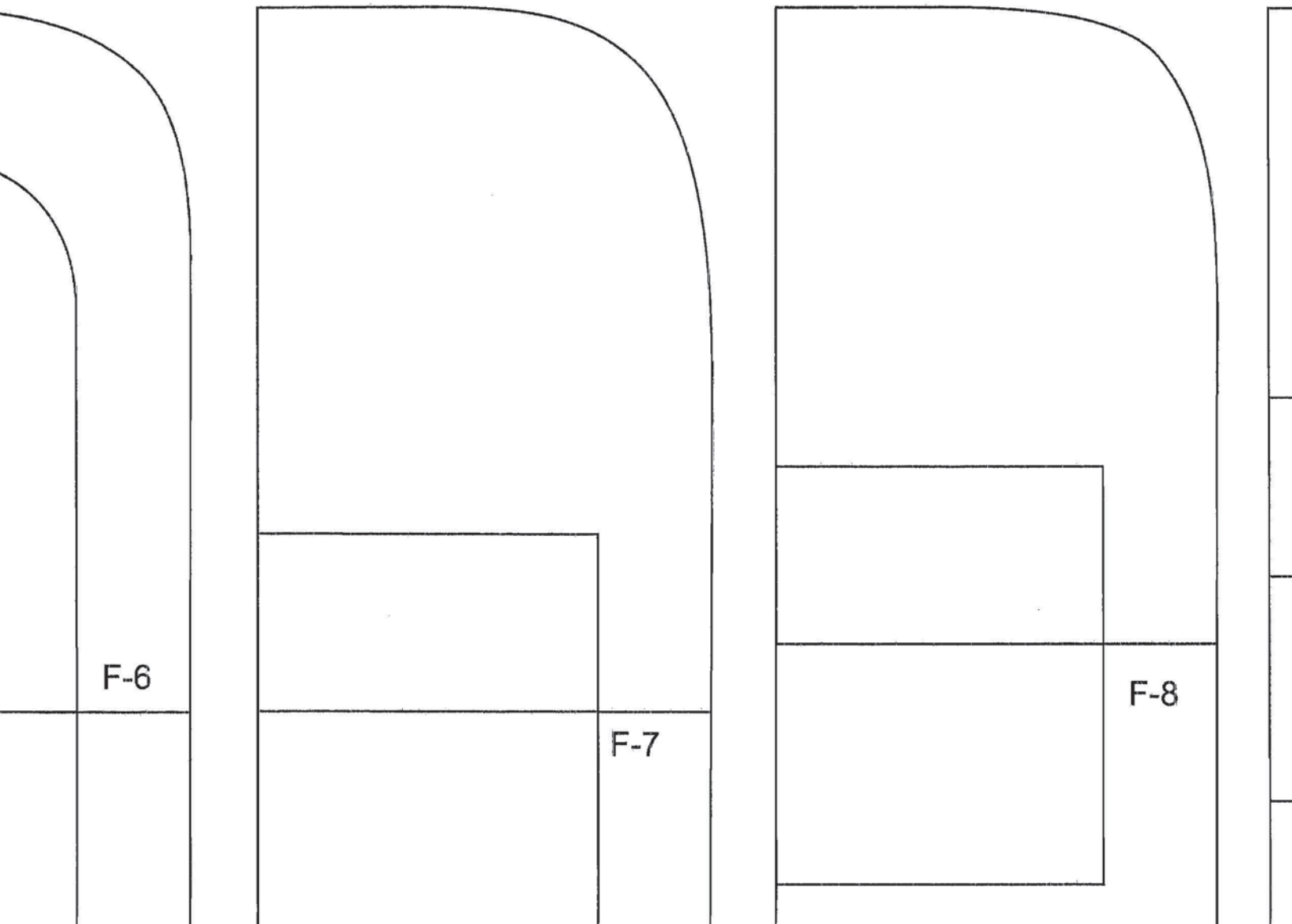
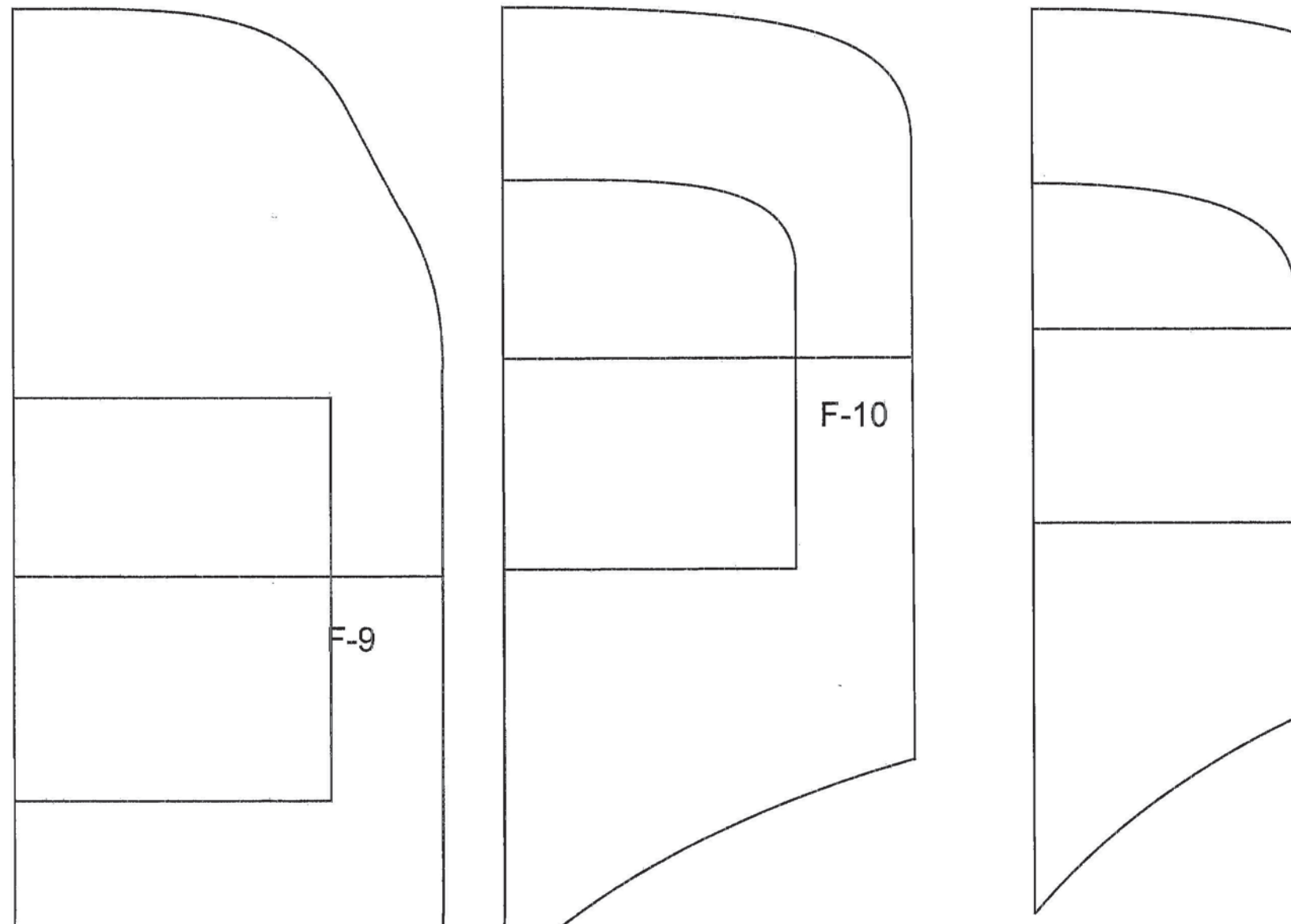
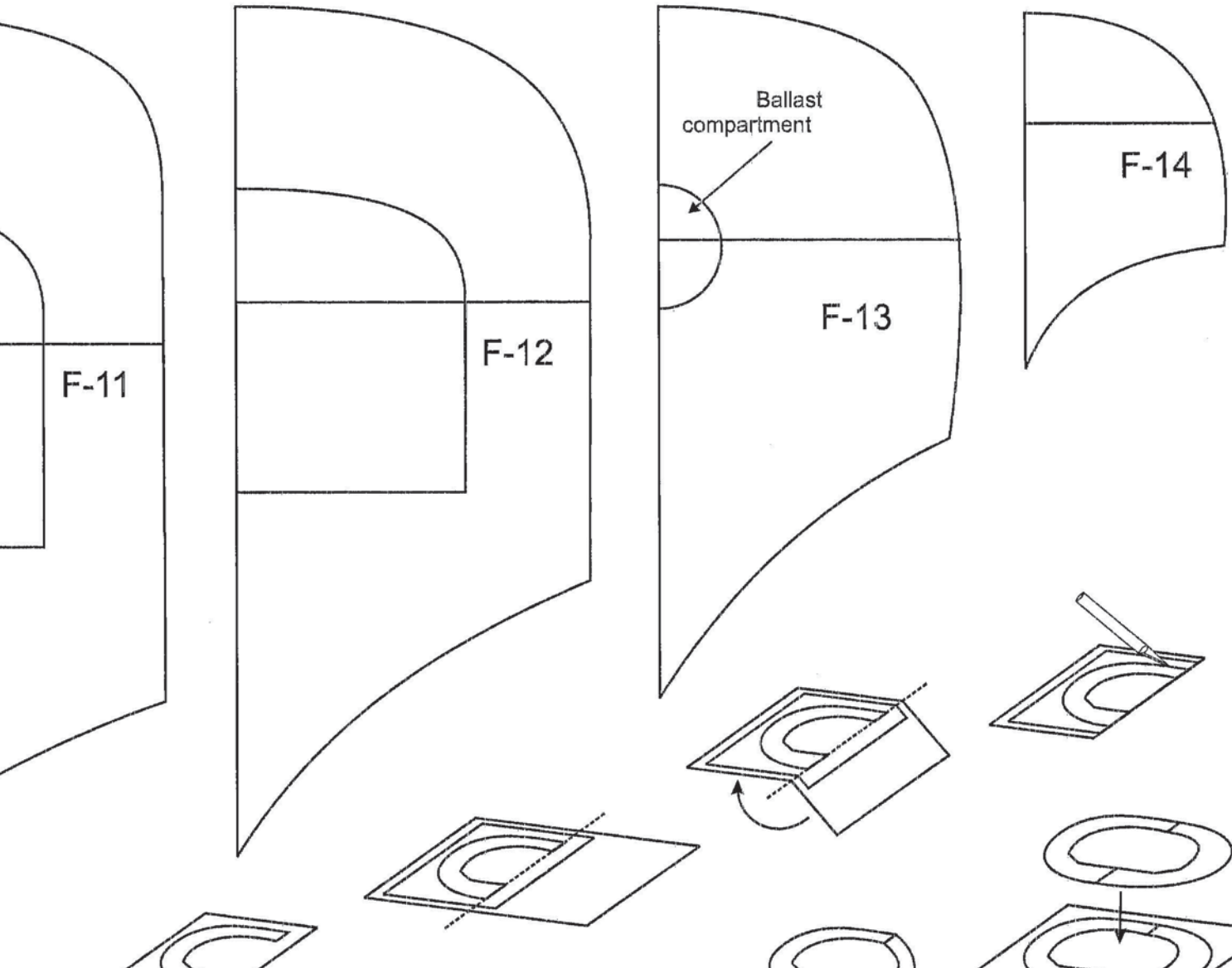



F-1
F-2
F-3

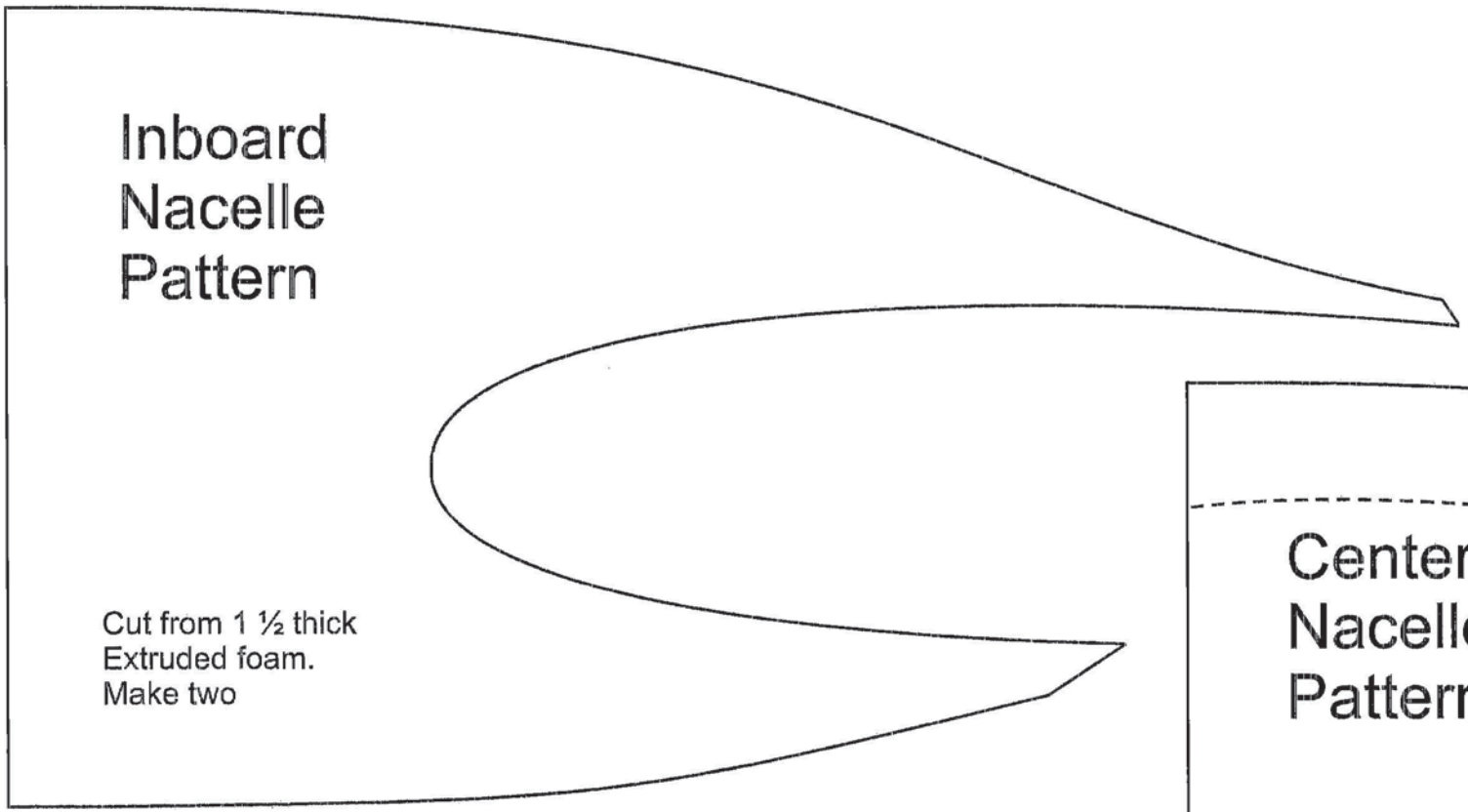

F-4
F-5

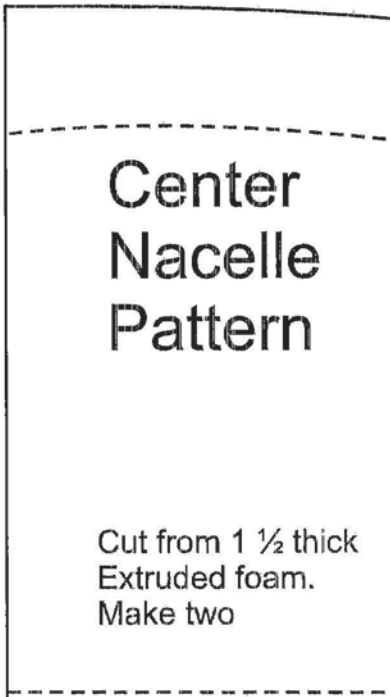

F-6
F-7
F-8


F-9
F-10



To sa
drawn
the p
Fold
card s



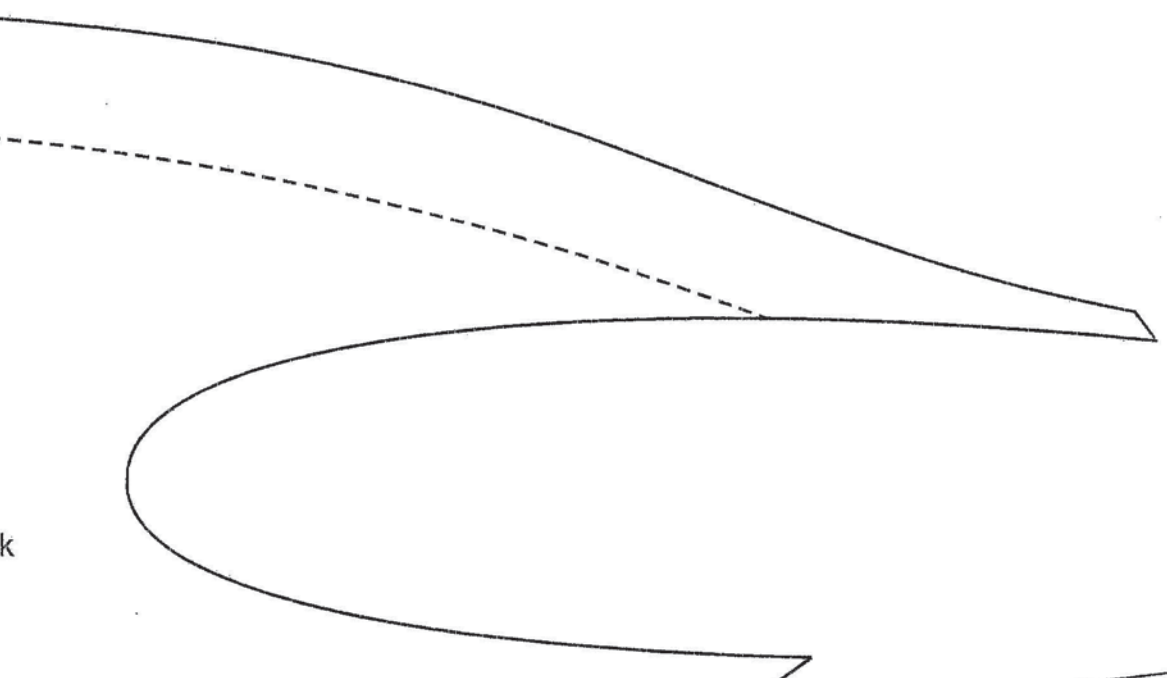


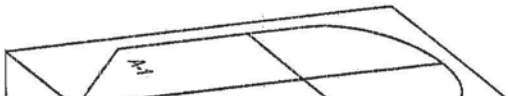
save paper and the cost to you for printing the segment patterns have been awn in halves. To make a full pattern either photo copy or cut the patterns from e plans. Apply spray adhesive to the pattern and attach it to card stock material. old the card stock at the pattern center line. Cut through the pattern and the rd stock with a hobby knife or scissors, when unfolded the pattern is ready to use.

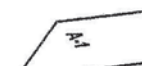
Use the segment patterns to mark the foam and

Outboard Nacelle Pattern

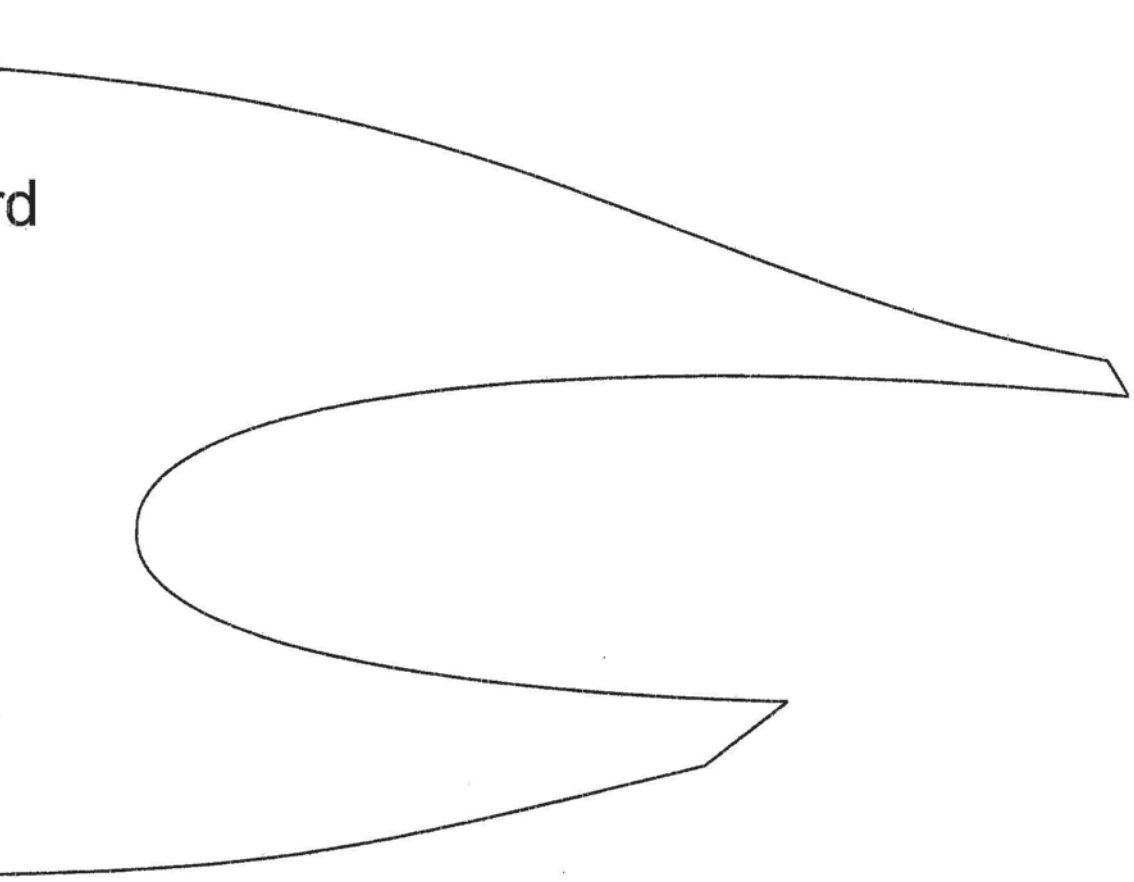
Cut from 1 ½ thick
Extruded foam.
Make two

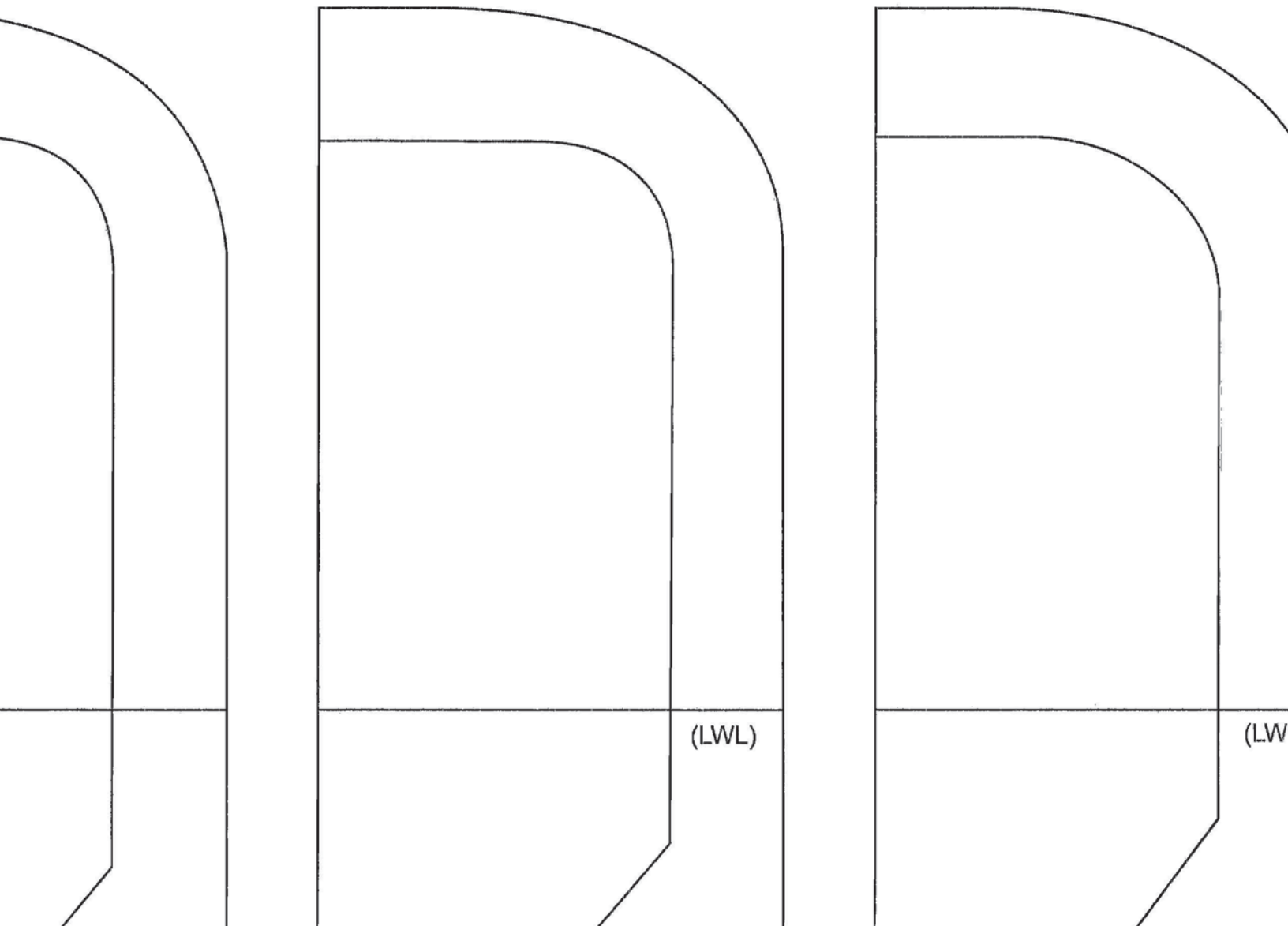


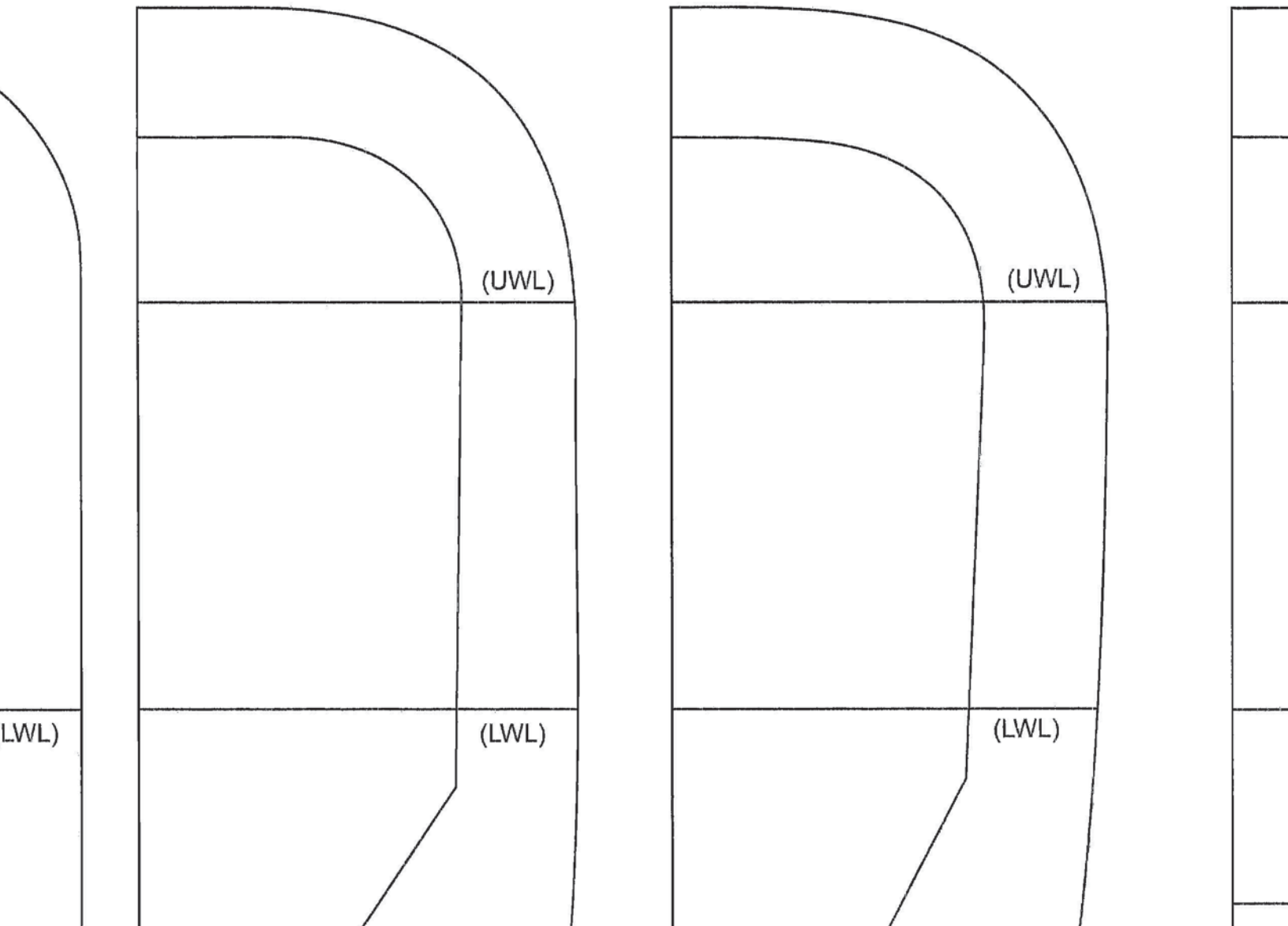


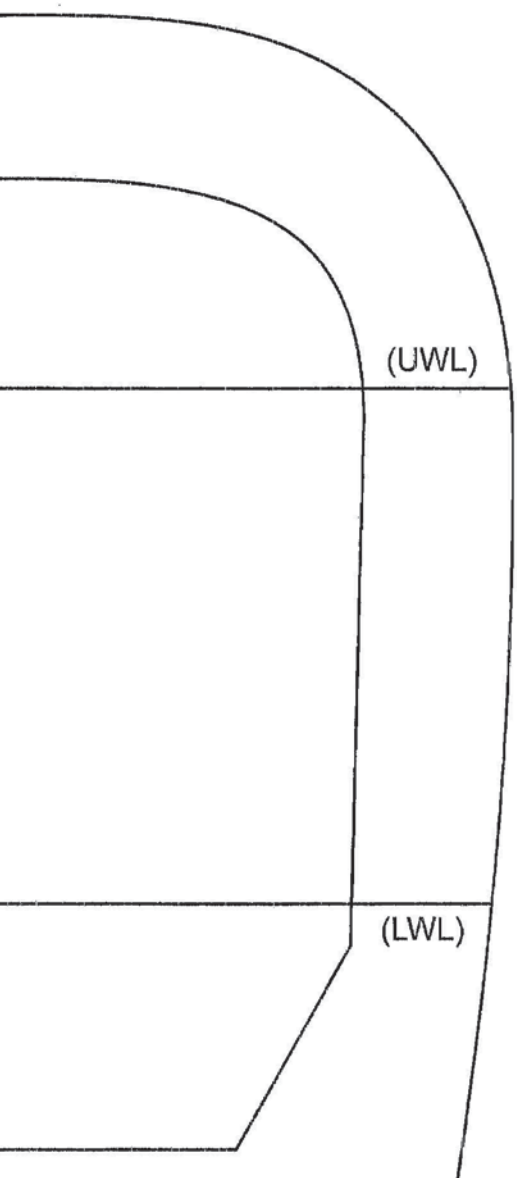


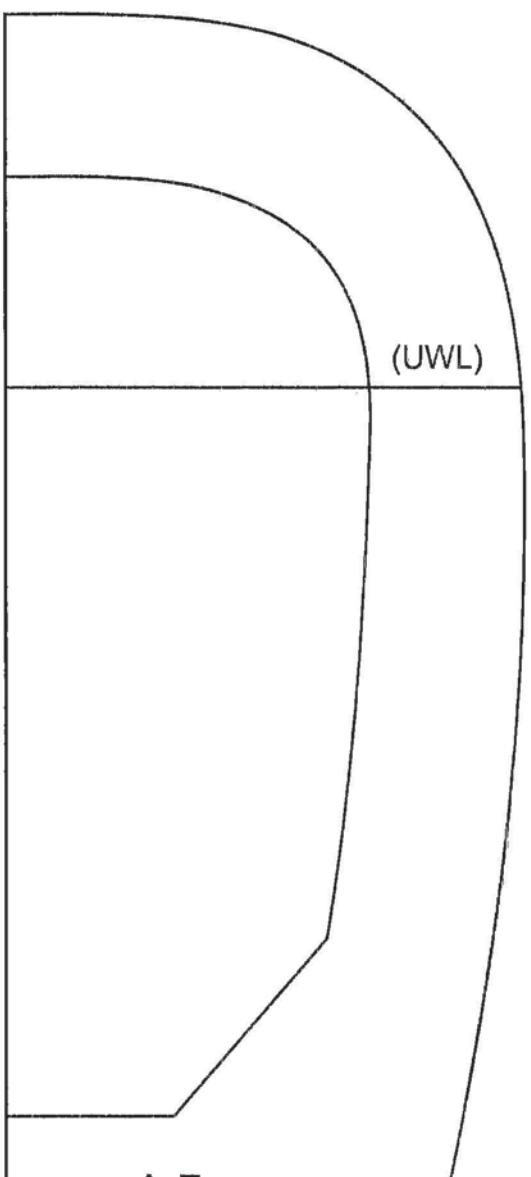
rd



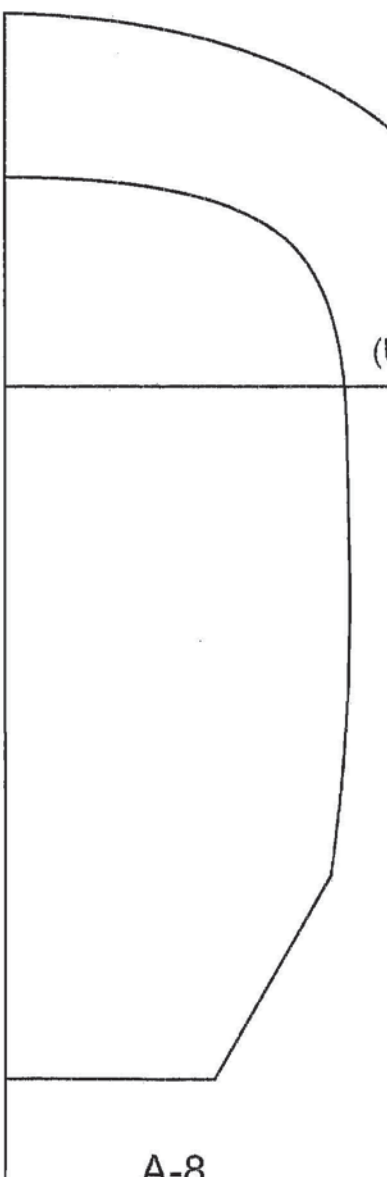

(LWL)
(LW


LWL)
(UWL)
(LWL)
(UWL)
(LWL)

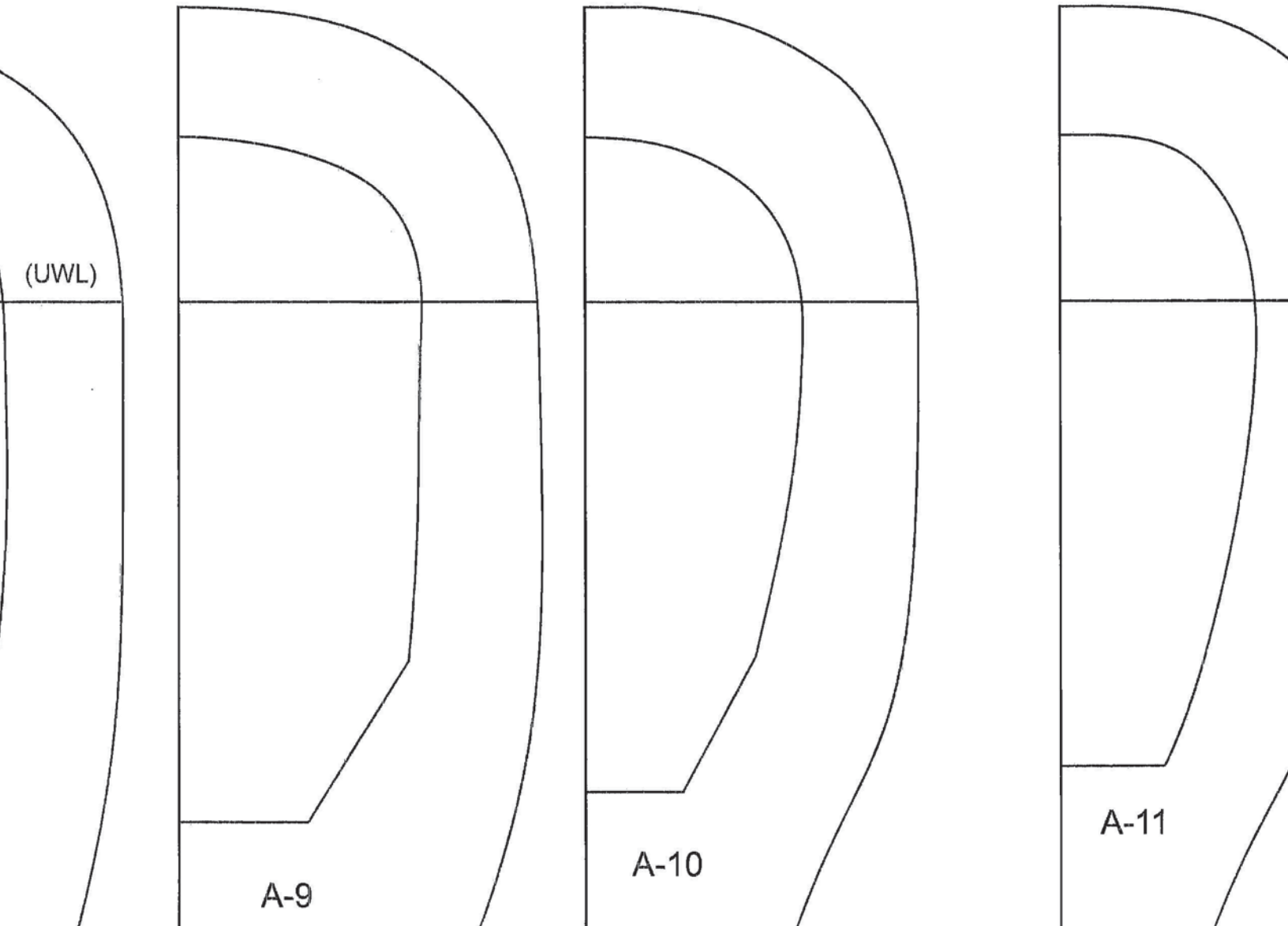


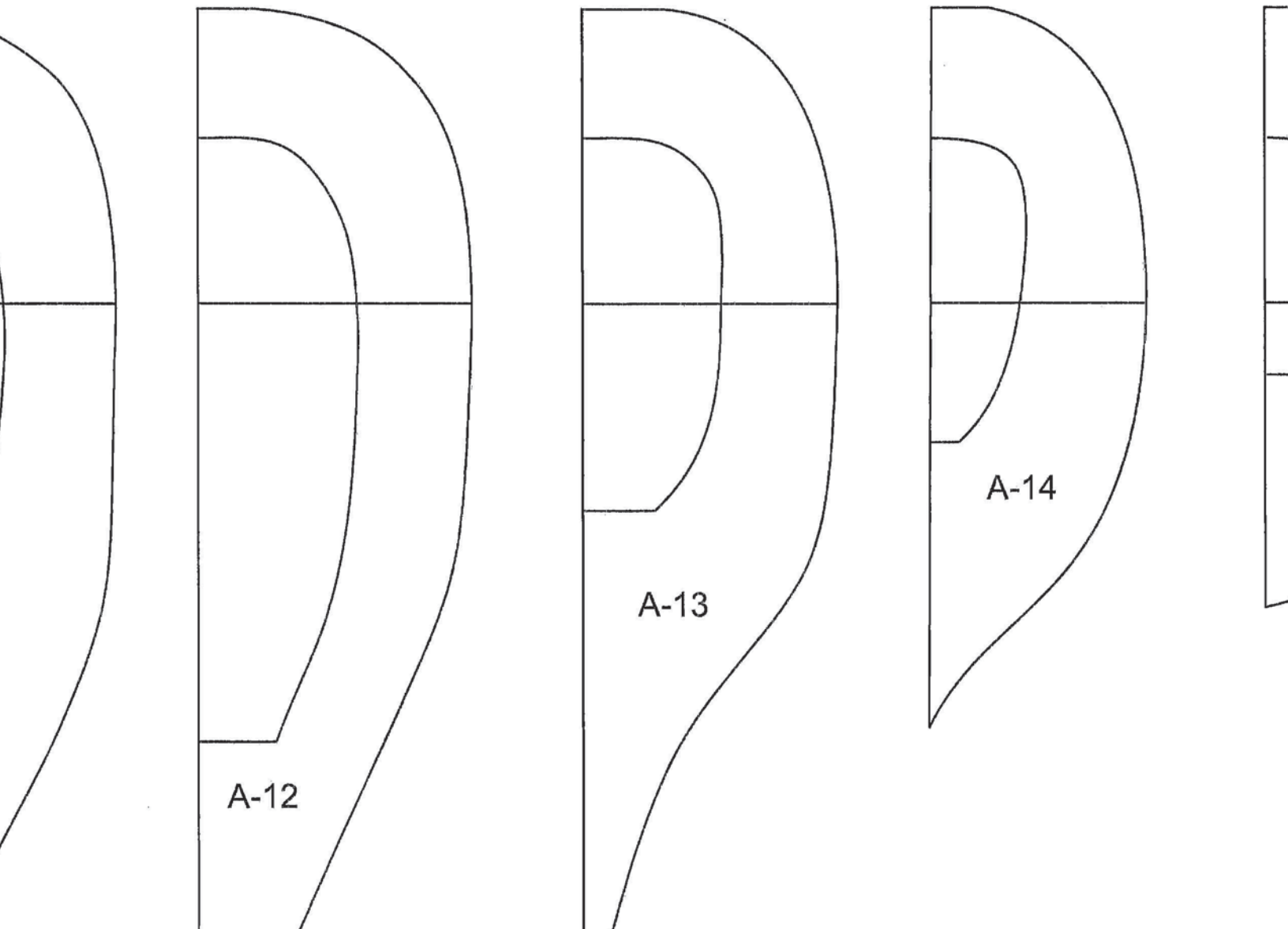


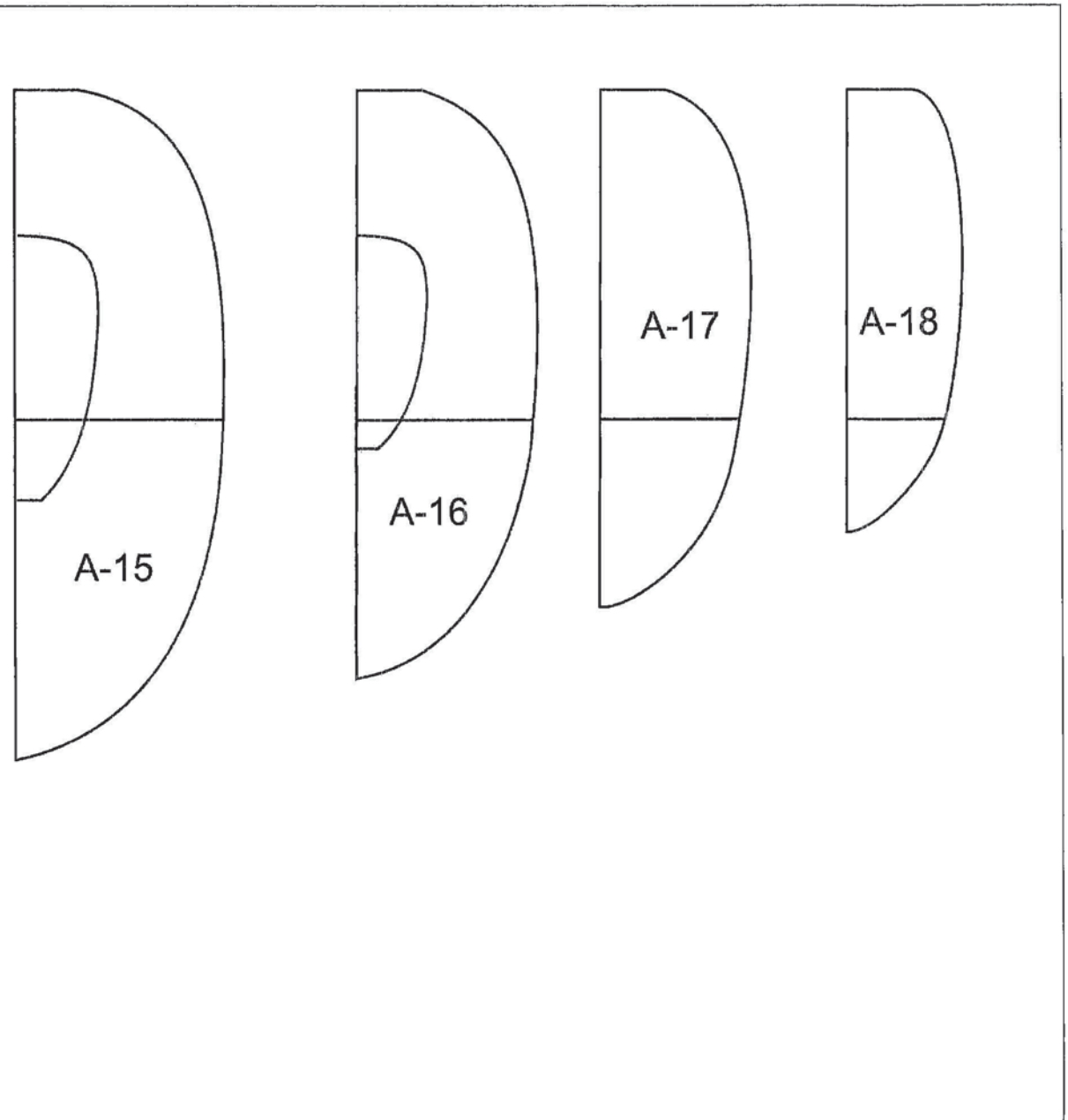
A-7

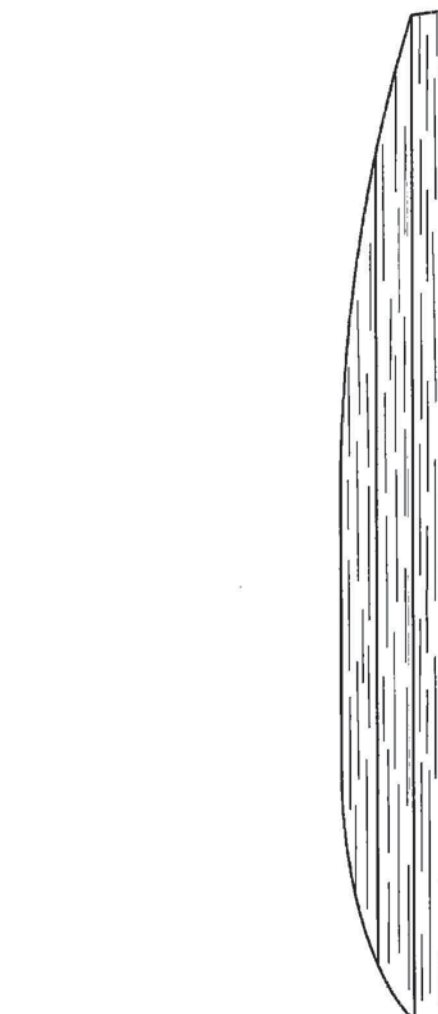


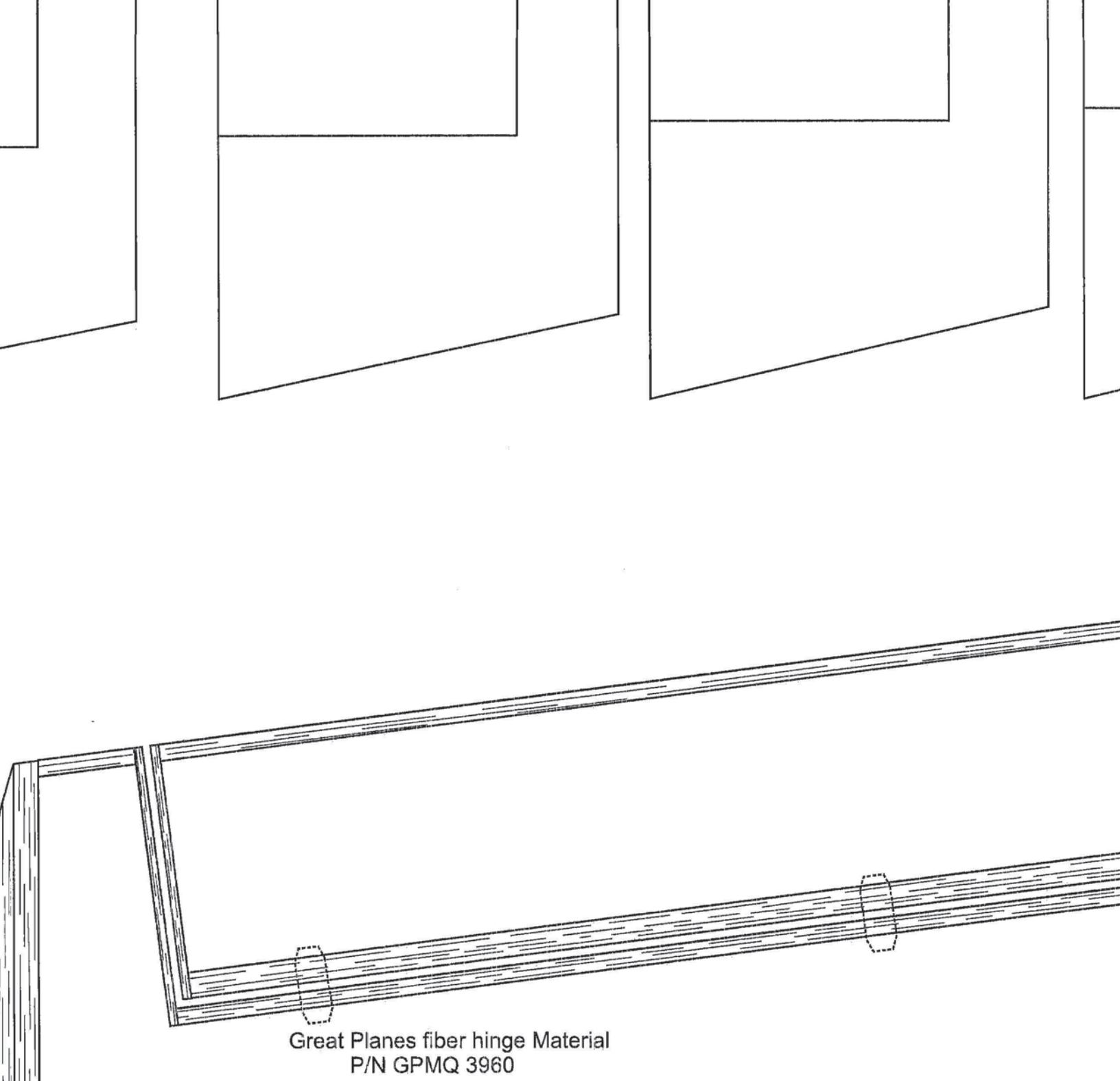
A-8


(UWL)
A-9
A-10
A-11

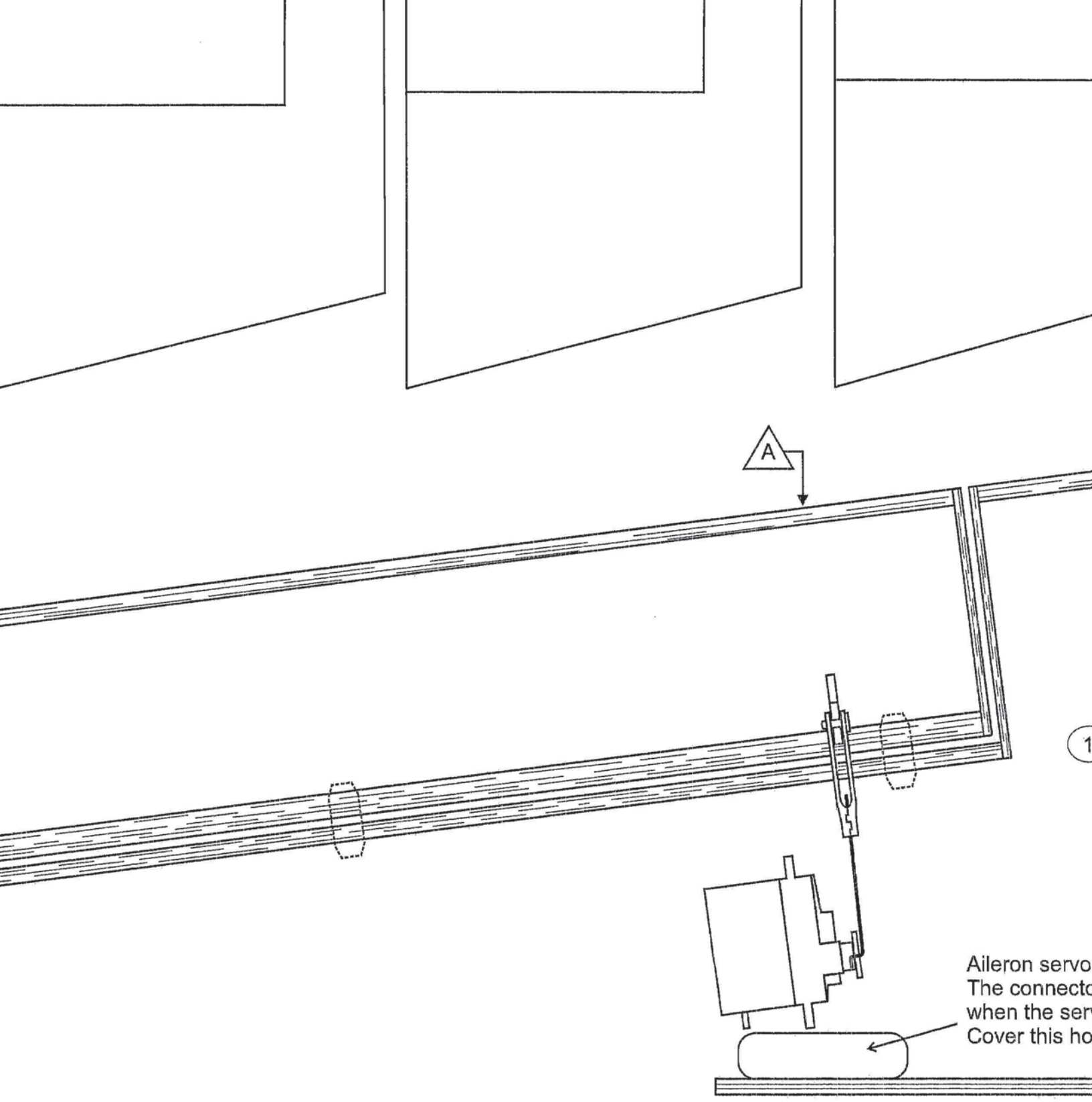

A-12
A-13
A-14

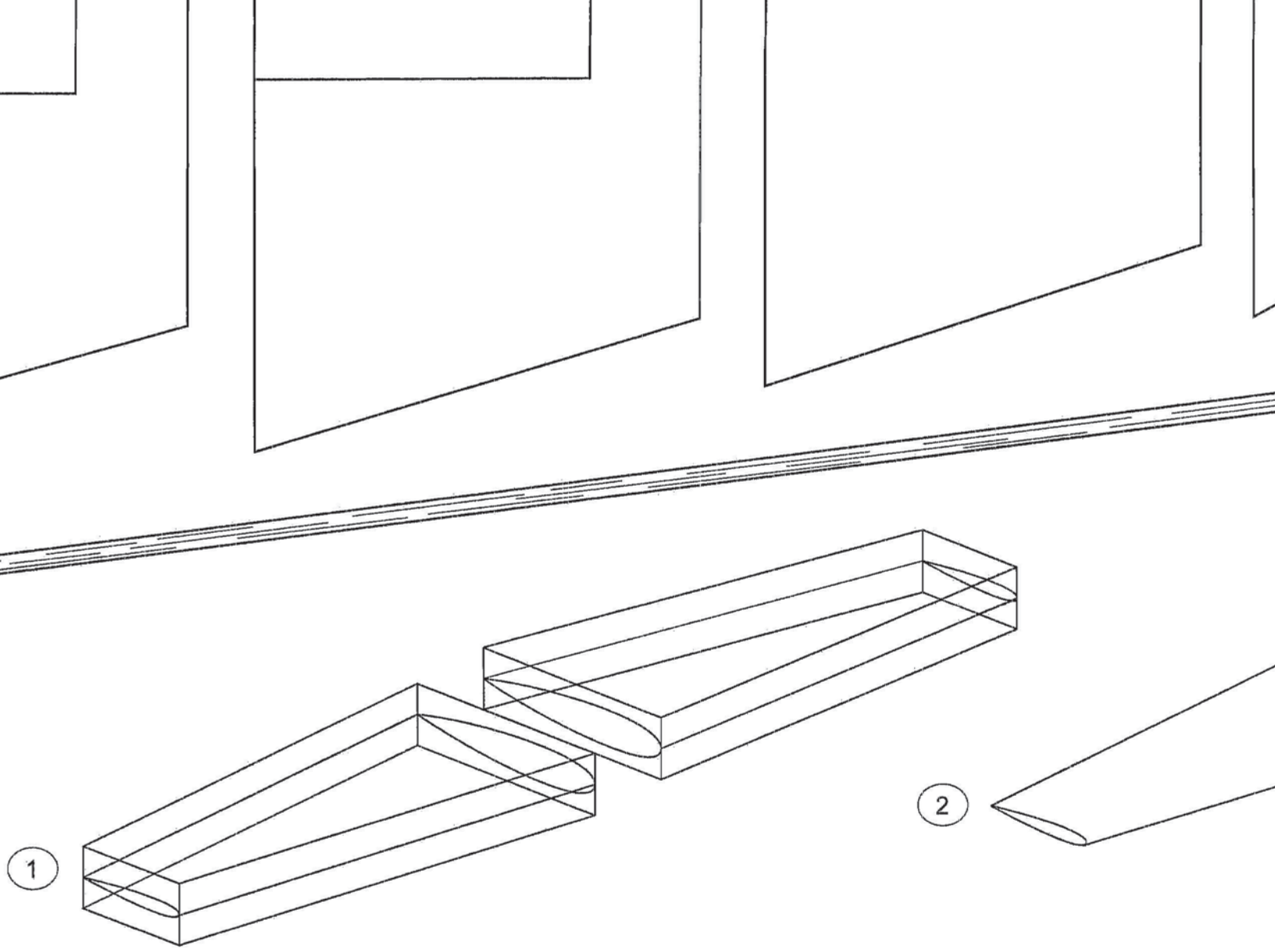

A-15
A-16
A-17
A-18



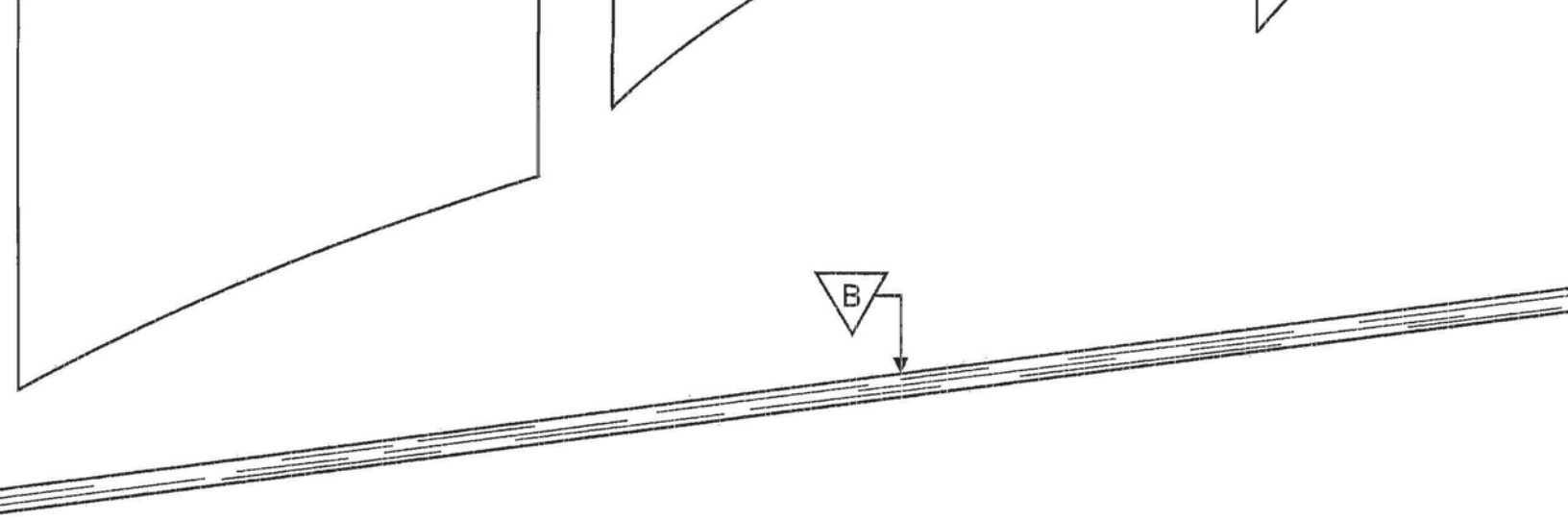


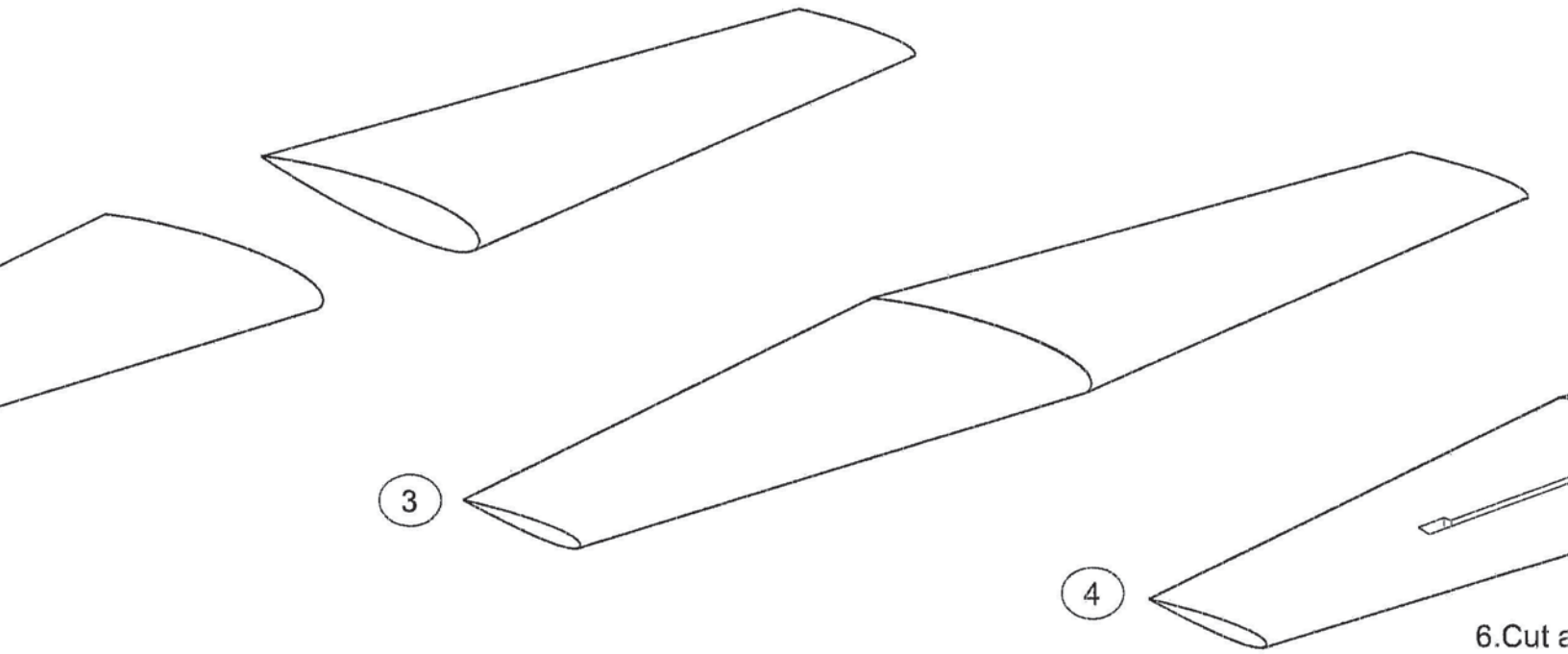
Great Planes fiber hinge Material
P/N GPMQ 3960


A
1
Aileron servo
The connecto
when the ser
Cover this ho



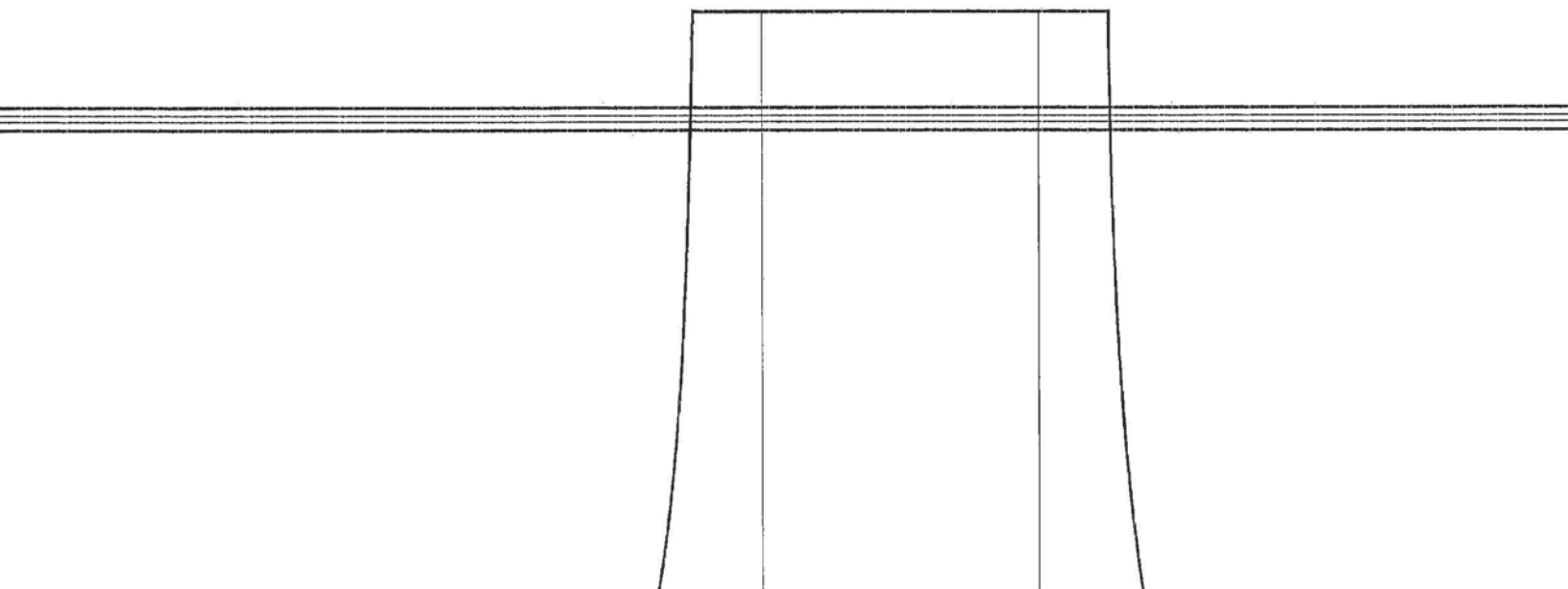
rvo wires are installed in the spar grove before the spar is installed.
ector is stored in this cut out space while the wing is being sheeted.
servo is installed it is used to store the connectors and extra servo wire.
hole with masking tape to keep the sheeting glue out of the compartment.

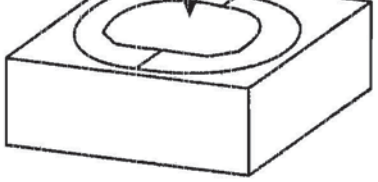




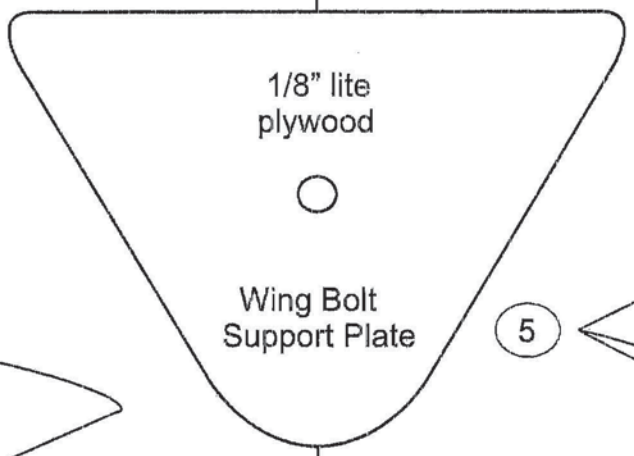
6.Cut a
the be
7.Put the wing in

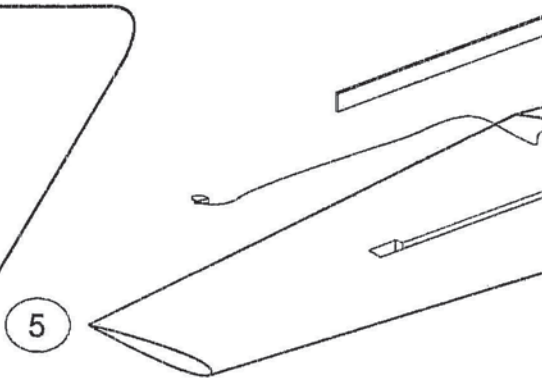
Note the notch
Repeat steps 6

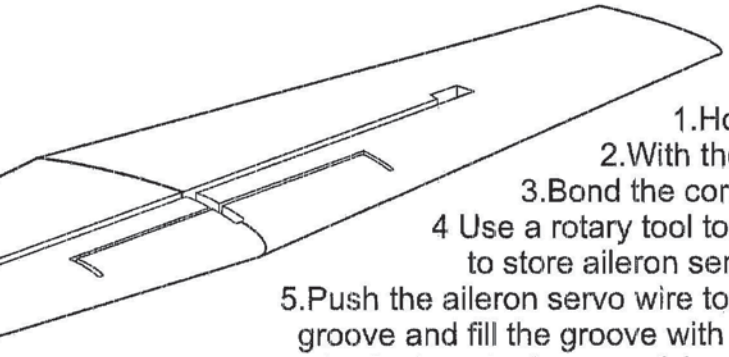




Making your segment patterns







1.Hot wire cut the beaded foam wing core.

2.With the top of the wing cores on the work surface, block sand the pane

3.Bond the core roots to each other with epoxy.

4 Use a rotary tool to cut the slot for the spar and groove for motor wiring. Note the w
to store aileron servo wire.

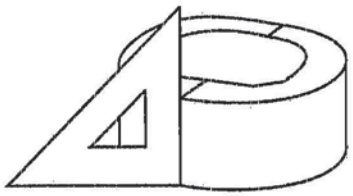
5.Push the aileron servo wire to the bottom of the spar slot and bond the spar and spar joiner p
groove and fill the groove with strips of scrap foam. Coil the extra aileron wire and put it in the
filler flush to the bottom of the wing if needed.

ut a 3mm extruded foam sheet to fit the wing panel. Splices are ok if you use tape to hold it together during bonding
e beaded foam from soaking up the fiberglass resin used later. Apply polyurethane glue to the sheeting evenly with
g in the scrap wing bed for support, position the sheeting in place on the wing core and use the wing bed to apply e

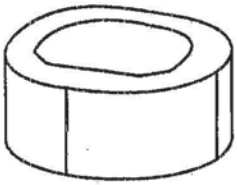
tches in the wing bed to clear the exposed wires.
os 6 &7 for the remaining 3 wing panels.

CG

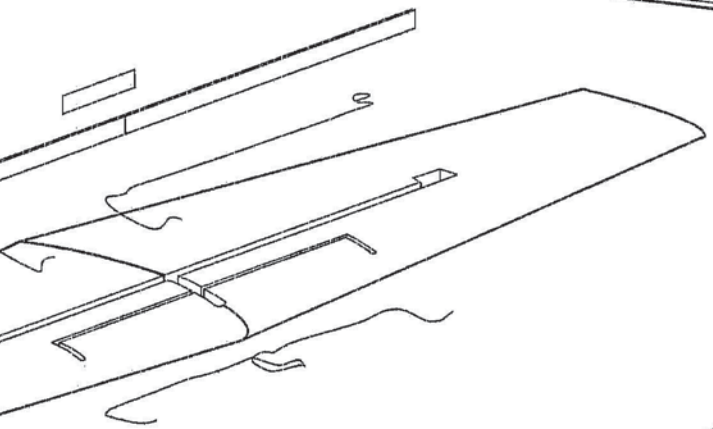
4 i
+/-

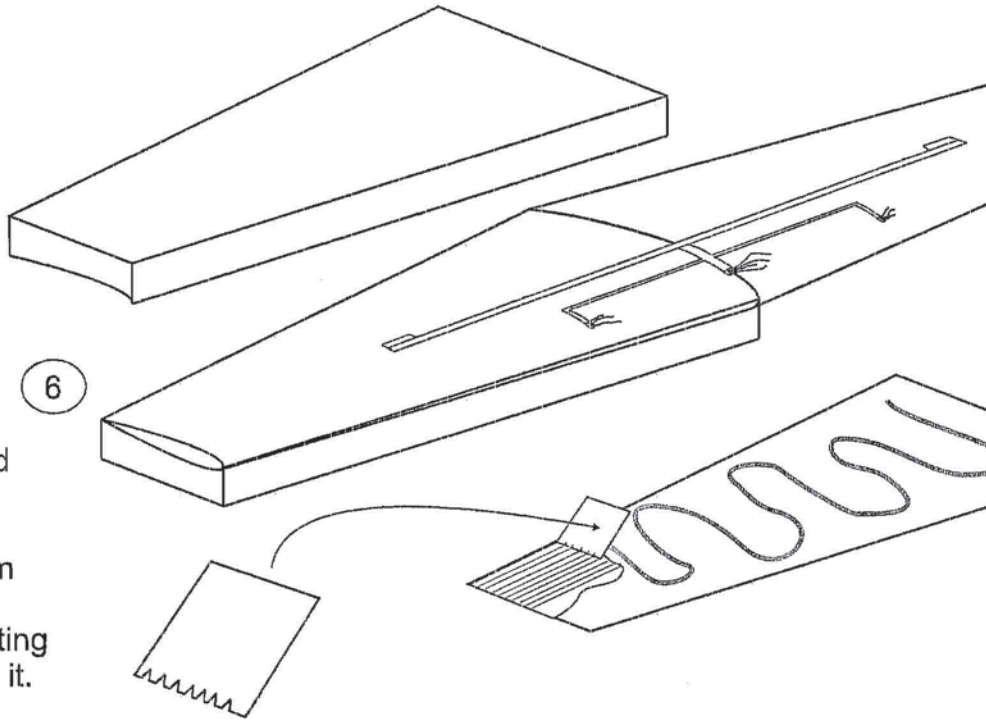


Use the segment patterns to mark the foam and cut the block with a scroll or band saw.



Use a square to mark the center line on every segment for alignment between each. Segments A4 to A-6 will require two water line (horizontal) marks for proper alignment.



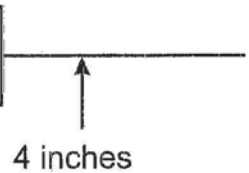


panel roots 90 degrees to the work surface. (6)

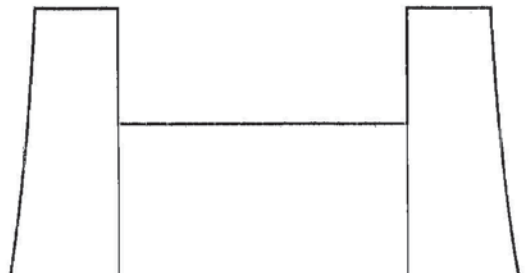
he wider space at the end of the spar slot used

er plate in place. Install the motor wiring in the he wire compartment. Sand the spar and foam

ding. The sheeting is used as a barrier preventing with a playing card that has had notches cut in it. ly even pressure to the sheeting.

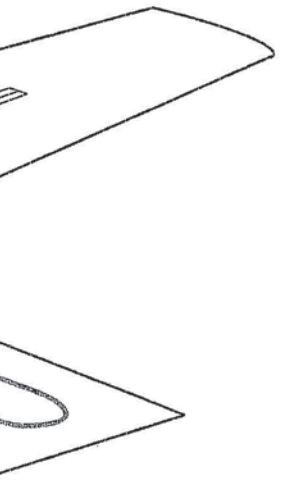


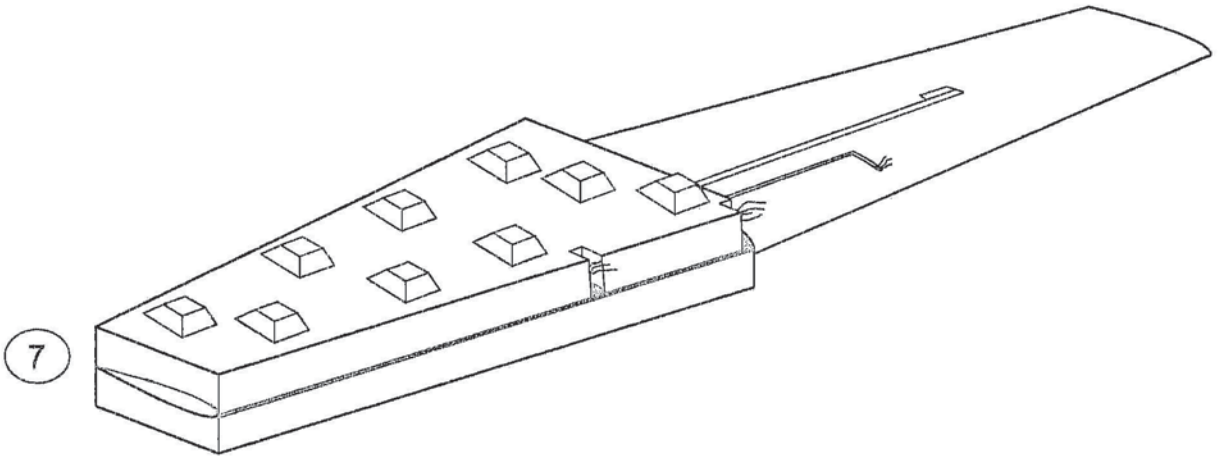
4 inches
+/- 1/4 inch

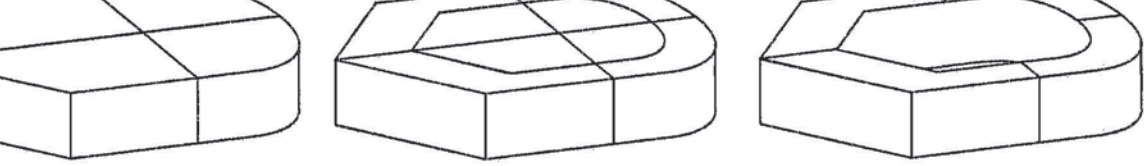


Because the segments of the fuselage taper, the
This helps avoid mistakes in assembly and insu
segments will keep you out of trouble.

1. Mark the foam block with the outside trim line
2. Cut the part out and use the pattern to mark th
3. When you assemble the segments, Aft part nu

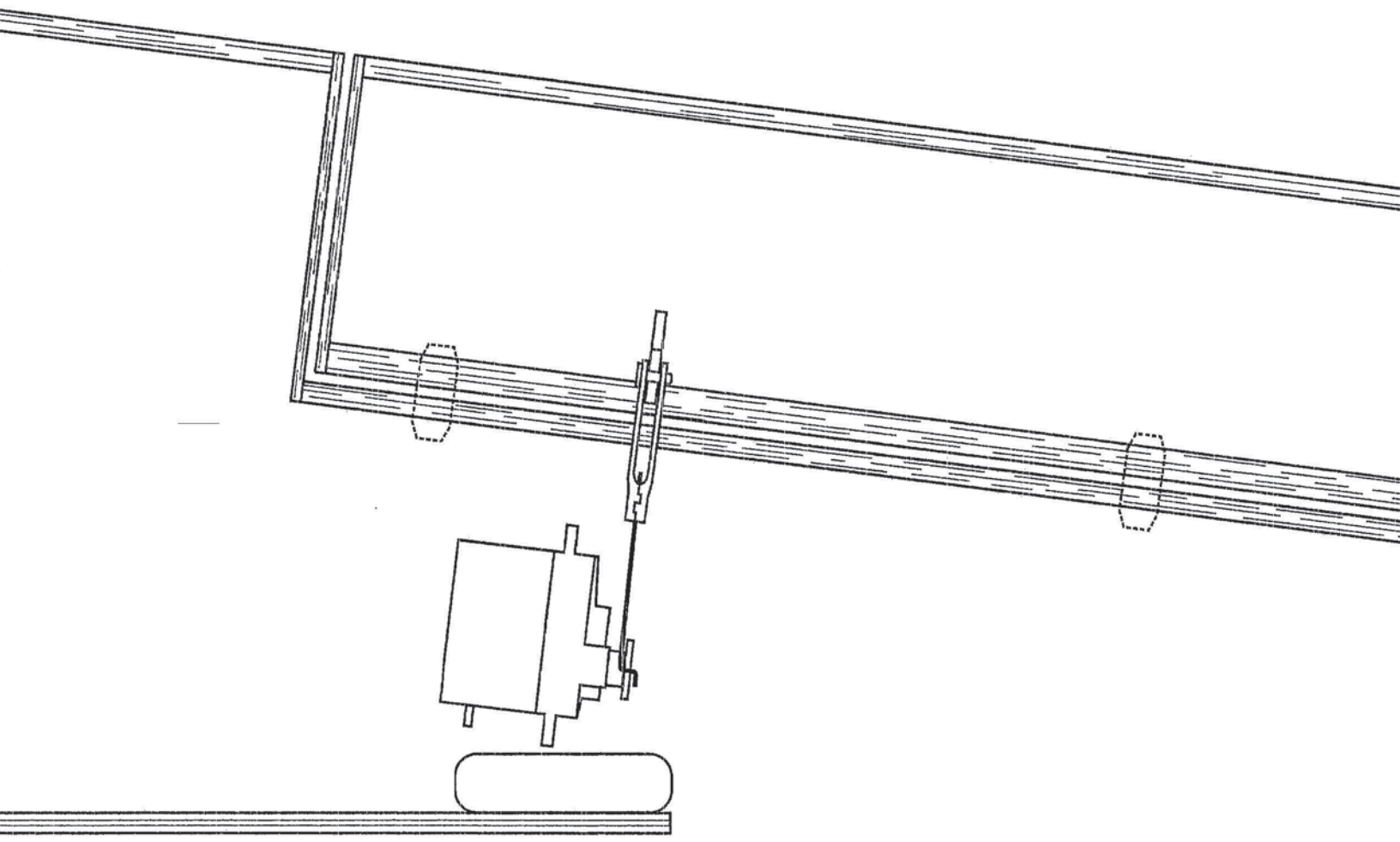


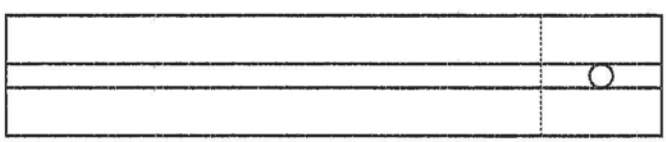




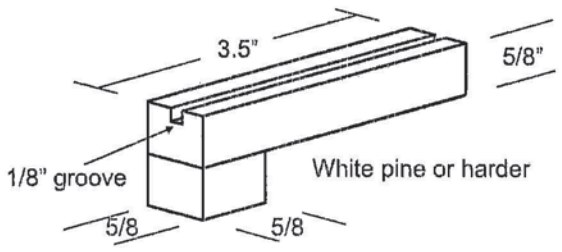
the part numbers start at the widest point at the middle and get higher toward the end.
nsures a constant skin thickness of 3/4 inch. Following a few rules while cutting the

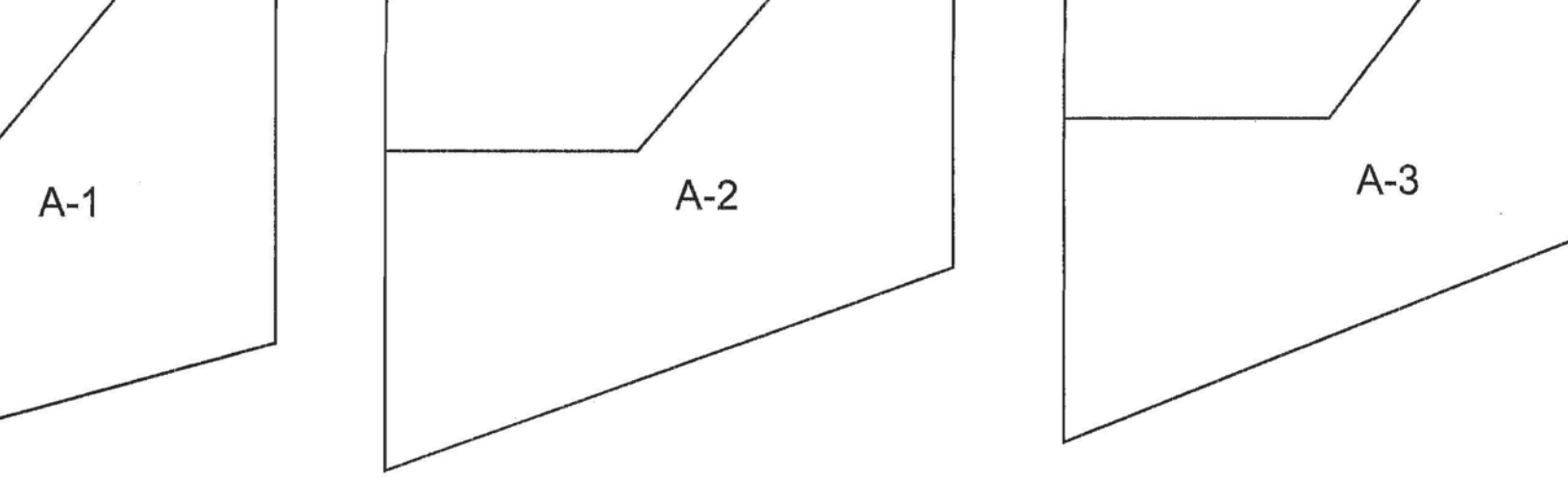
ine only. This side gets the part number.
rk the inside trim line on the other side.
t numbers face forward, forward part numbers face aft.

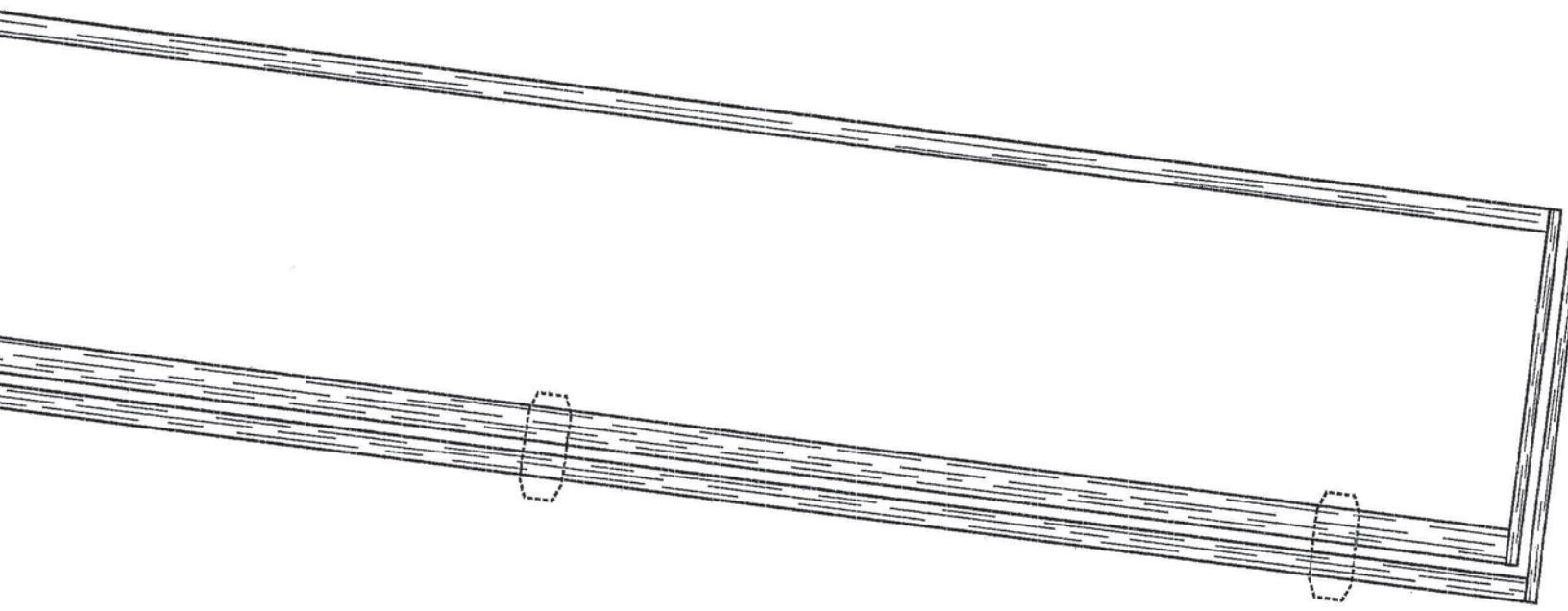


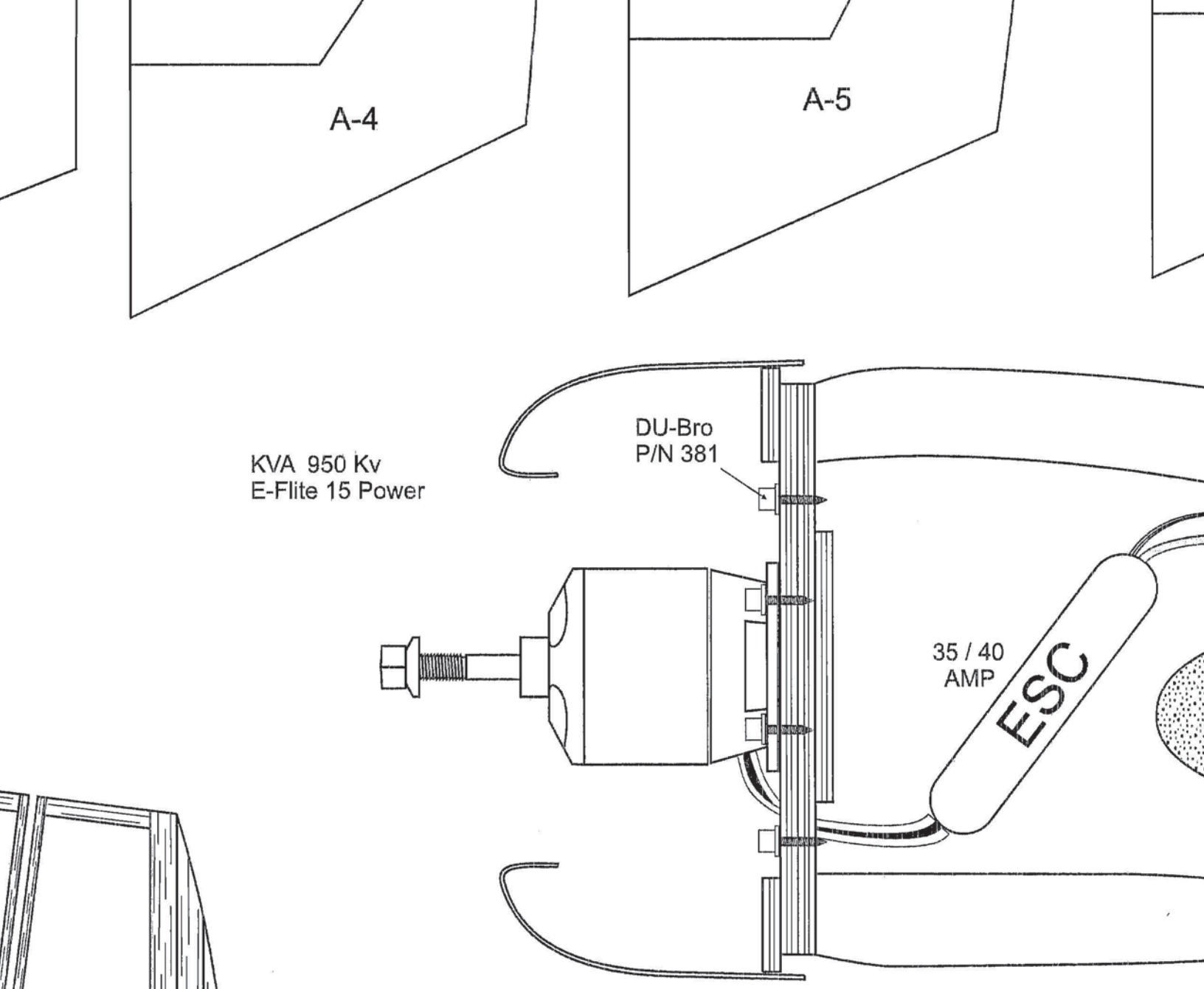


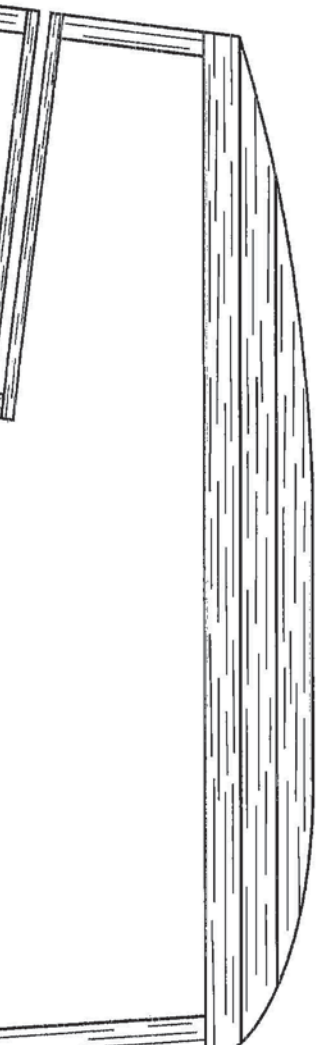
Tip Float Mount

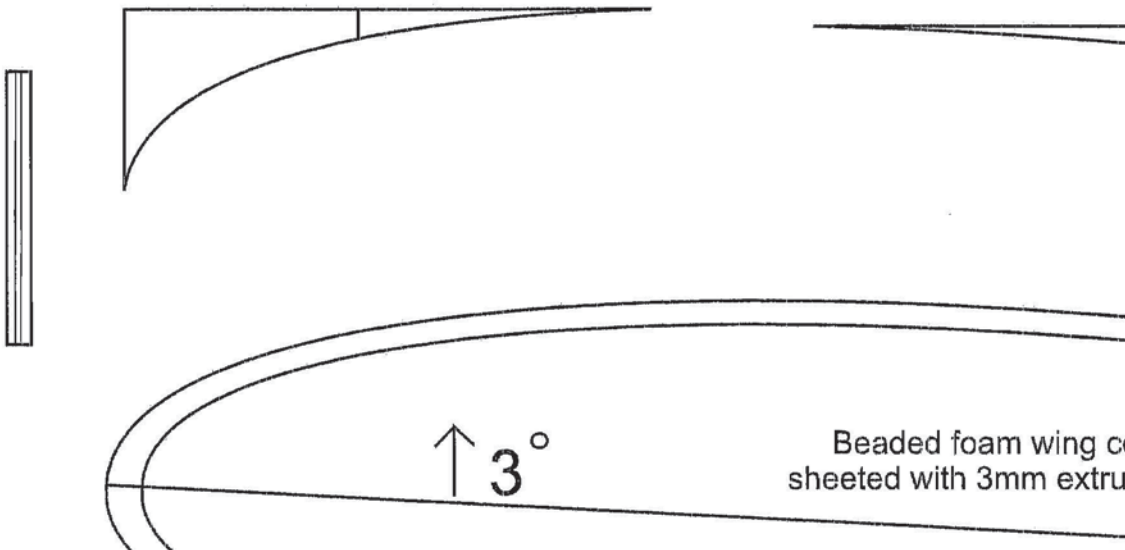



A-1
A-2
A-3




A-4
A-5
KVA 950 Kv
E-Flite 15 Power
DU-Bro
P/N 381
35 / 40
AMP
ESC




3°
Beaded foam wing c
sheeted with 3mm extru

A-6

A-7

A-8

B

Power requirements: 70 to 90 watts per pound.
The E-flite 950 Kv motor will produce 619 watts using a 10
If you use a four cell pack you can expect 710 watts using

This hole in the fuselage foam is lined with a plastic tube or rolled paper.

g core
xtruded foam sheeting

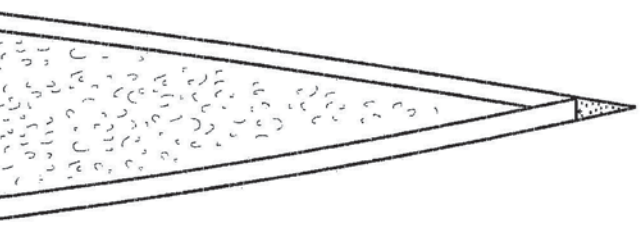
Pine block used to correct the bolt head contact angle

A-9

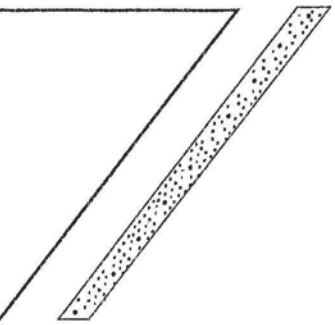
A-9

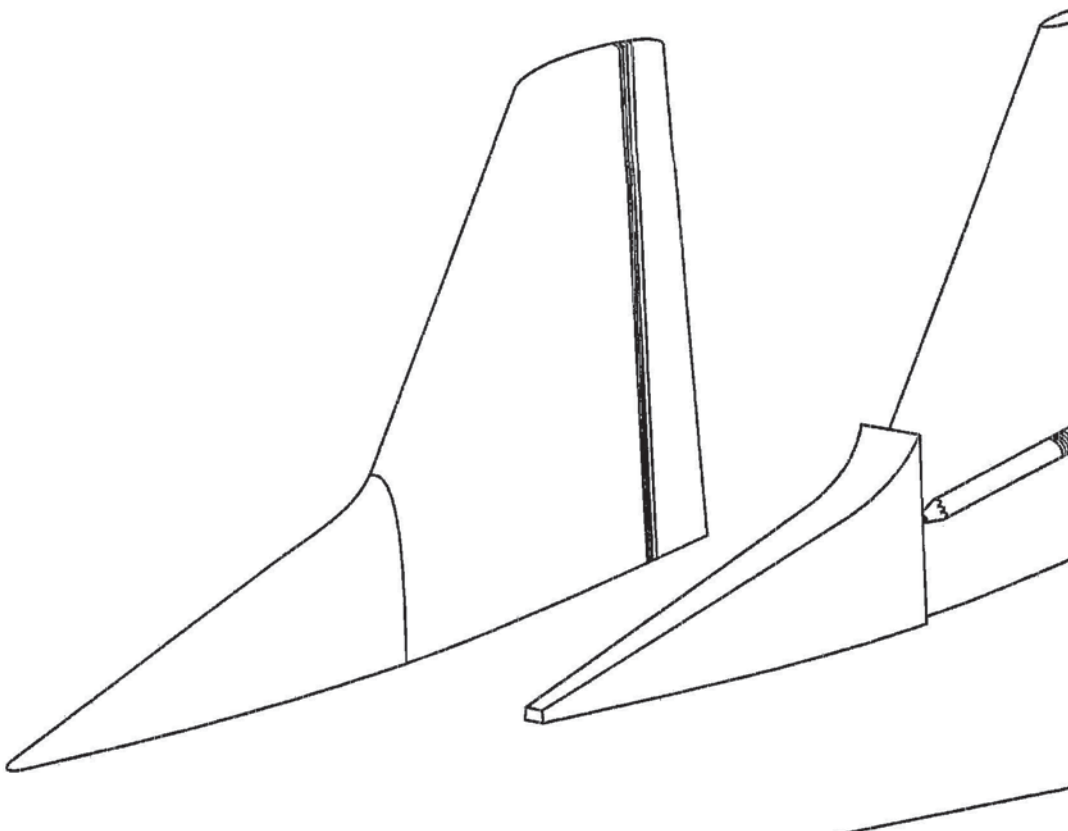
A-9

1 10x10 APC prop and three cell battery.
ing a 8x6 prop or 960 watts with a 8x8 prop.

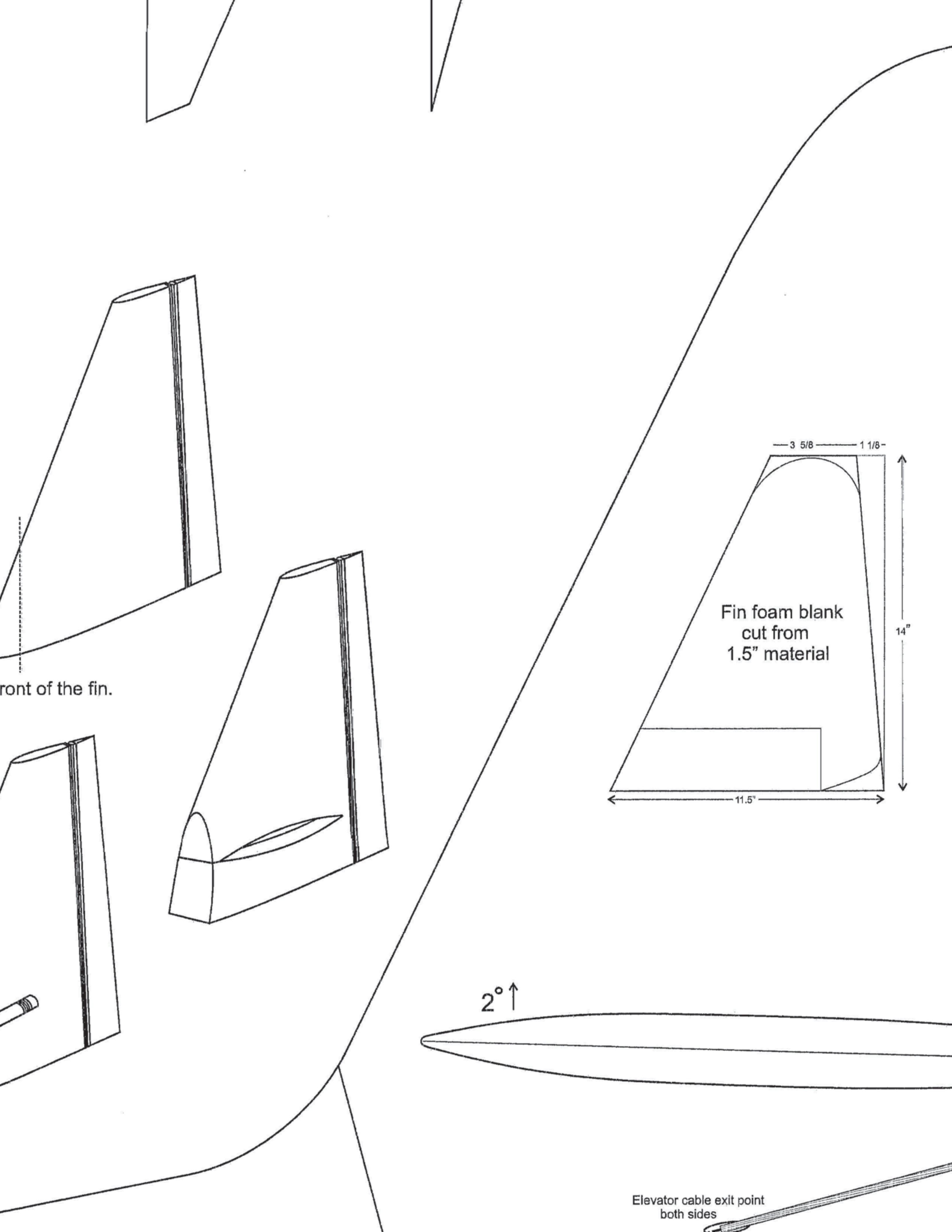


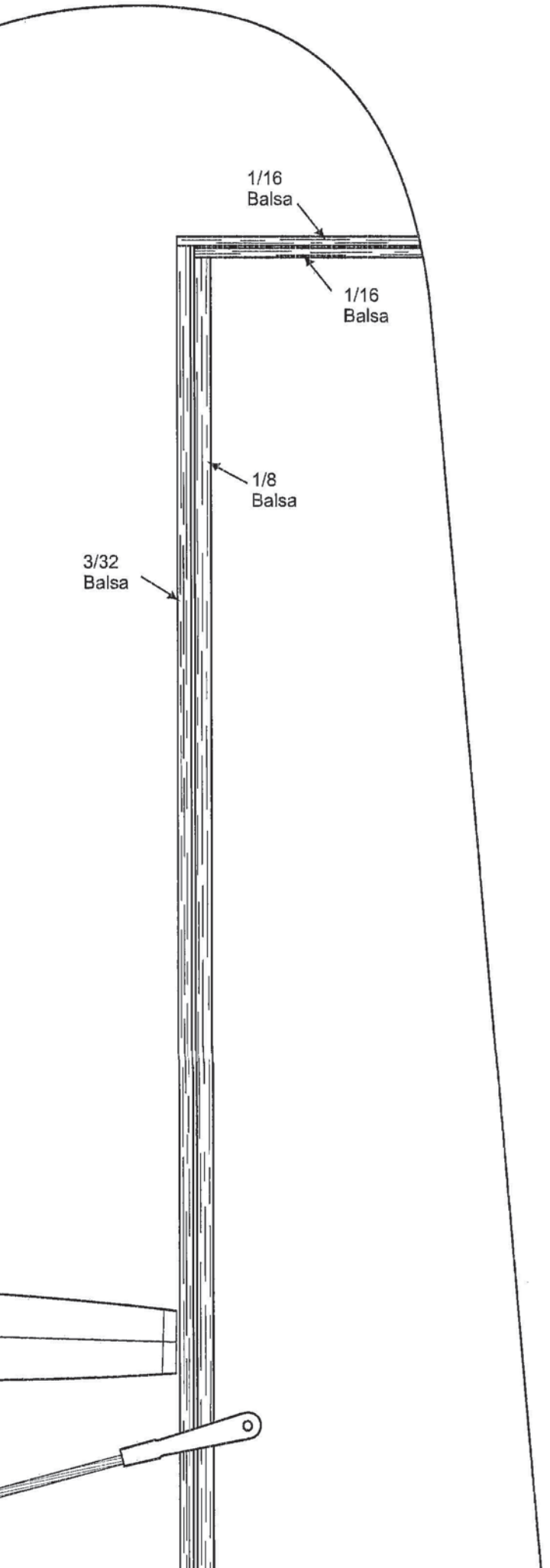
Use the fin patterns to cut the vertical fin.
Add the balsa hinge gap and hinge material for the rudder.
Cut the tip from the fin at the location on the side view.
Cut a hole in the fin using the vertical stabilizer root pattern.
Bond the fin to the fuselage then bond the stabilizer
to the fin. Note:if the rudder is not installed the slot
in the fin can be opened a bit to ease installation of
the stabilizer.
Use the side and top view pattern to cut a foam block for the fron
Mark the block using the fin as a pattern and sand to match.
Bond the block in place and complete the sanding task.

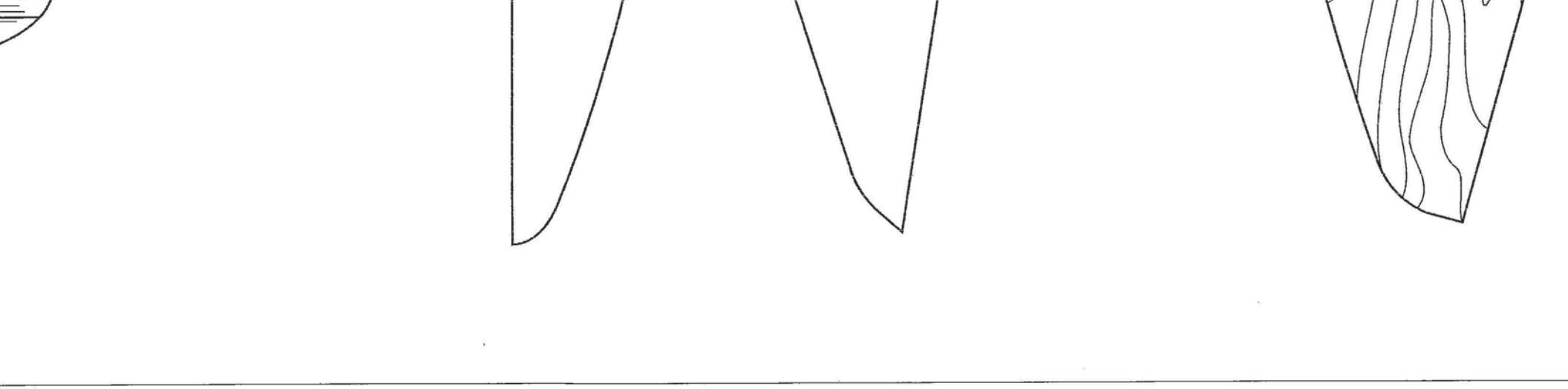


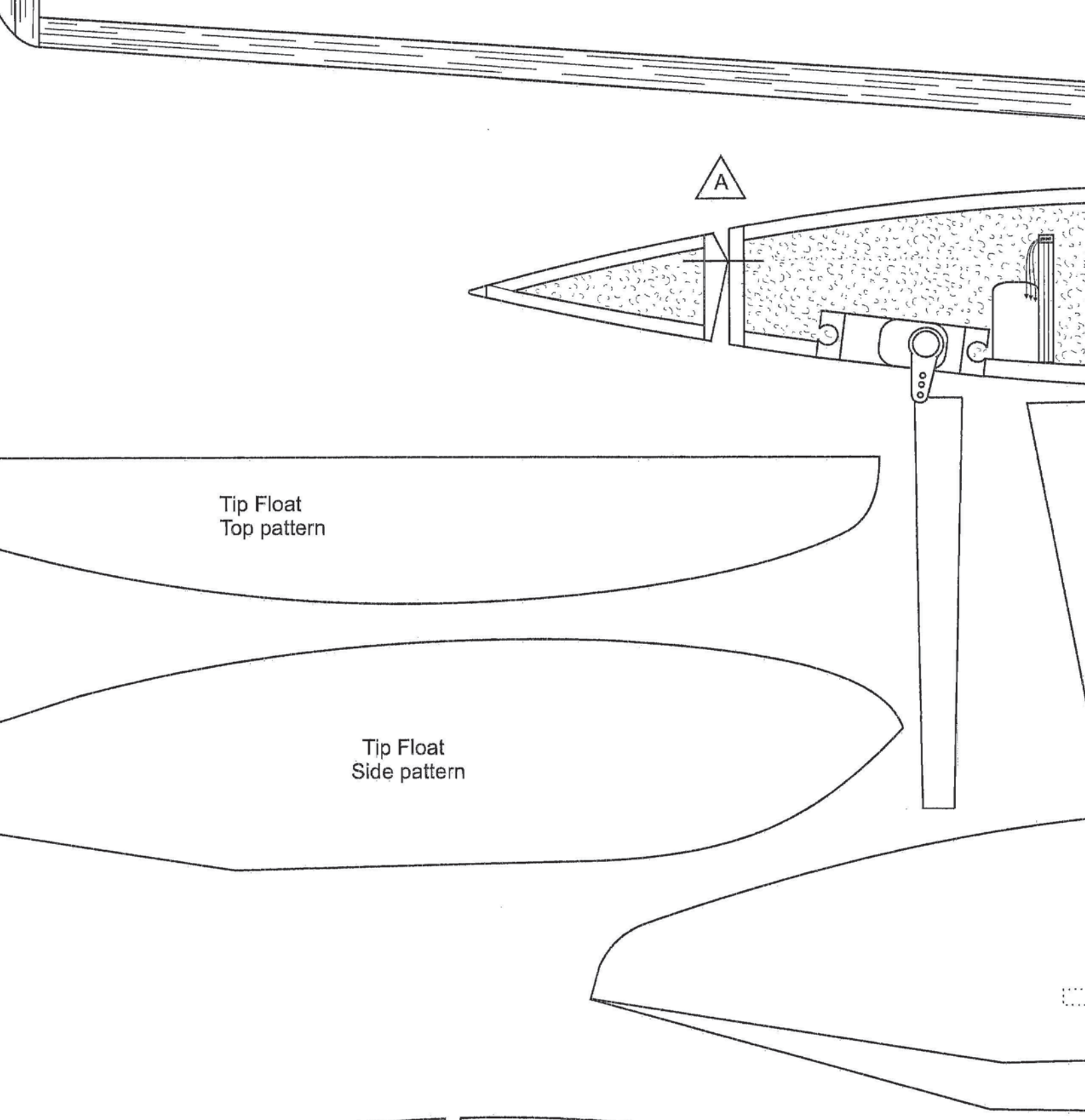


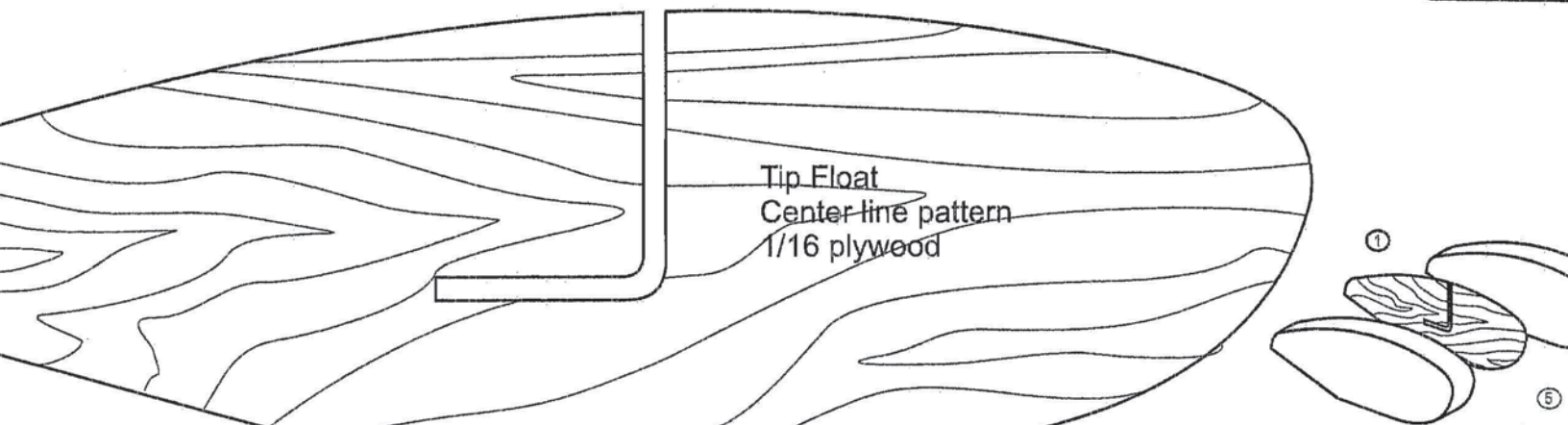
ront of the fin.

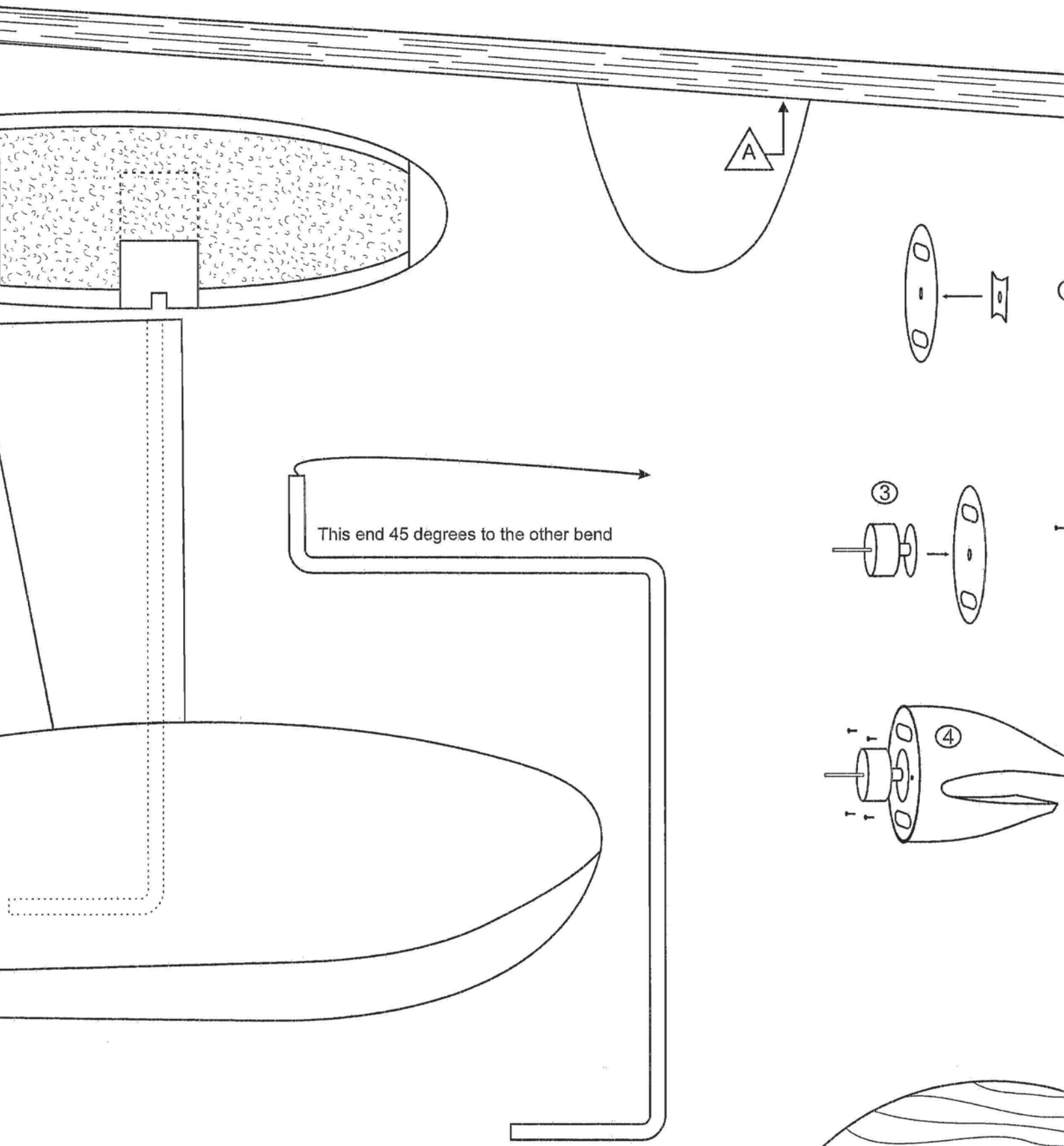


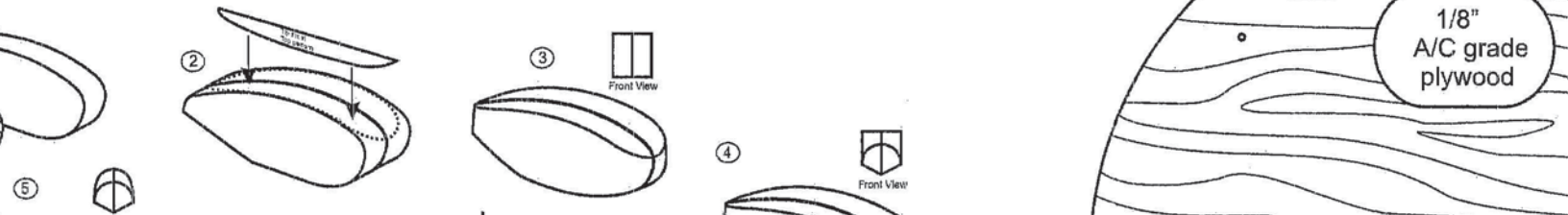

1/16
Balsa
1/16
Balsa
1/8
Balsa
3/32
Balsa

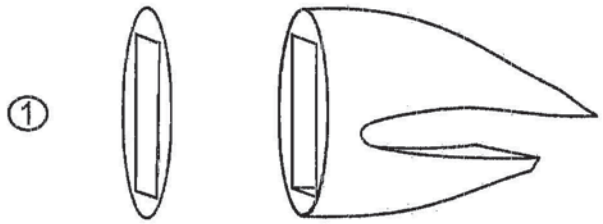


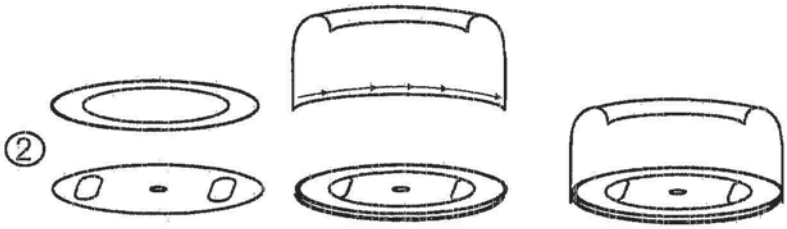

A
Tip Float
Top pattern
Tip Float
Side pattern

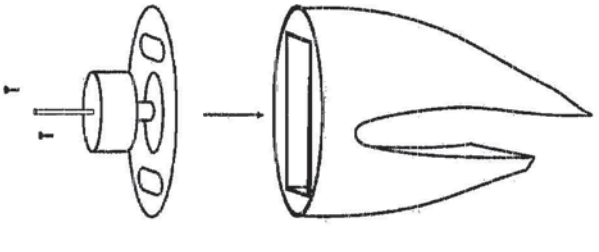

Tip Float
Center line pattern
1/16 plywood
1
5

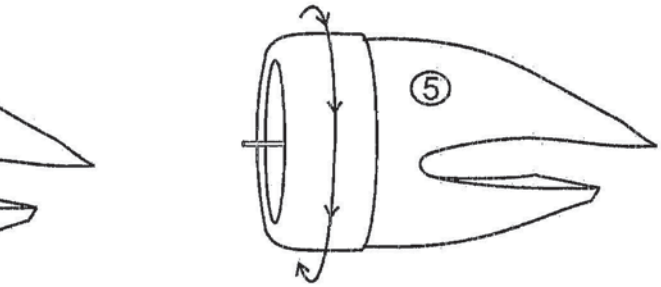

A
This end 45 degrees to the other bend
③
④


②
③
Front View
④
Front View
⑤
1/8"
A/C grade
plywood



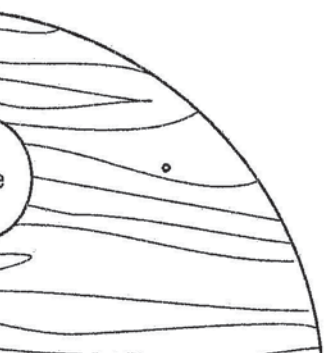


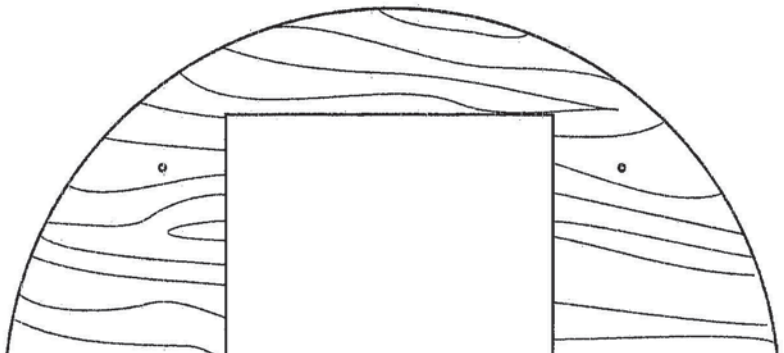


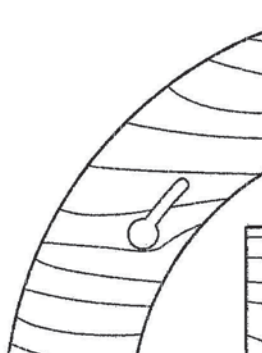


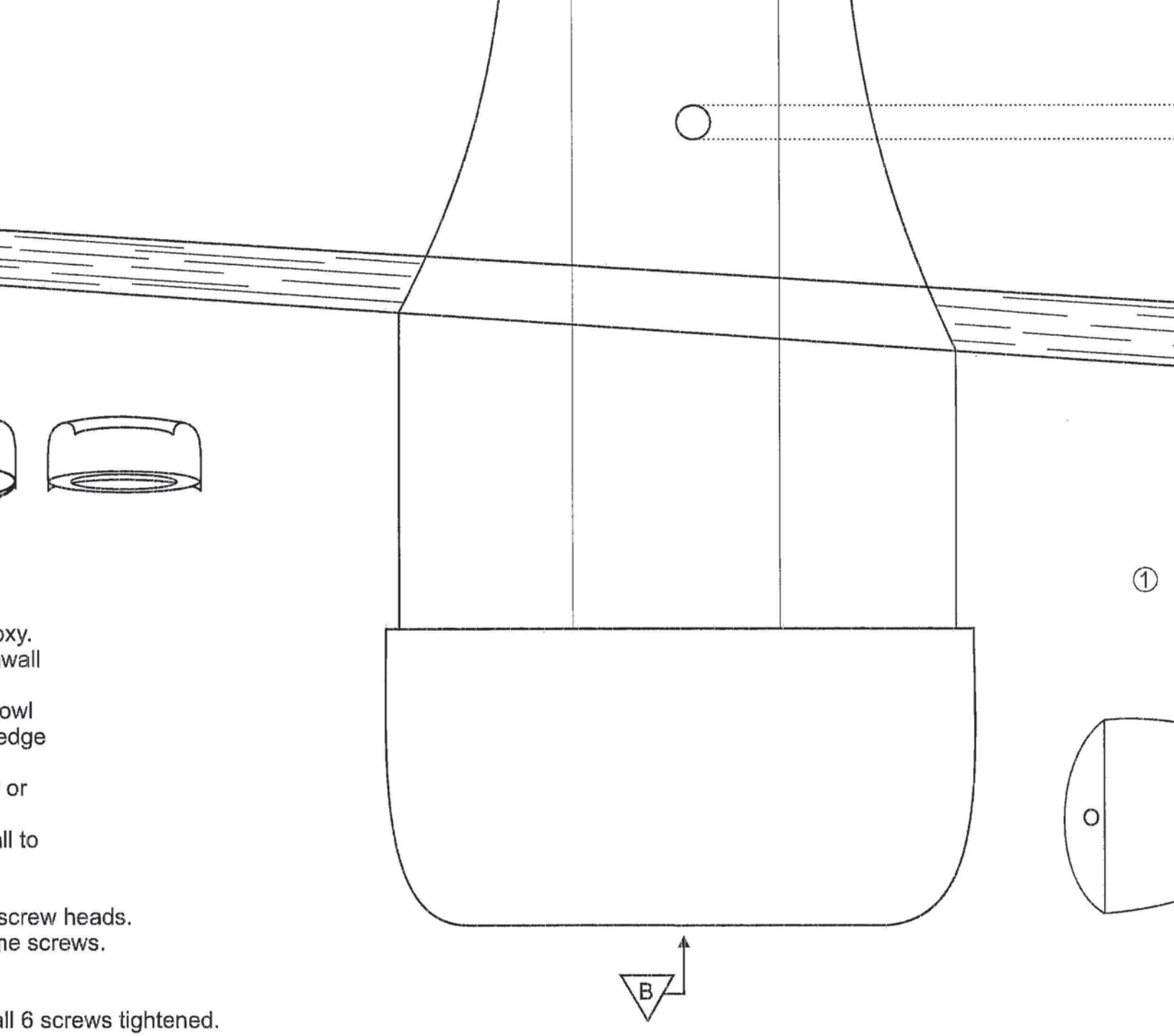
1. Bond the firewall mount to the foam nacelle with epoxy. bond the motor mount doubler to the back of the firewal with epoxy.
2. Lay the firewall facing up on a flat surface with the cowl ring centered, apply epoxy or sylicone to the inside edg of the cowl. Push the cowl over the cowl ring until it contacts the work surface. Allow the adhesive to dry or cure completely.
3 Mount the motor to the firewall then mount the firewall to the mount with two screws in the mid position. Check your thrust angles and adjust as needed.
4 Install the last four screws leaveing a gap under the scre Install the cowl ring by engaging the key holes with the s Rotate the cowl then tighten the screws.

NOTE: do not operate the motor at full power without all 6









oxy.
wall

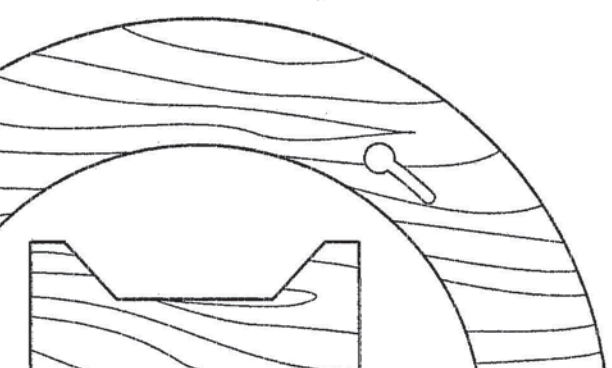
owl
edge

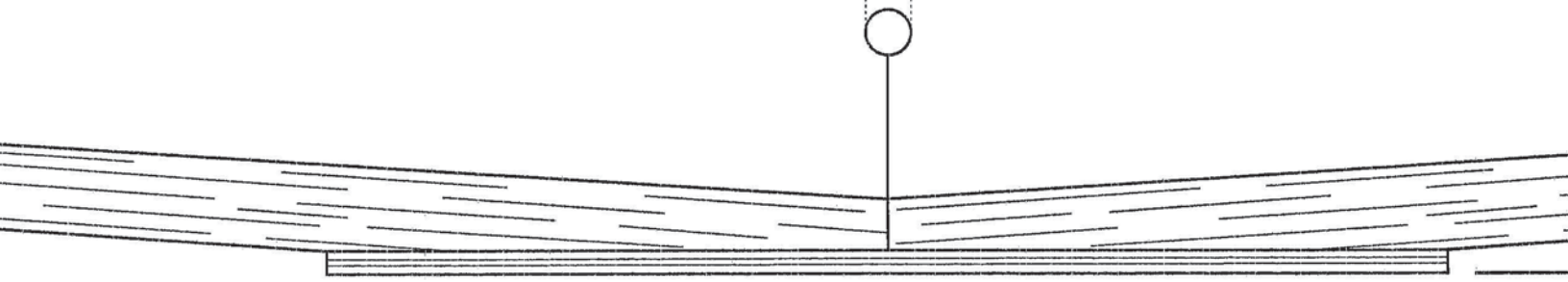
or

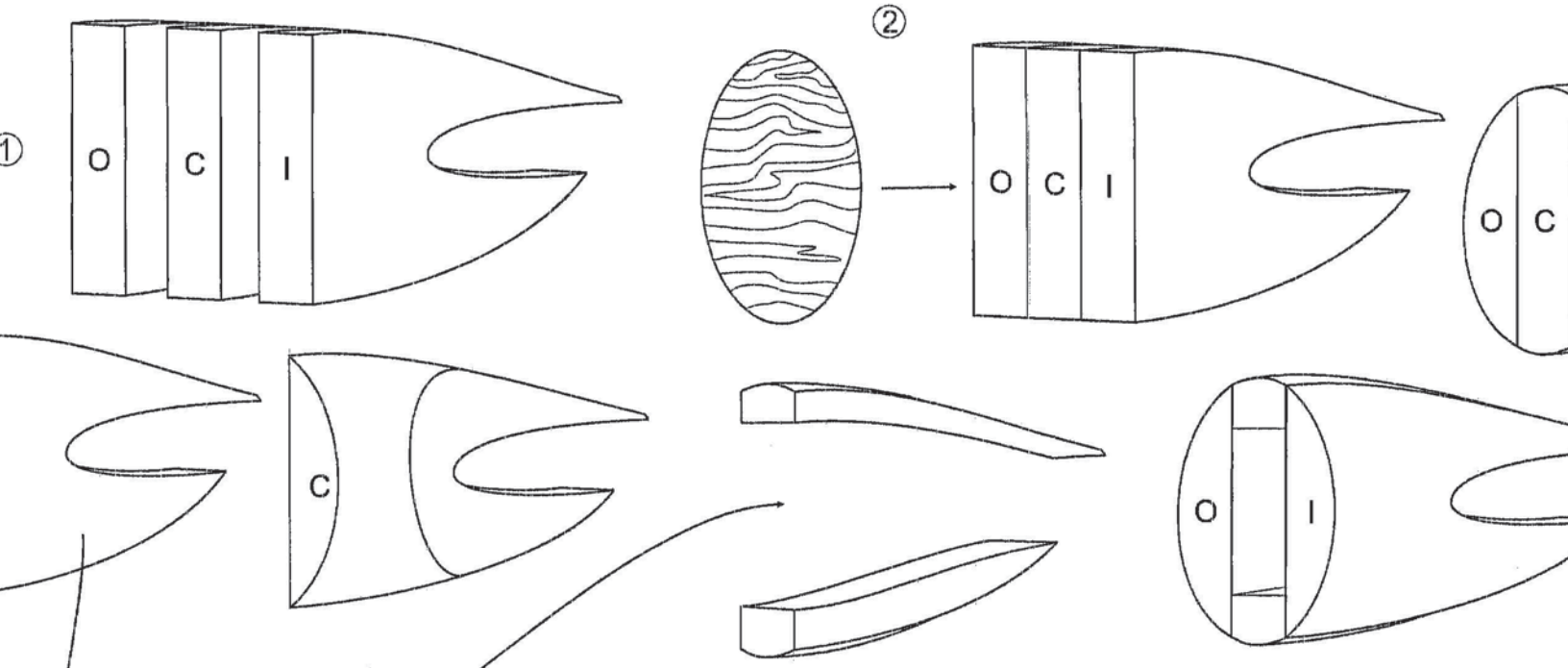
ll to

screw heads.
ne screws.

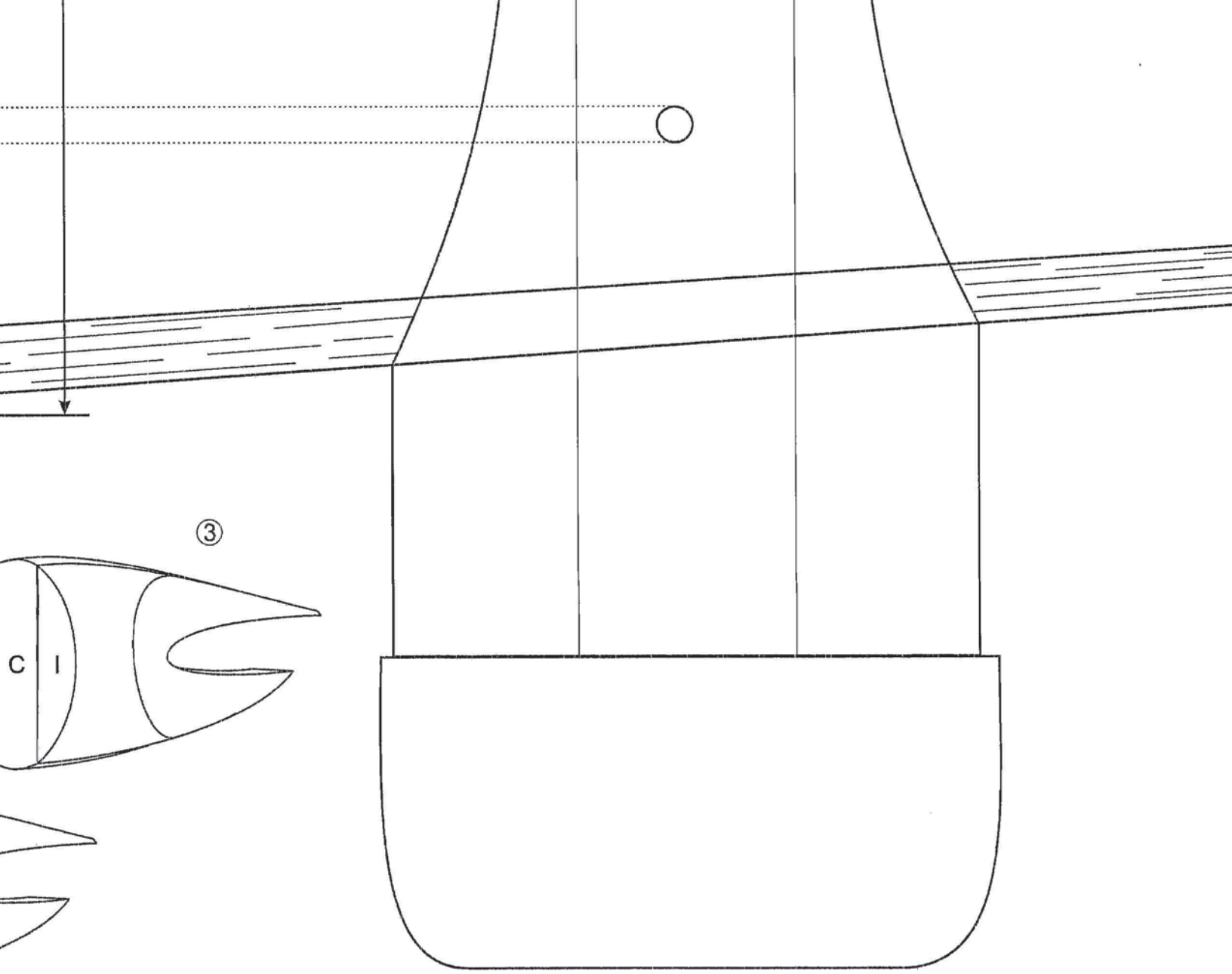
ll 6 screws tightened.





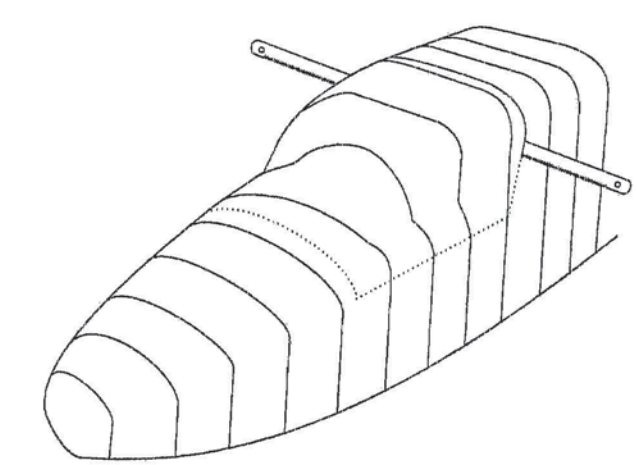


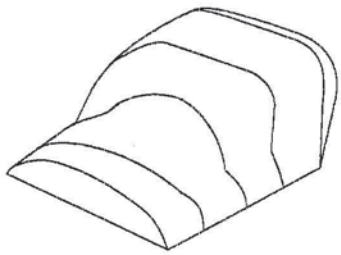
1. Cut the nacelle parts from the 1.5 inch foam sheet and tack bond them with
(Tack bond with three drops of epoxy)
2. Attach a 4 inch disc to the front with two sided tape as a sanding guard.
3. Sand the three blocks to a cylinder shape. if a belt sander is used; use
light pressure to avoid heat build up. Sand the remaining corner round to blend
4. Pull dental floss in-between the nacelle parts to separate them, cut the cente
Use the 30 min epoxy and use tape to hold the assembly together while it cure

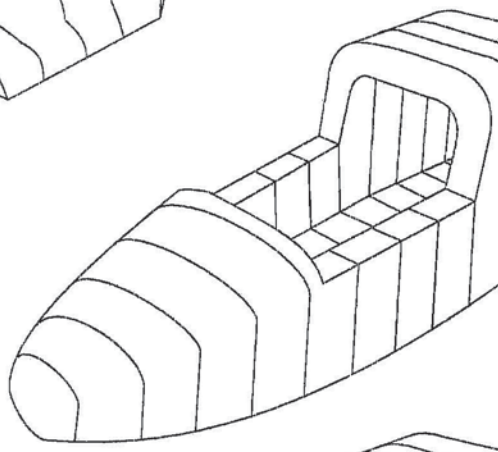


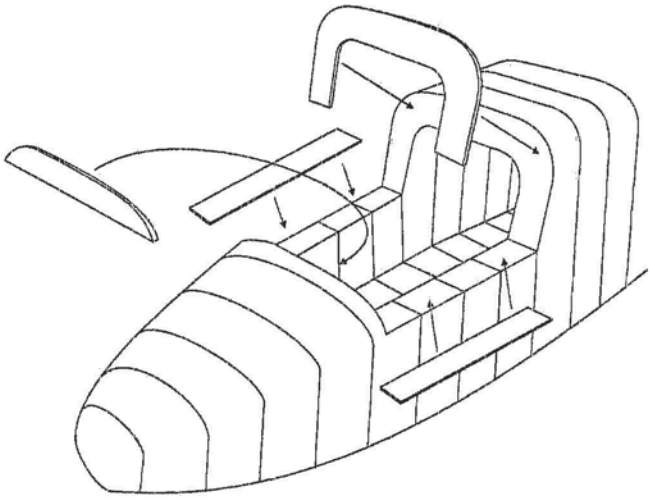
with the front edges flush.

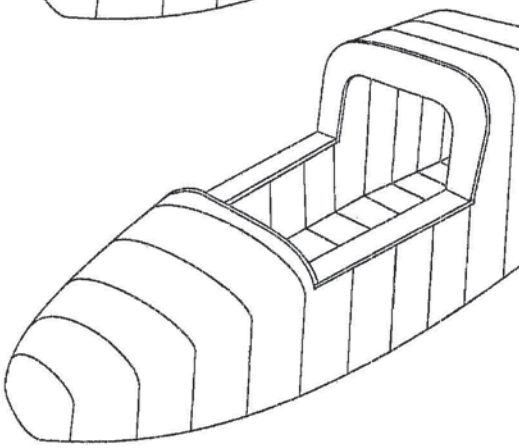
end the aft nacelle to the cylinder shape.
enter out of the center panel and assemble with epoxy.
cures.



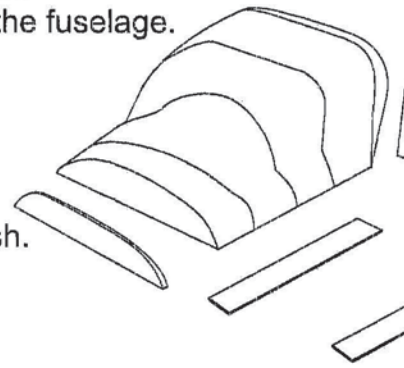


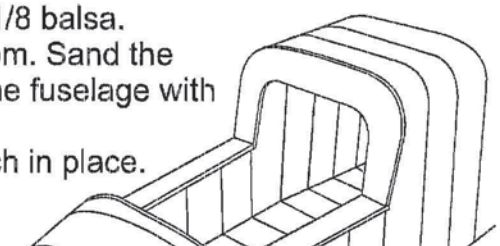


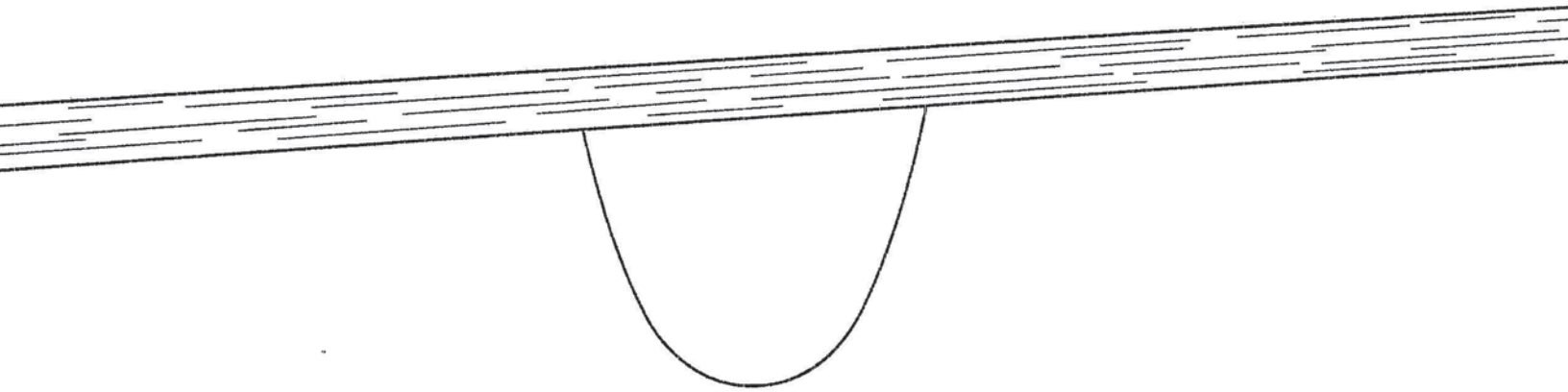


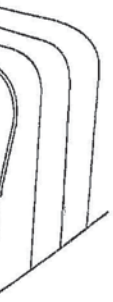


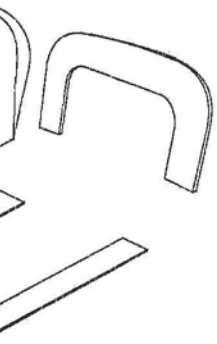
After the fuselage has its first ply of fiberglass cut the hatch from the fuselage.
Note the bottom cut is started with a razor.
Sand the fuselage mating surface smooth.
Bond 1/8 balsa sheets to the fuselage and sand the balsa edges flush with the fuselage edge.
On the hatch, mark a line 3/16 inch from the cut edge and sand to the line. Bond 1/8 balsa to the back of the hatch and sand it flush.
Sand foam from the hatch bottom until it will sit flush with the fuselage top while sitting on 1/8 balsa.
Bond balsa to the hatch bottom. Sand the front of the hatch until it fits the fuselage with its balsa plate in place.
Use magnets to hold the hatch in place.

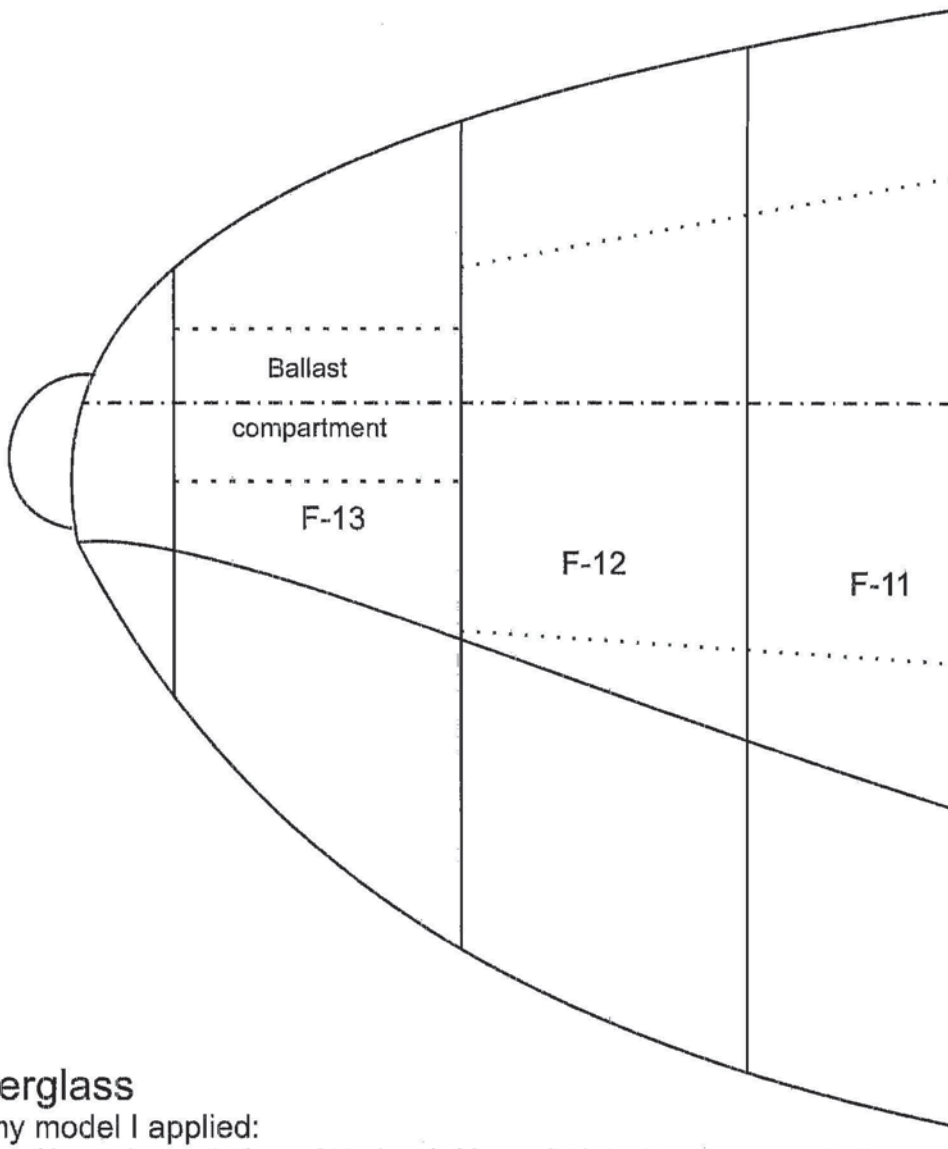






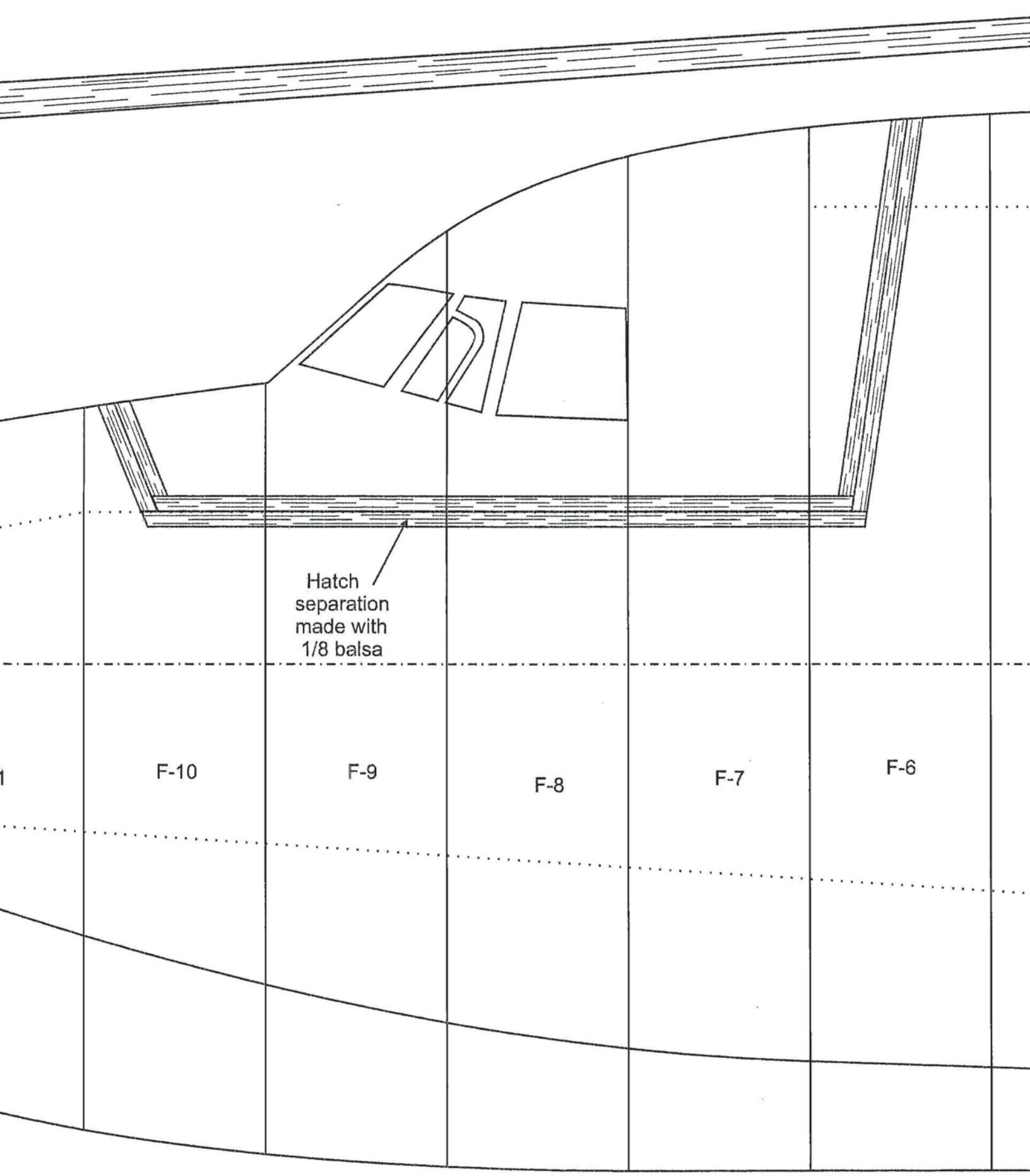




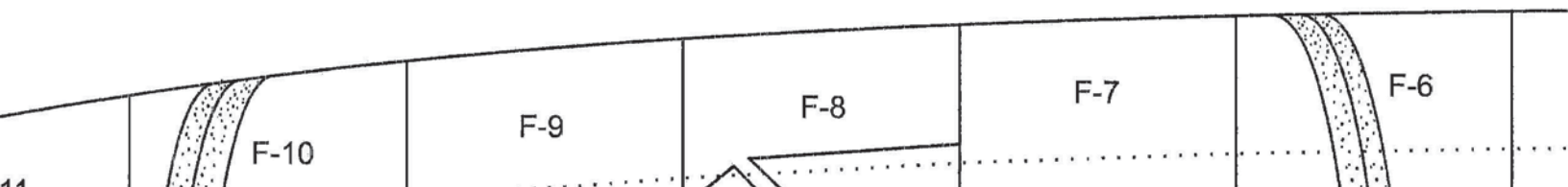


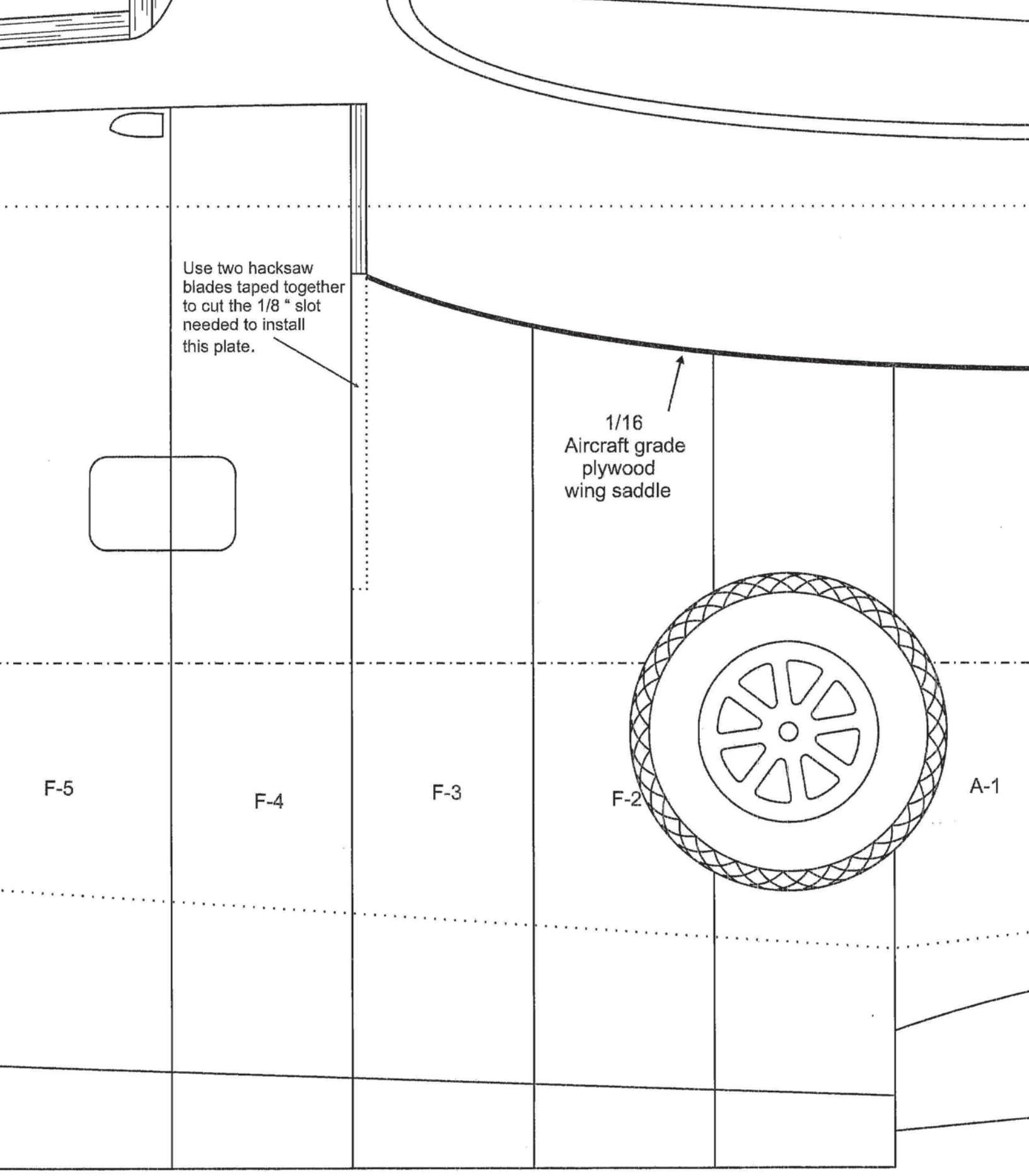
Fiberglass

on my model I applied:
3 ply 3/4oz. glass cloth and 2 ply of ½ oz cloth to the fuselage belly.
3 ply ½ oz cloth to the tip floats.
1 ply of 3/4 cloth covered with 1 ply of ½ oz cloth for smoothness on the

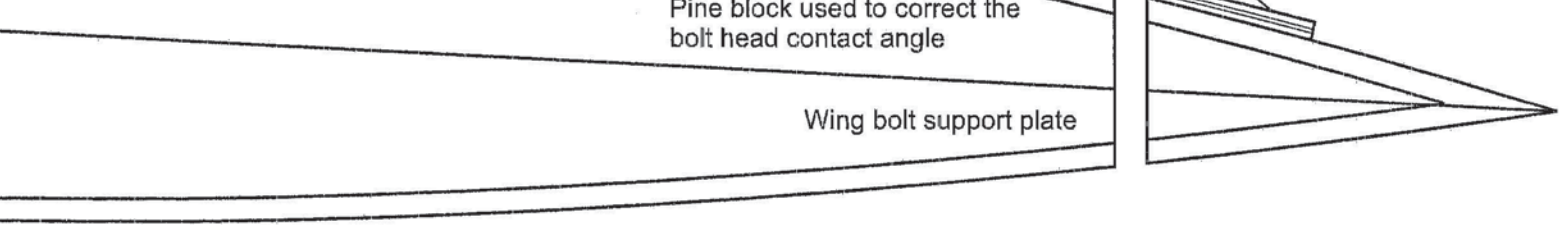


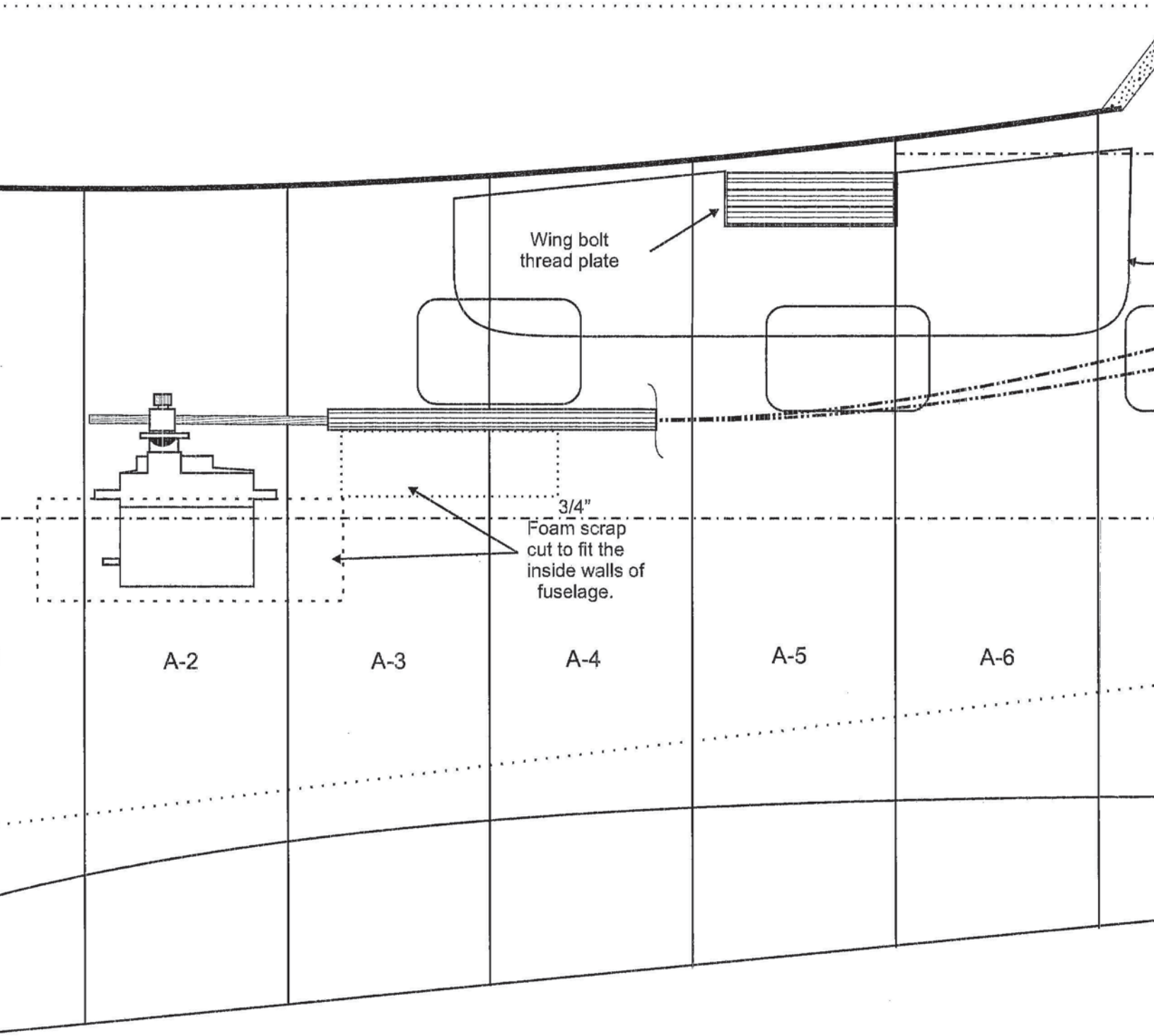
the remainder of the model.

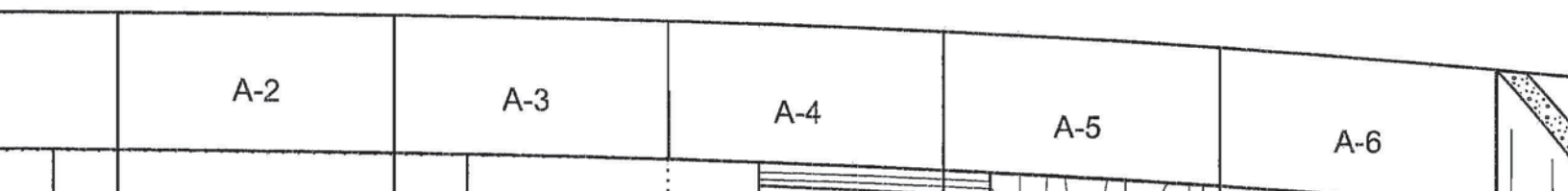


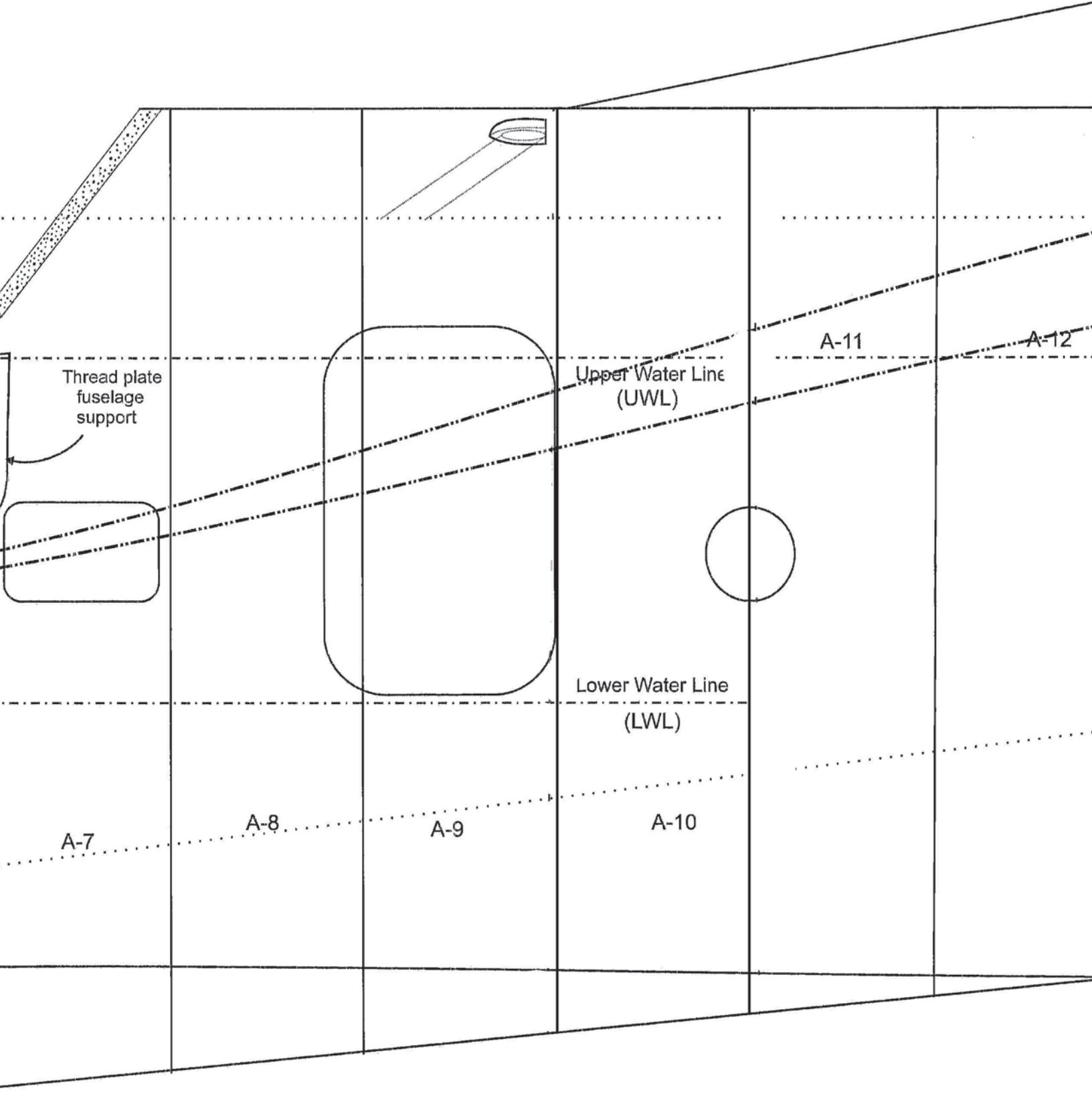


F-5	F-4	F-3	F-2	F-1	A-1

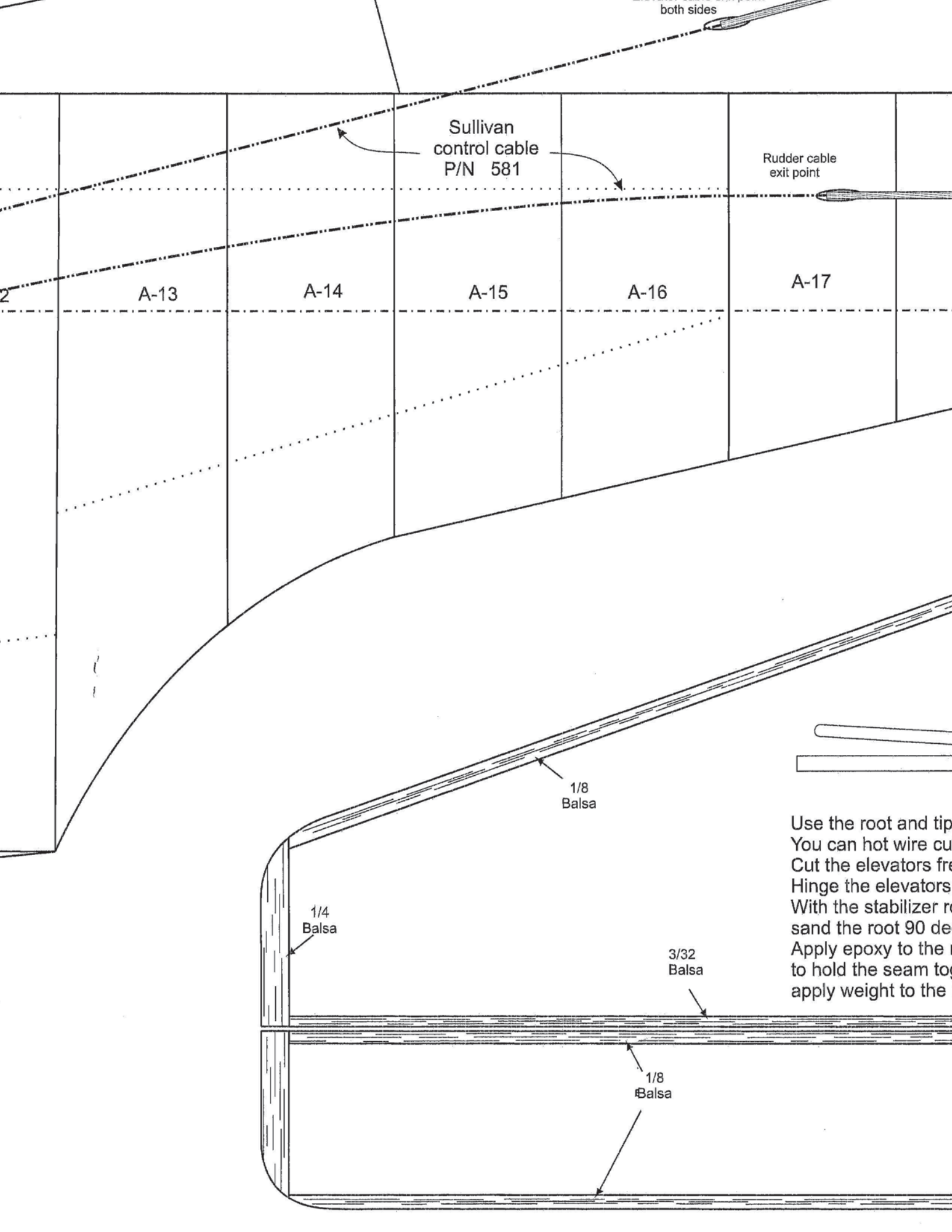

Pine block used to correct the
bolt head contact angle
Wing bolt support plate

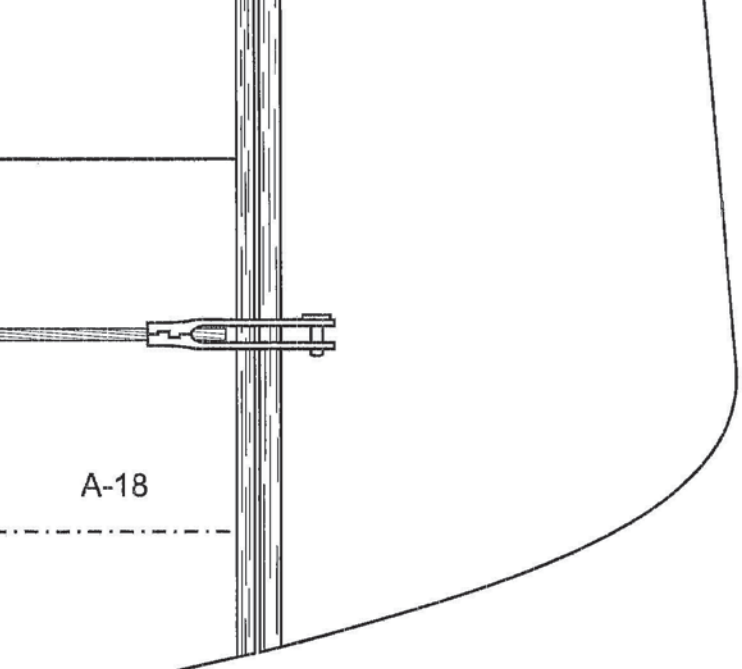

Wing bolt
thread plate
3/4"
Foam scrap
cut to fit the
inside walls of
fuselage.
A-2
A-3
A-4
A-5
A-6

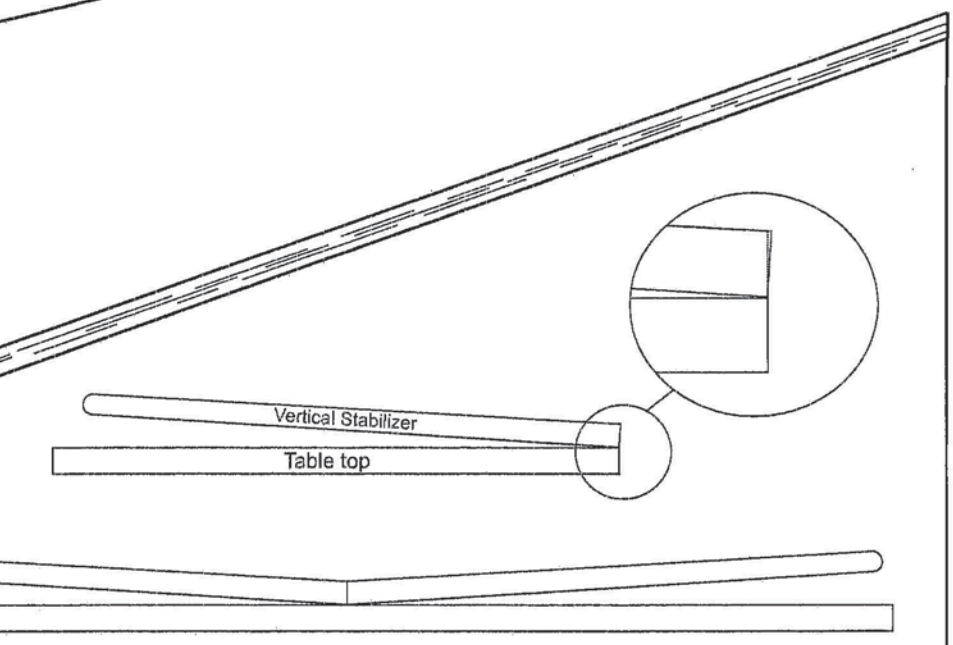

A-2
A-3
A-4
A-5
A-6


Thread plate
fuselage
support
Upper Water Line
(UWL)
Lower Water Line
(LWL)
A-7
A-8
A-9
A-10
A-11
A-12

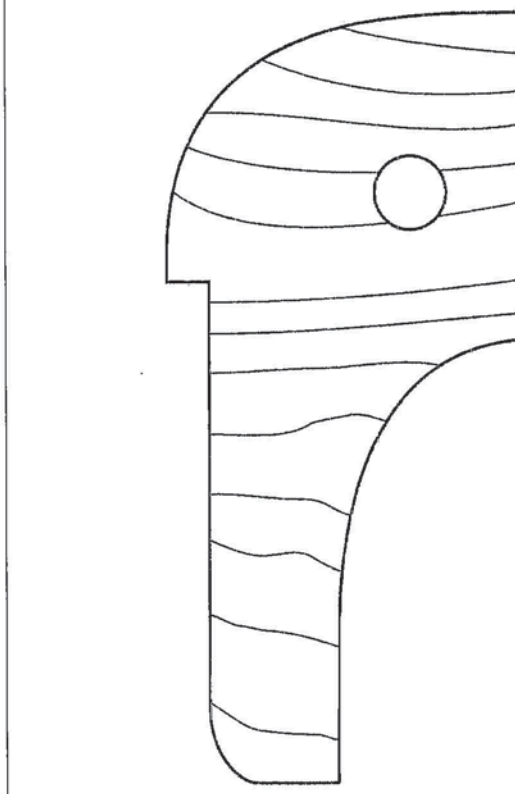

A-7

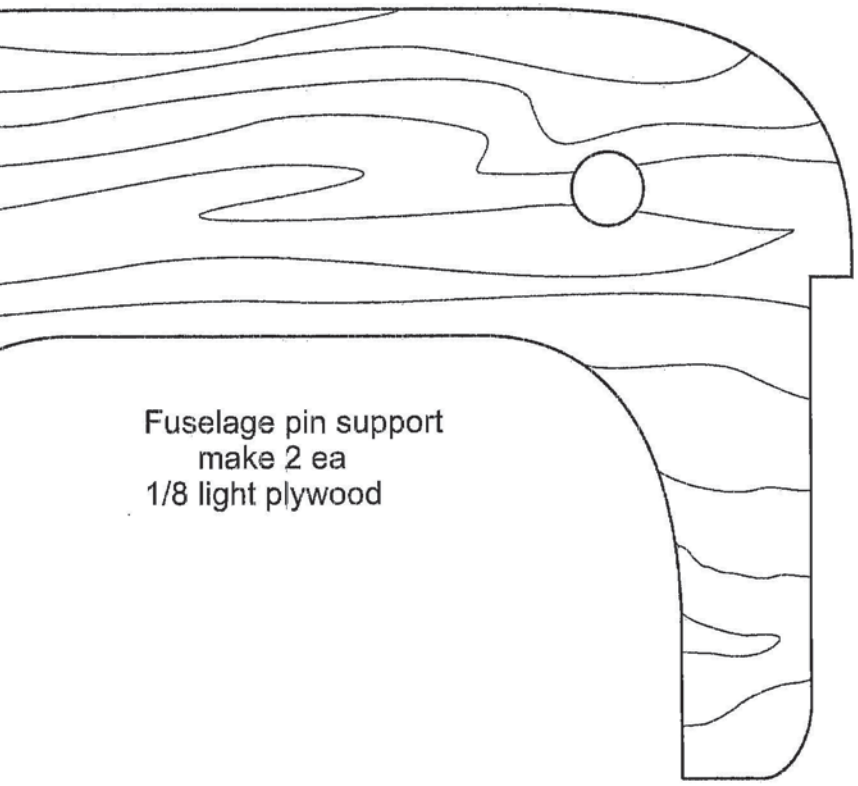

both sides
Sullivan
control cable
P/N 581
Rudder cable
exit point
A-13
A-14
A-15
A-16
A-17
1/8
Balsa
1/4
Balsa
3/32
Balsa
1/8
Balsa
Use the root and tip
You can hot wire cu
Cut the elevators fre
Hinge the elevators
With the stabilizer r
sand the root 90 de
Apply epoxy to the
to hold the seam tog
apply weight to the





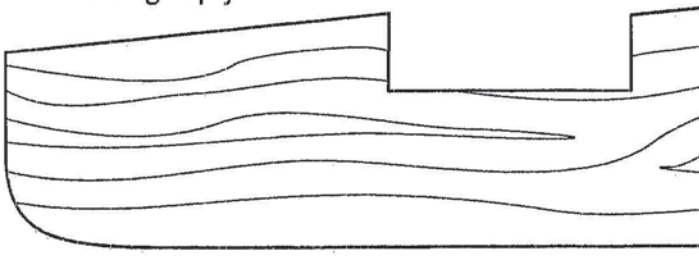
l tip patterns to make the two stab panels.
e cut them or simply sand them to shape
s free and add the hinge line balsa and balsa bump protection.
tors now but leave them off until the stab is installed on the model.
er root at the edge of the work surface and the tip raised 1 1/4 inch
degrees to the top of the work surface.
he root of the stab, with the bottom facing up use masking tape
n together. Flip the stabilizer over and raise the tips 1 1/4 inch and
he center until the epoxy cures.



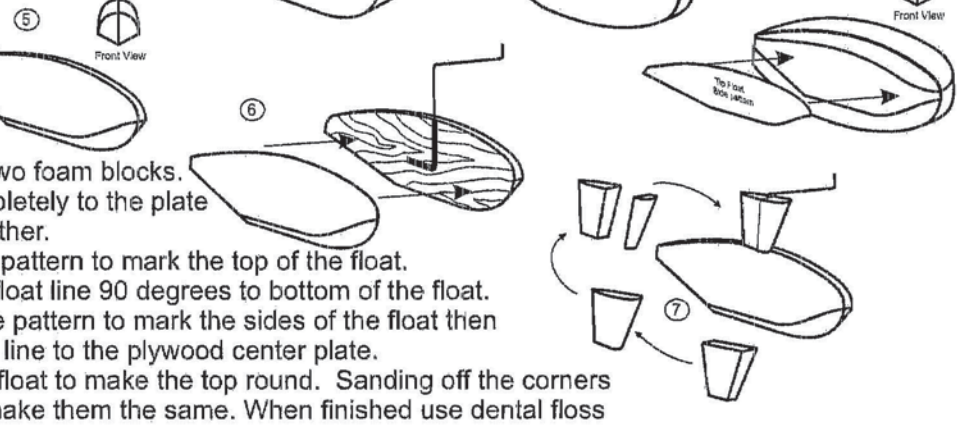


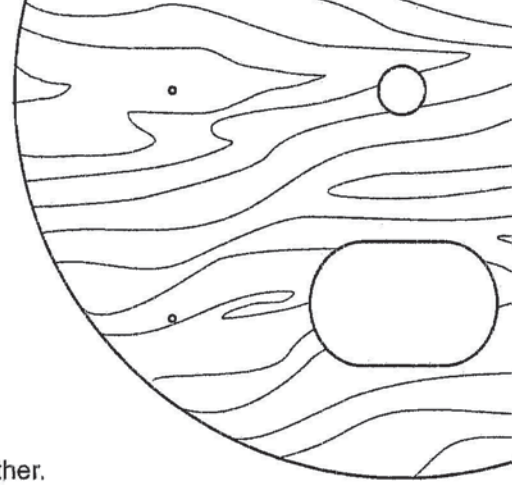
Fuselage pin support
make 2 ea
1/8 light plywood

Wing Attach Support
make 2 ea
1/8 light plywood

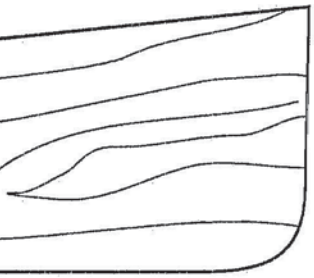


1. Use the plywood
   tip float center plate
   as a pattern to cut two fo
   Bond one side complete
   and tack bond the other.
2. Use the tip float top patt
3. Cut to the top view float
4. Use the tip float side pat
   block sand from the line
5. Sand the top of the float
   evenly will help to make
   in between the tack bon
6. Dent the foam in the foa
7. Cut the foam block for th
   to clear the strut Bond th

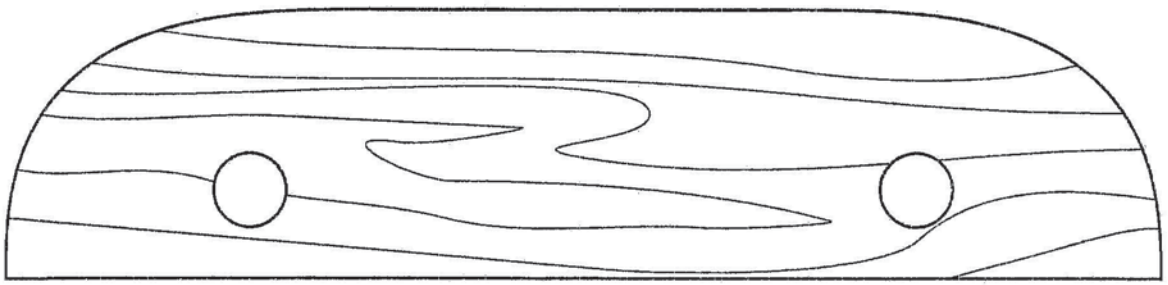




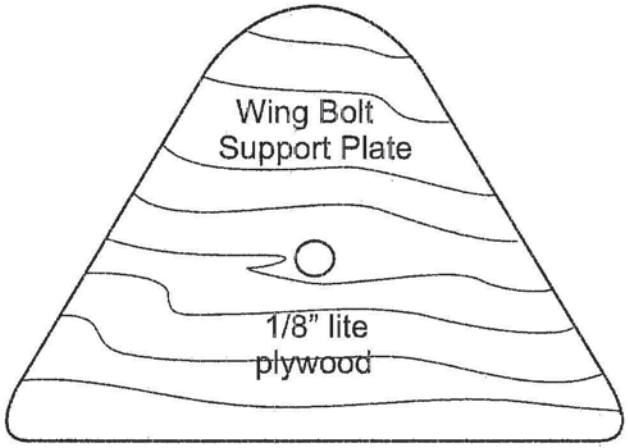
wo foam blocks.
oletely to the plate
ther.
pattern to mark the top of the float.
loat line 90 degrees to bottom of the float.
e pattern to mark the sides of the float then
line to the plywood center plate.
float to make the top round. Sanding off the corners
nake them the same. When finished use dental floss
bonded block and the plywood plate to separate them.
e foam block where the wire float strut goes to make space for it then bond the float halves together.
or the strut cover, sand it to the airfoil shape, cut it in half , sand a groove in the mating surface
nd the foam to the strut wire, glass the float with three ply of ½ oz. cloth.



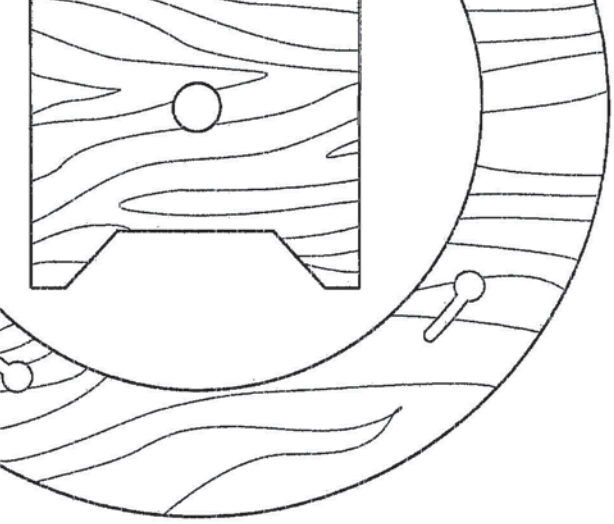
Wing pin support
make 2 ea
1/8 light plywood



1/8"
lite plywood

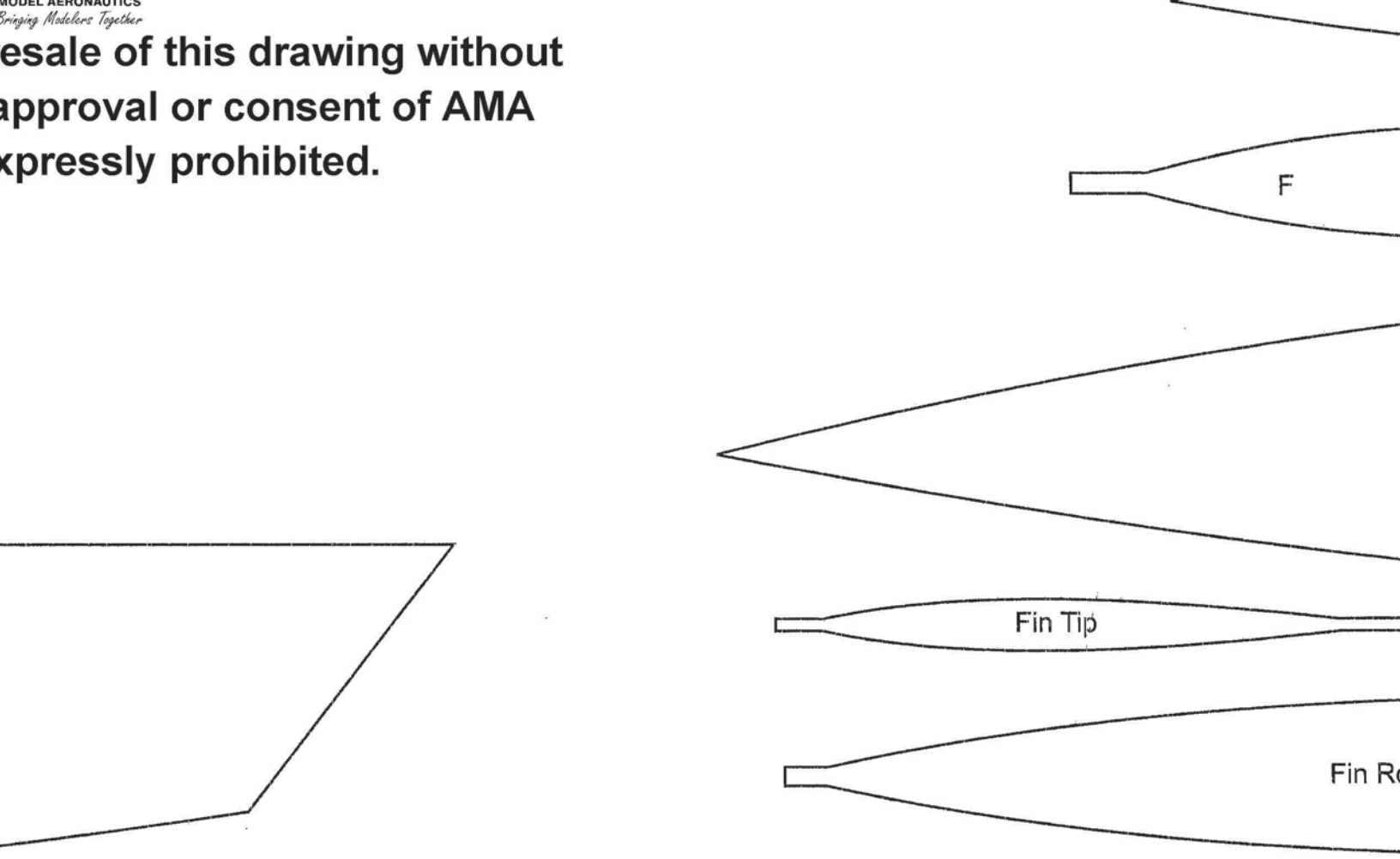


Fuselage wing sadd



ddle cut pattern

With the fuselage on its back and the sides 90 degrees to the work surface.
Align this pattern with the forward edge even with the back of the F-4 segment.
mark the fuselage and cut the wing saddle. save the removed part to make the fuselage fairing above the wing.



Tip Pattern

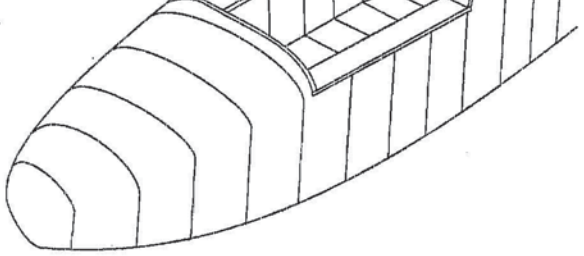
F Stab Tip pattern A

Stab Root pattern A

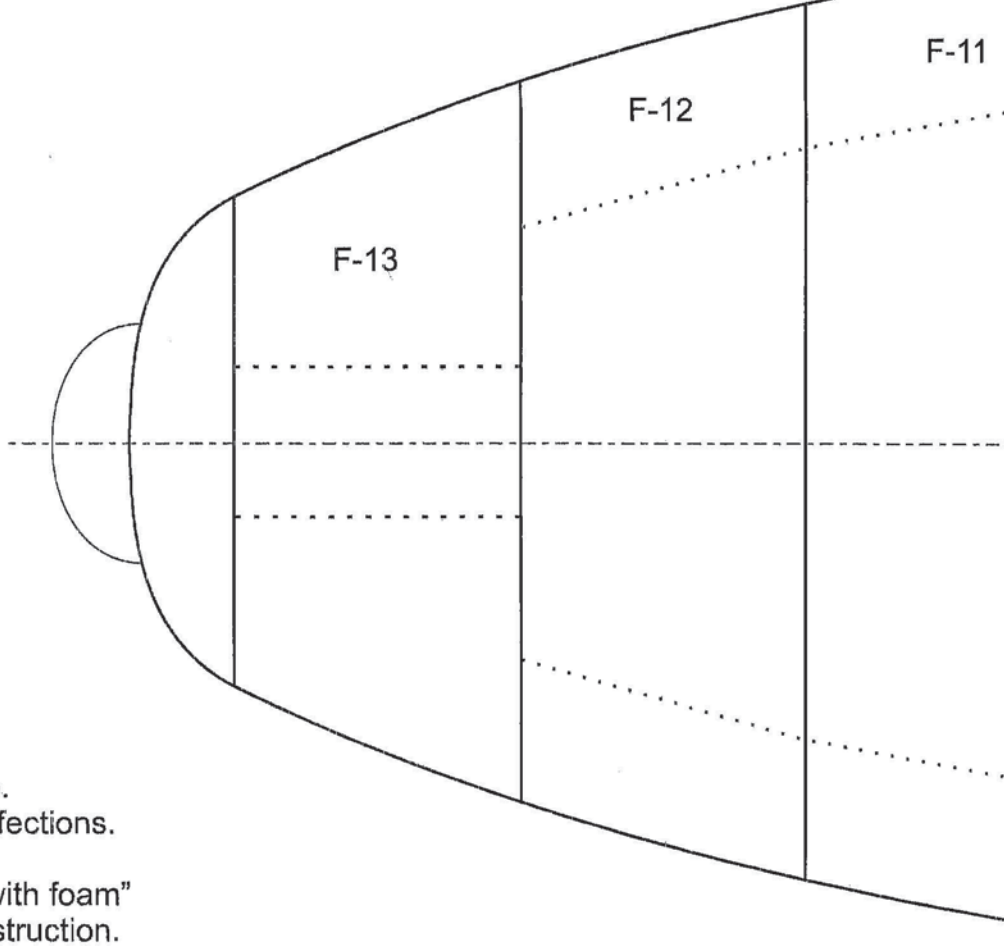
Top

Albatross wing core
Root Pattern

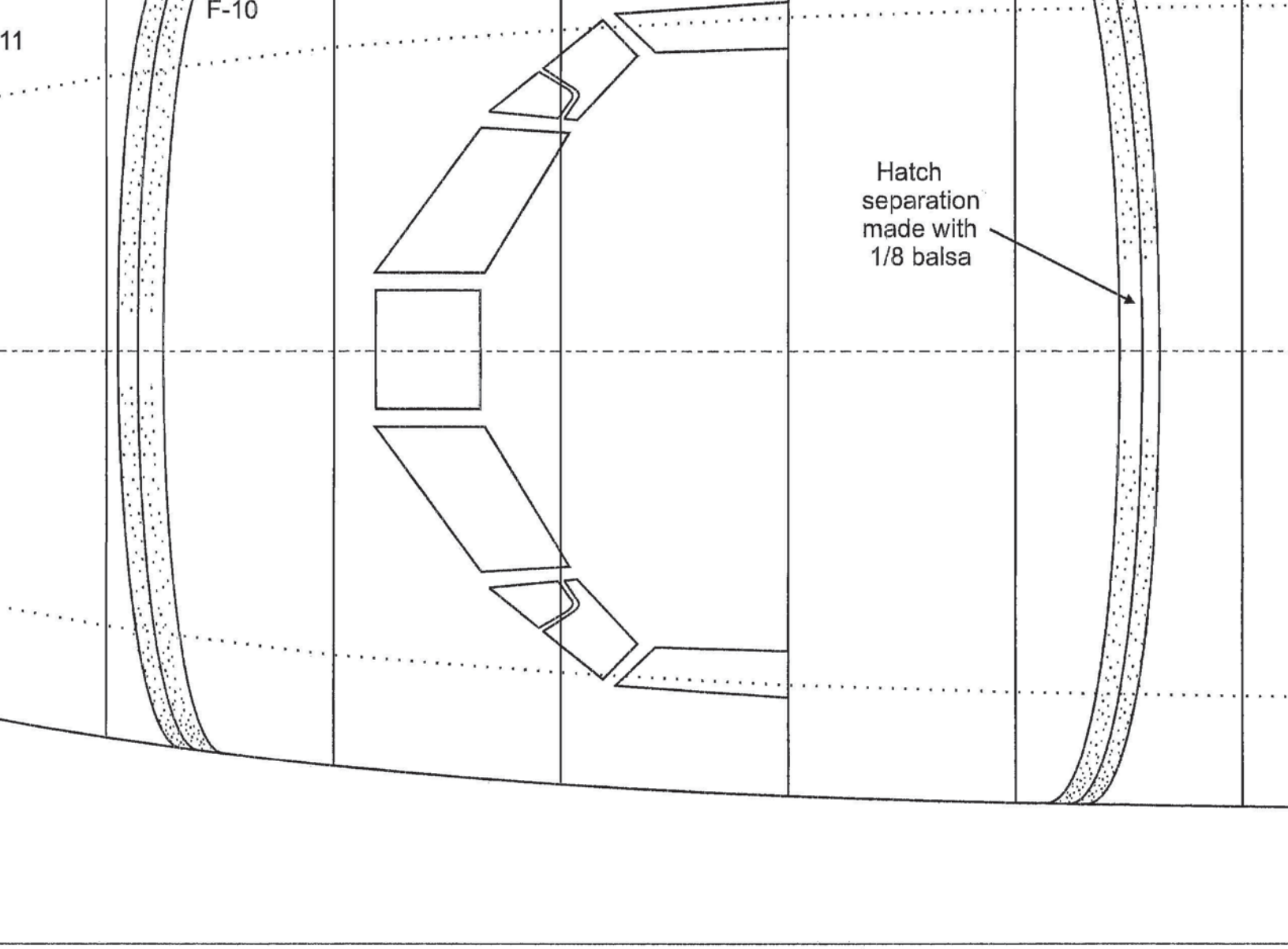
n Root

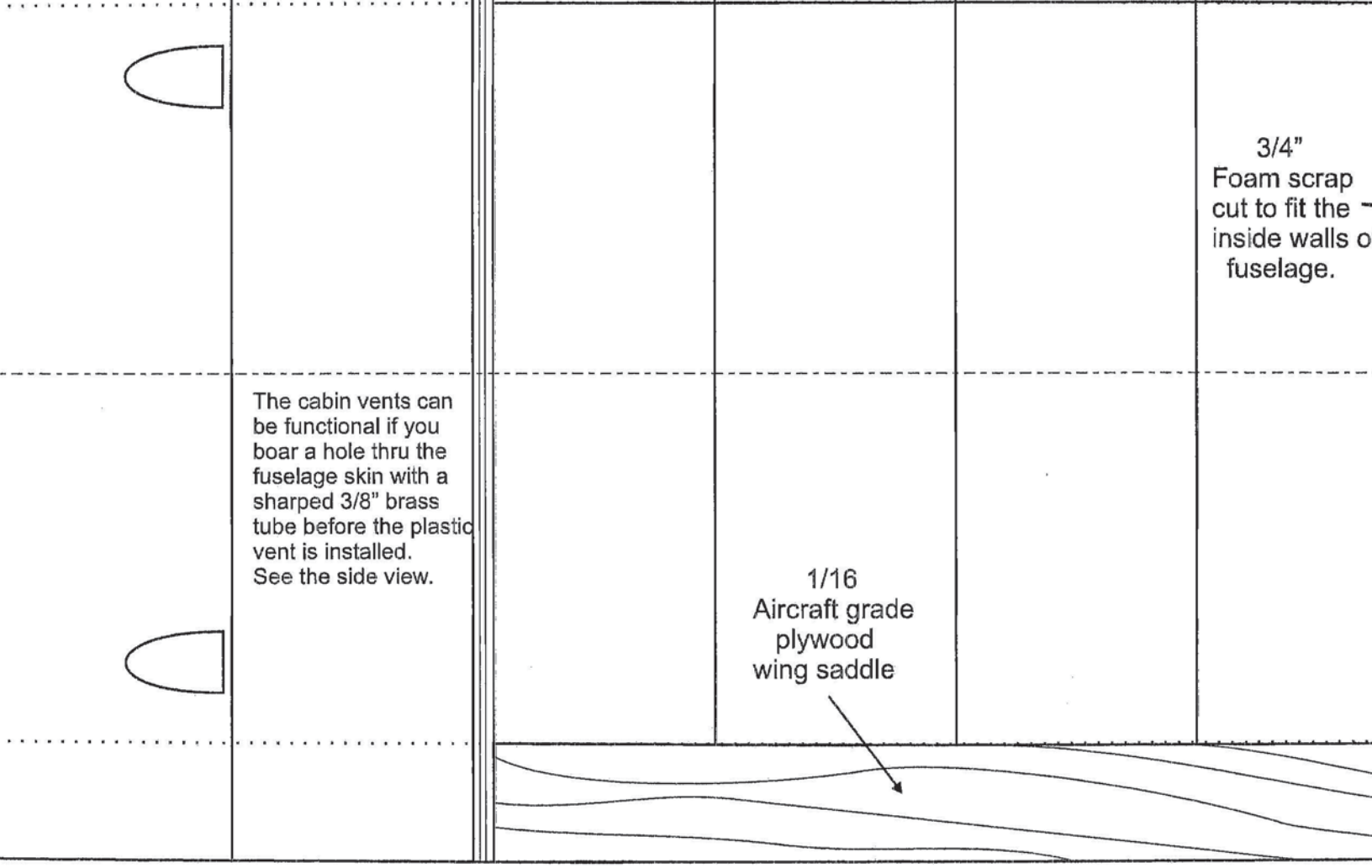


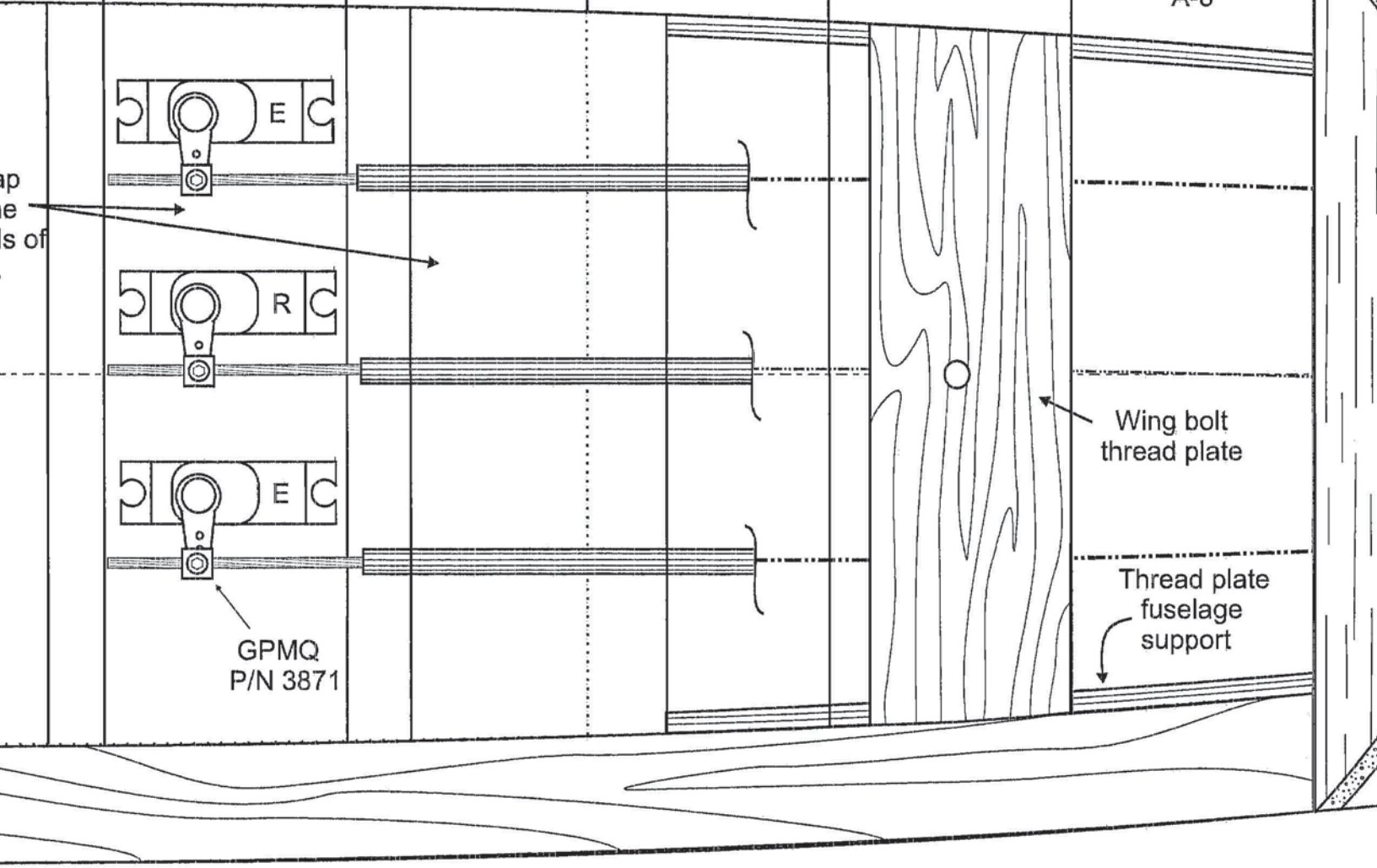
1. Apply ½ ounce glas
thinned 30% with den
2. lightly sand the sur
to remove the ridge
3. After it cures, apply
squeegee off excess
4. Repeat step three u
For detailed finishing
is suggested and is a

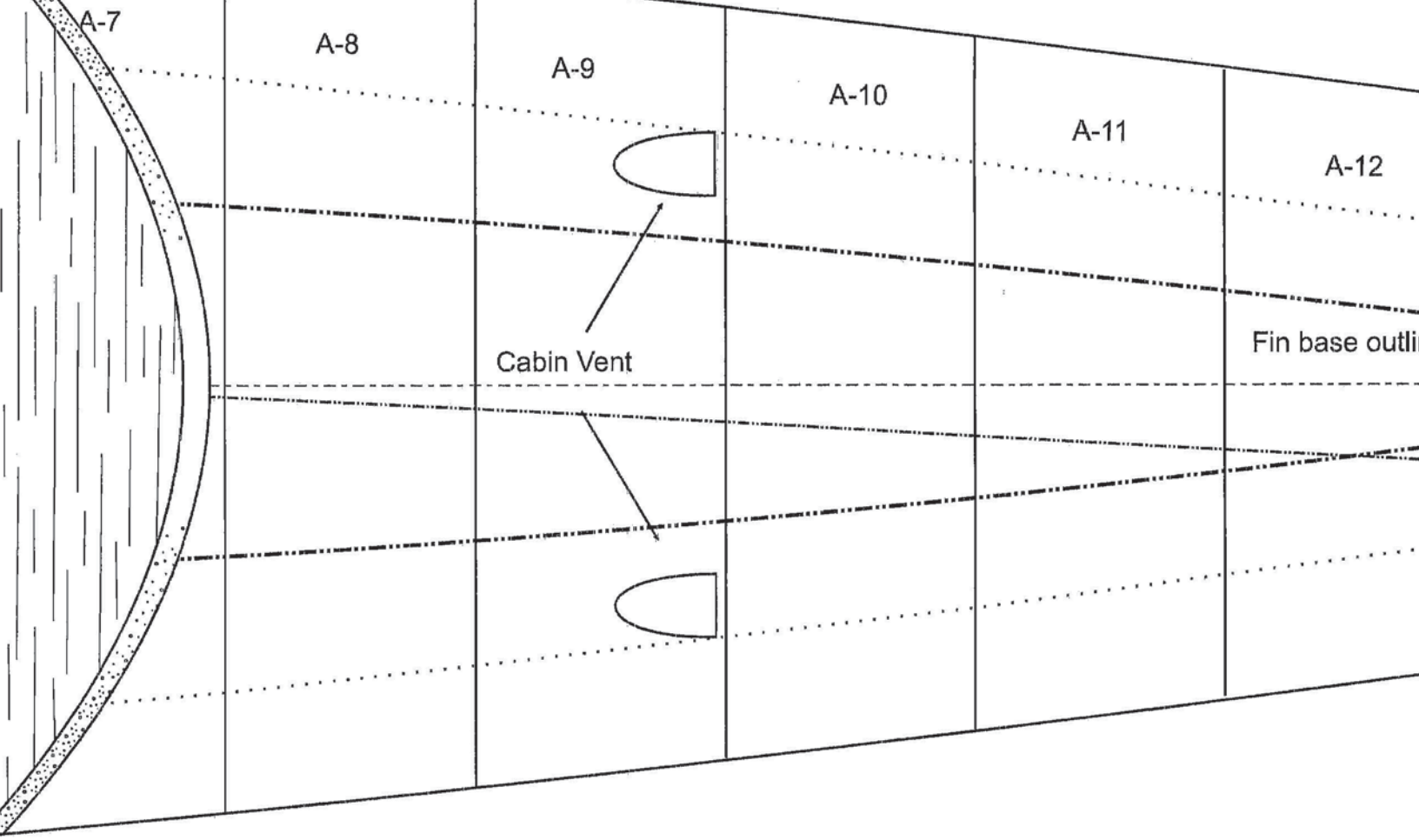


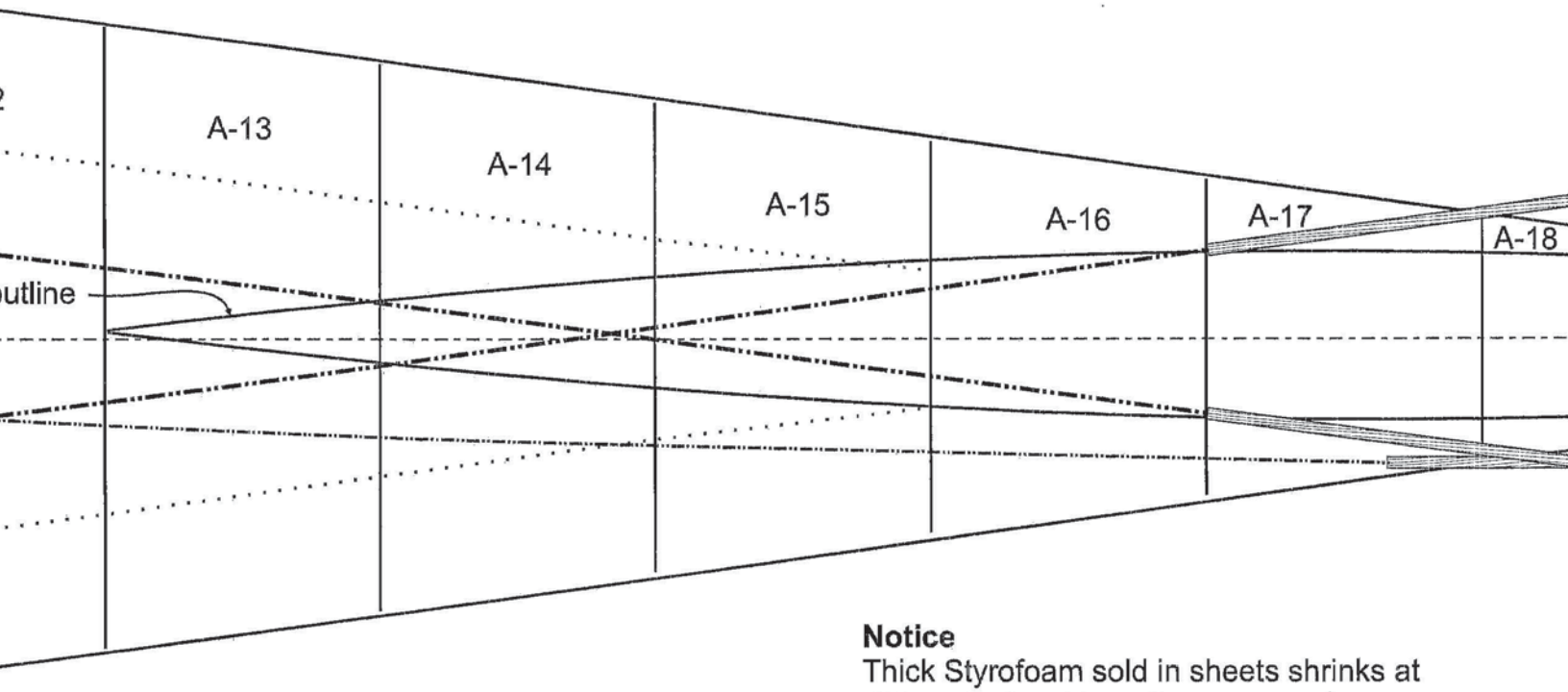
glass cloth and Zap finishing resin
denatured alcohol. Apply with a brush.
surface where the glass cloth overlaps
ge
pply non thinned resin to the glassed surface.
ss resin with a playing card. wet sand imperfections.
ee until the surface becomes glossy.
ng instructions and tips, the book "building with foam"
s a must for those that are new to foam construction.


F-10
11
Hatch
separation
made with
1/8 balsa

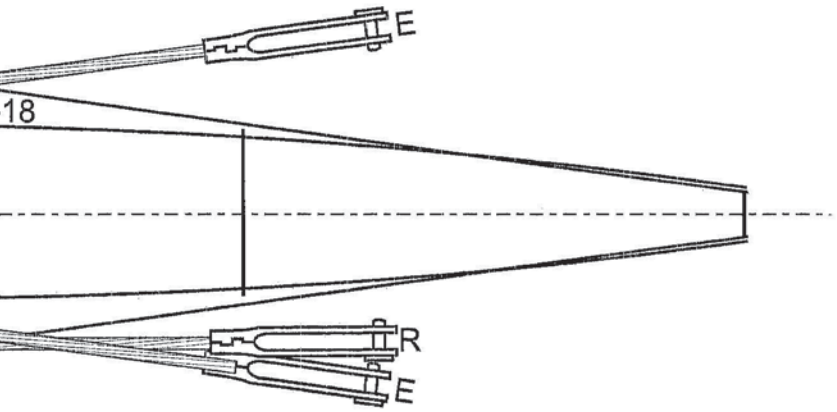

3/4"
Foam scrap
cut to fit the
inside walls o
fuselage.
The cabin vents can
be functional if you
boar a hole thru the
fuselage skin with a
sharped 3/8" brass
tube before the plastic
vent is installed.
See the side view.
1/16
Aircraft grade
plywood
wing saddle


E
R
E
Wing bolt
thread plate
Thread plate
fuselage
support
GPMQ
P/N 3871


A-7
A-8
A-9
A-10
A-11
A-12
Cabin Vent
Fin base outli



Notice
Thick Styrofoam sold in sheets shrinks at different rates. Sometimes as much as roughly 1/16 inch during manufacturing. The segment spacing on this drawing has not allowed for this inconsistency.
This could change the total length of your model



HU-16 Albatross

Designed and drawn by Keith Sparks

Model type	Electric powered , Radio controlled
Specs.	Span..... 76 in. length.....49 in.
REV.1	weight ...6 lbs wing area...667.5 Sq. in.
Construction type	Extruded foam wood composite