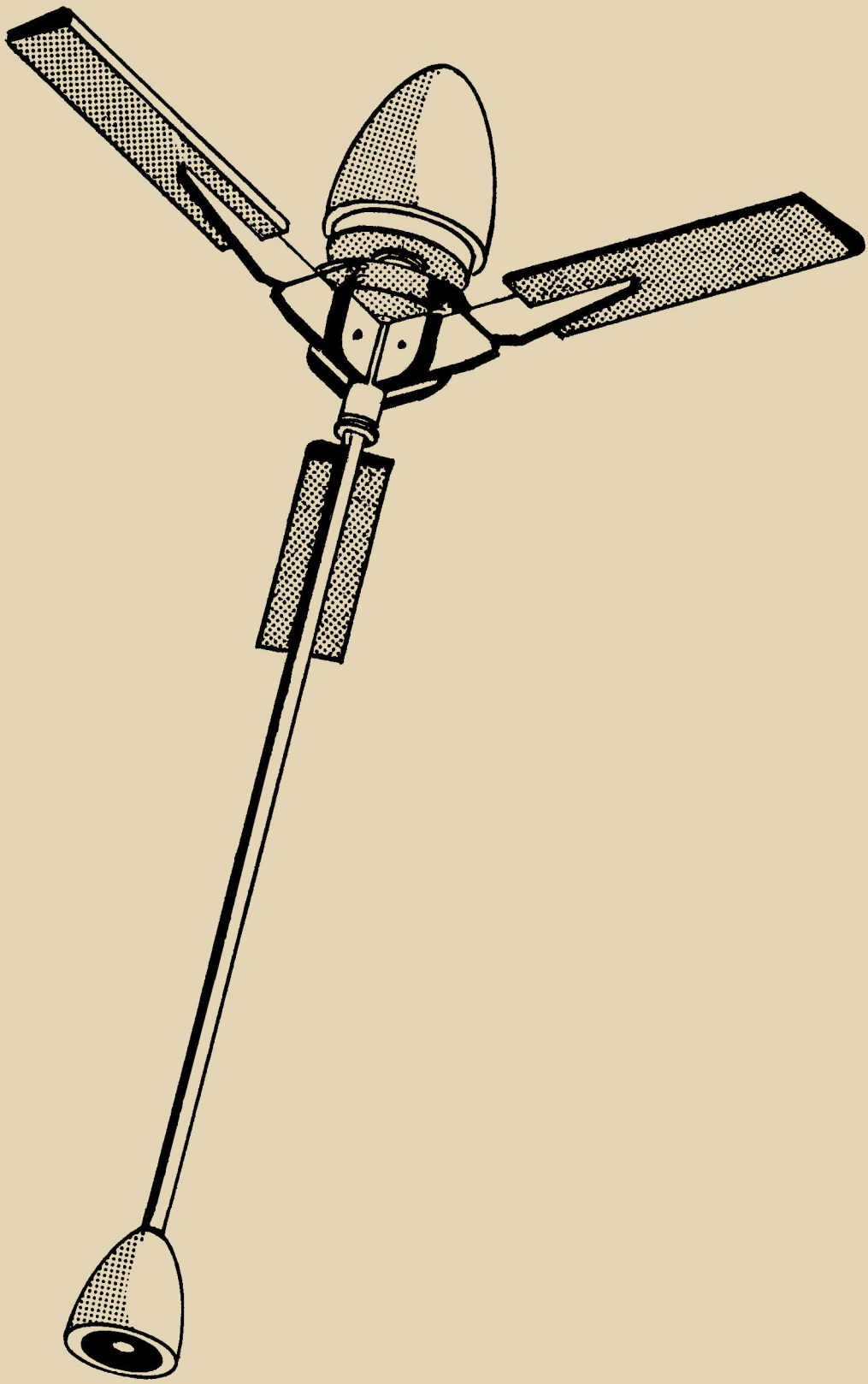
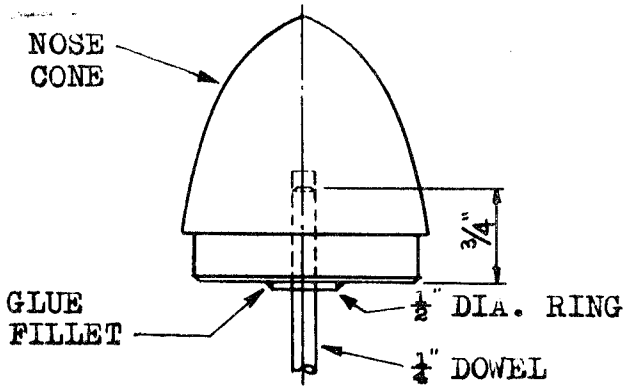
JET-i-SON GLIDER
ROTOR UNIT



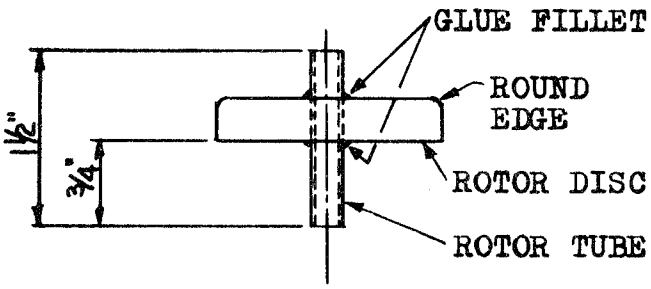
KOPTER

P.O. BOX 98226 PITTSBURGH, PA. 15227



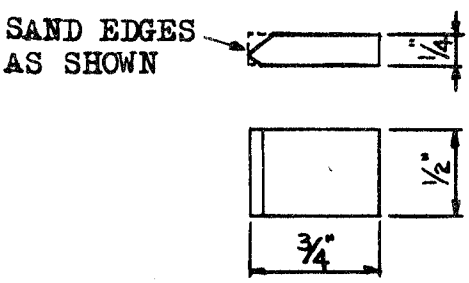
STEP -1

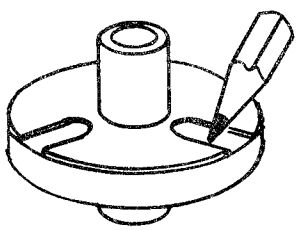
USE A DRILL OR WOOD RASP TO MAKE A 1/4" DIA. x 1" DEEP HOLE IN NOSE CONE. INSERT DOWEL WITH GLUE INTO HOLE. PUSH A 1/2" SPACER RING UP TO THE NOSE CONE, ADD A GLUE FILLET AROUND THE SPACER AND SET ASSEMBLY ASIDE TO DRY.

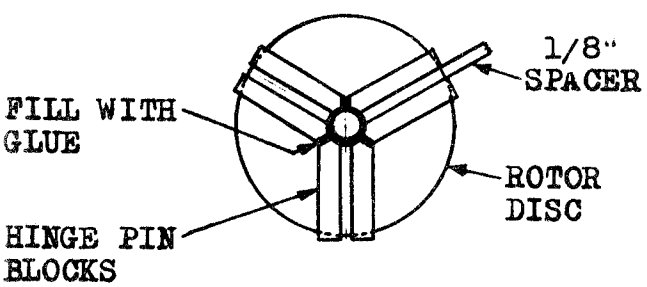


STEP - 2

USE A ROUND WOOD RASP OR ROLLED SANDPAPER TO MAKE A SNUG FITTING HOLE IN THE CENTER OF THE ROTOR MOUNT DISC. PLACE THE DISC OVER THE 1 1/2 LONG ROTOR TUBE, ADD GLUE FILLET TO BOTH SIDES OF DISC THEN SET ASSEMBLY ASIDE TO DRY.

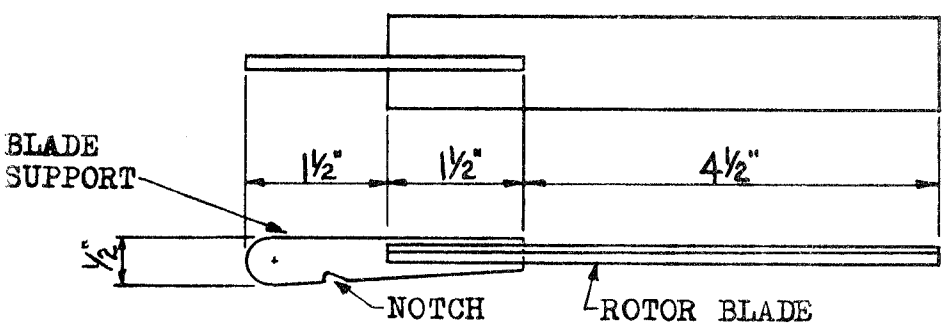


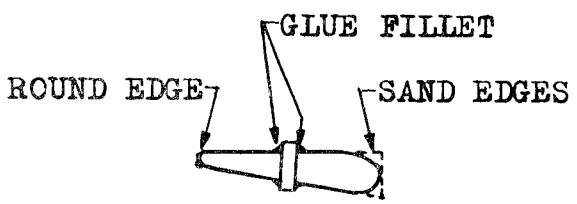




STEP - 3

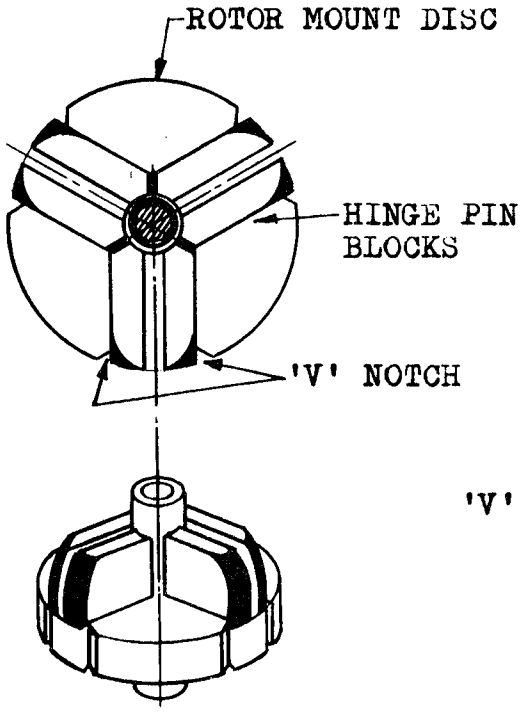
CUT OUT HINGE PIN BLOCK AND BLADE SPACING TEMPLATE FROM TEMPLATE SHEET. PLACE OVER 3/4" LENGTH OF ROTOR TUBE AND MARK OFF LINES ON EACH SIDE OF SLOTS. CUT SIX HINGE PIN BLOCKS FROM 1/4" x 1/2" BALSA STOCK. SHAPE AS SHOWN &GLUE TO DISC & TUBE. USE A SCRAP PIECE OF BALSA AS A SPACER TO PROPERLY ALIGN HINGE PIN BLOCKS. REMOVE SPACERS CAREFULLY THEN SET ASSEMBLY ASIDE TO DRY. THIS UNIT MUST BE COMPLETELY DRY BEFORE ROUNDING OFF EDGES.



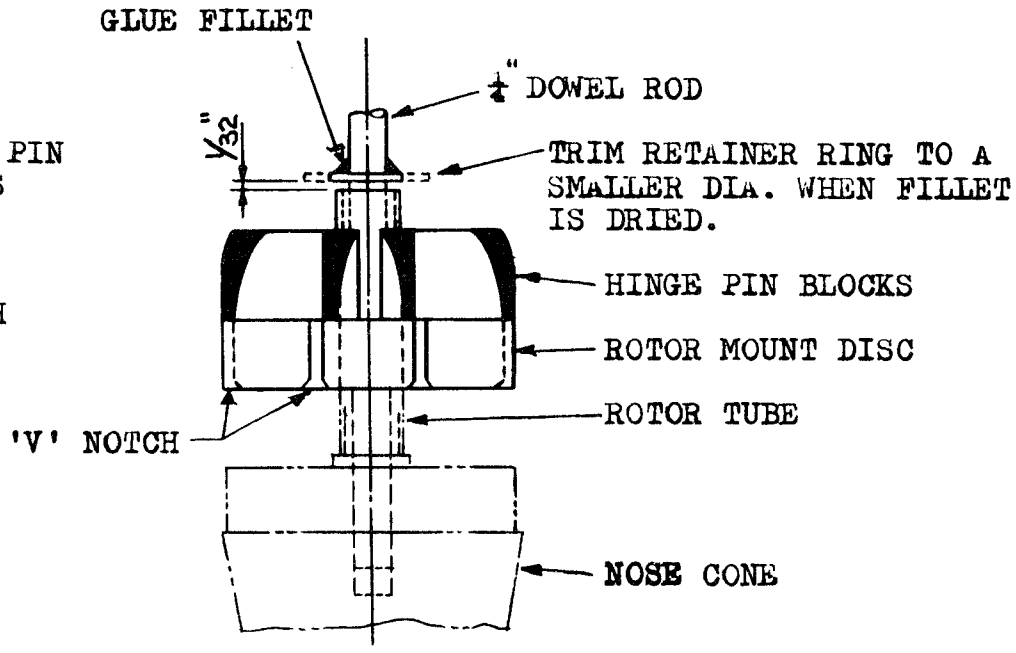


STEP - 4

Using ROTOR BLADE TEMPLATE CUT A 1/8" x 1 1/2" SLOT IN ROTOR BLADE. SHAPE THREE BLADE SUPPORTS FROM 1/8" x 1/2" HARDWOOD STOCK USING BLADE SUPPORT TEMPLATE. GLUE THE BLADE & SUPPORT TOGETHER USING A GENEROUS AMOUNT OF GLUE. AFTER GLUE HAS DRIED SHAPE THE LEADING AND TRAILING EDGES AS SHOWN ABOVE. NOTE: IF BLADES ARE NOT PROPERLY PITCHED, ROTATION DURING FLIGHT WILL NOT OCCUR. NOTCH FOR RUBBER BAND SHOULD NOT BE DEEPER THAN 1/8".

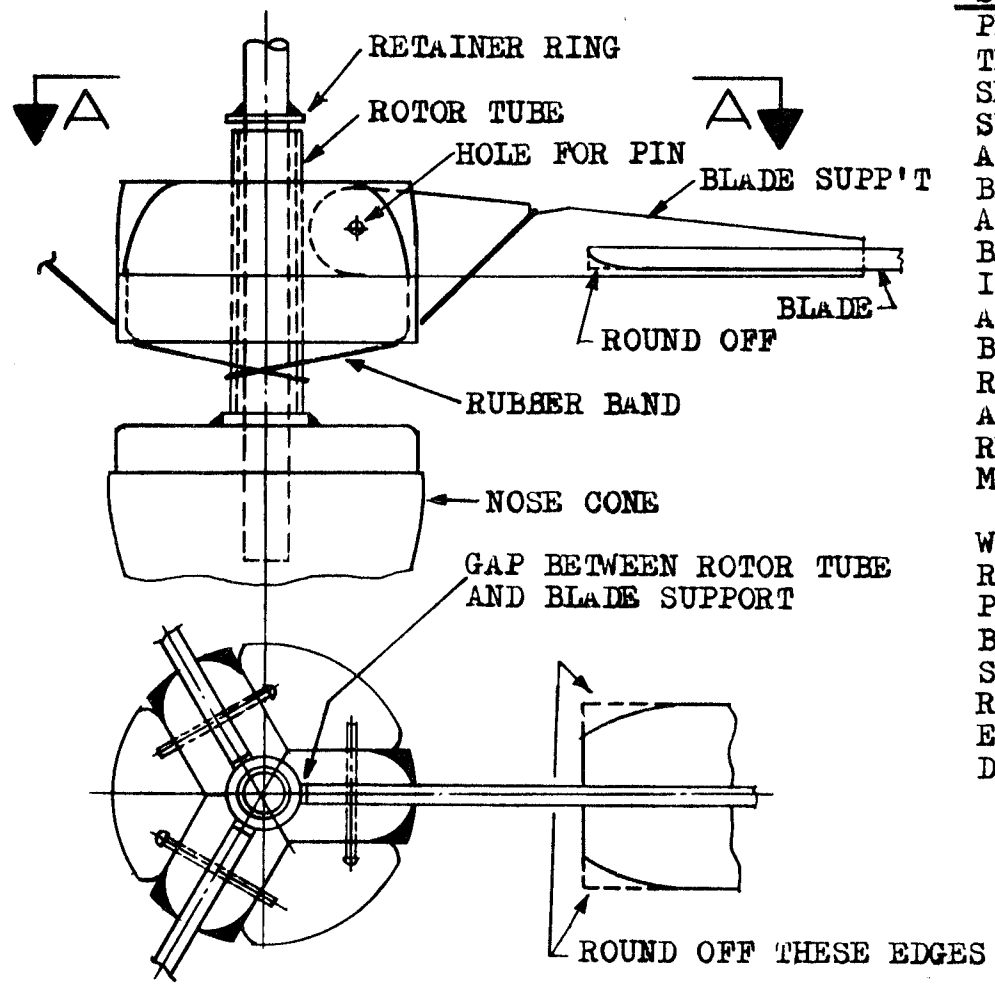


DEVELOPED VIEW OF ROTOR



STEP -5

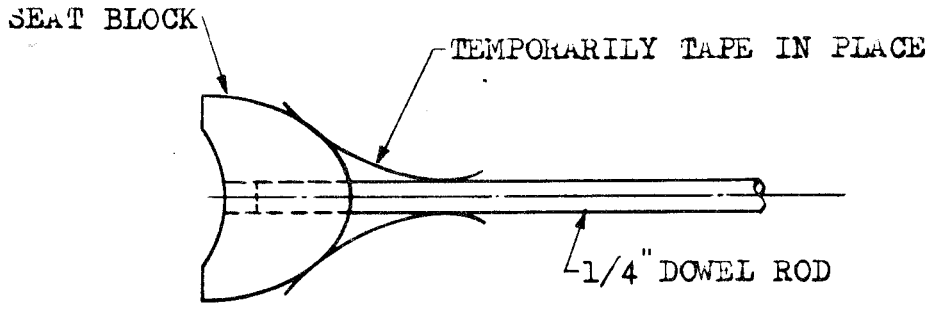
SAND ENDS OF HINGE PIN BLOCKS TO CONTOURS AS SHOWN BY SHADED AREAS. CUT A 'V' NOTCH, 1/8" DEEP ON EACH SIDE OF PIN BLOCKS, IN THE ROTOR DISC. ROUND OFF EDGES OF NOTCHES. PLACE ROTOR ASSEMBLY ON DOWEL ROD. SLIP RETAINER RING UP TO ROTOR TUBE LEAVING A 1/32" GAP TO ALLOW ROTOR TO TURN FREELY. ADD A GLUE FILLET TO ONE SIDE OF RING. WHEN FILLET HAS DRIED SAND RING TO A SMALLER DIAMETER AS SHOWN ABOVE.



STEP - 6

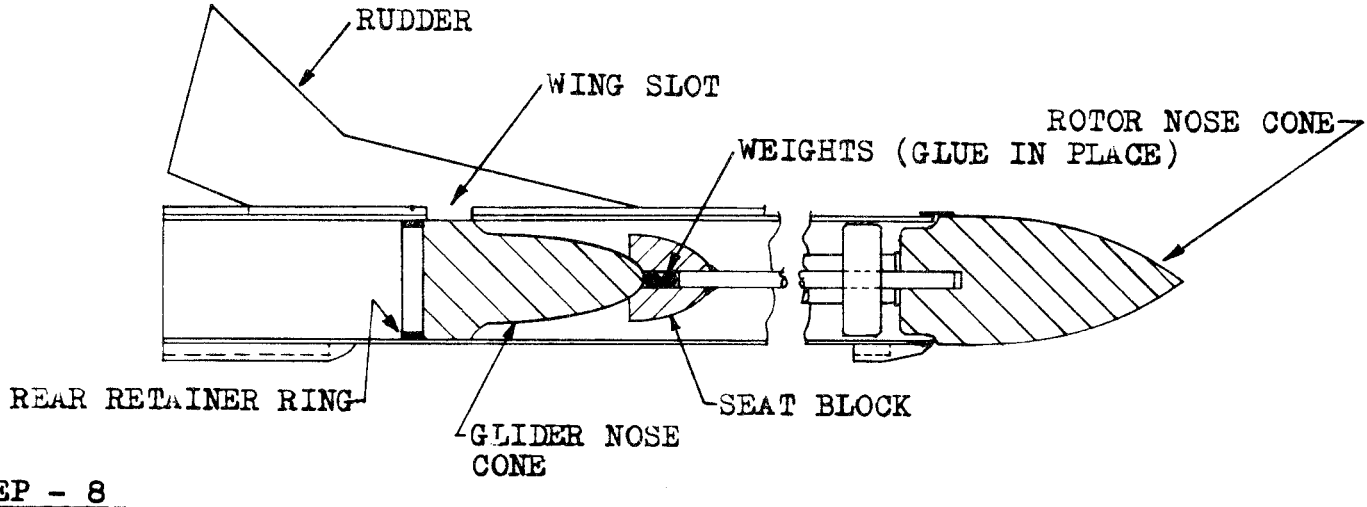
PLACE BLADE SUPPORT BETWEEN THE HINGE PIN BLOCKS. LEAVE A SMALL GAP BETWEEN THE BLADE SUPPORT AND ROTOR TUBE. DRILL A SMALL HOLE THROUGH THE BLOCKS & SUPPORT. INSERT PIN AND VERY CAREFULLY FOLD BLADE BACK INTO RETRACTED POSITION. IF BINDING OCCURS, REMOVE PIN AND SAND OFF HIGH SPOTS UNTIL BLADE CAN MOVE FREELY. SLIP RUBBER BAND OVER BLADE NOTCH AND STRETCH OVER NOSE CONE. REPEAT THIS PROCEDURE WITH REMAINING BLADE ASSEMBLIES.

WHEN BLADES ARE ATTACHED TO ROTORFOLD THEM INTO RETRACTED POSITION AND PLACE IN GLIDER BODY TUBE. CHECK FOR HIGH SPOTS THAT WOULD KEEP THE ROTOR UNIT FROM BEING PROPERLY EJECTED FROM THE BODY TUBE DURING FLIGHT.



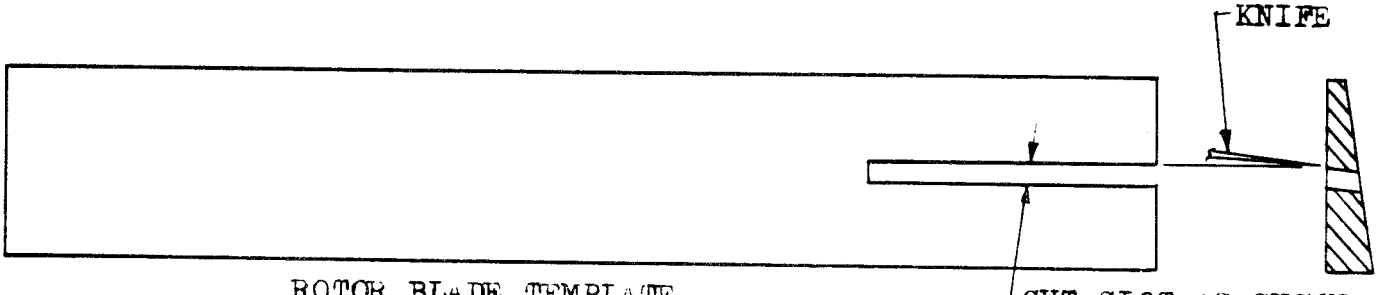
STEP - 7

MAKE A 1/4" HOLE IN THE ROTOR SEAT BLOCK, INSERT DOWEL ROD ABOUT HALF WAY AND TAPE IN PLACE. INSERT THE ROTOR ASSEMBLY INTO THE GLIDER BODY TUBE. MAKE ANY NECESSARY ADJUSTMENTS TO DOWEL ROD SO THAT THE ROTOR NOSE CONE IS SEATED AGAINST THE TIP OF THE GLIDER BODY TUBE. ALSO BE SURE THAT THE GLIDER NOSE CONE IS SEATED AGAINST THE REAR RETAINER RING AS SHOWN IN(STEP - 8).

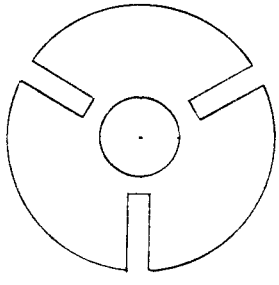


STEP - 8

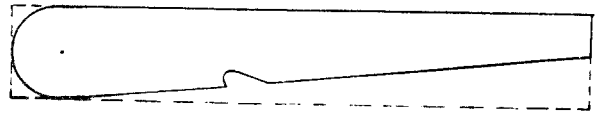
WHEN ALL ADJUSTMENTS ARE MADE, WITHDRAW THE ROTOR ASSEMBLY CAREFULLY FROM THE BODY TUBE, MARK SEAT BLOCK POSITION ON DOWEL ROD, REMOVE TAPE AND ADD GLUE TO HOLE IN SEAT BLOCK. REPLACE SEAT BLOCK TO POSITION MARKED ON DOWEL ROD. WITH THE ROTOR BLADES IN THE EXTENDED OR(OPEN POSITION) PLACE THE ROTOR ON THE INDEX FINGER TO CHECK THE BALANCE POINT. THE BALANCE POINT SHOULD BE DIRECTLY BEHIND THE ROTOR TUBE. IF WEIGHTS ARE REQUIRED ADD THEM AS SHOWN ABOVE.



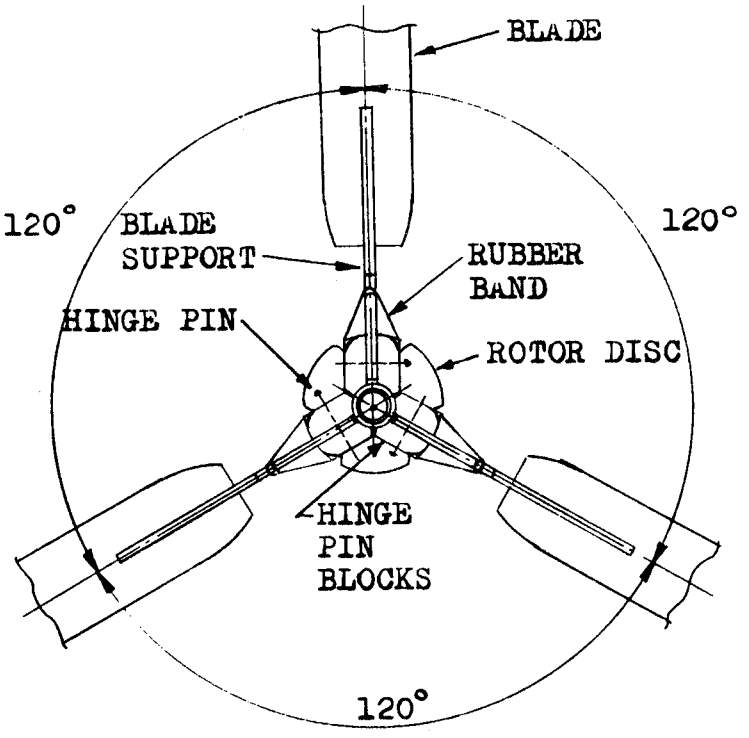
ROTOR BLADE TEMPLATE



HINGE PIN SUPPORT AND BLADE SPACING TEMPLATE



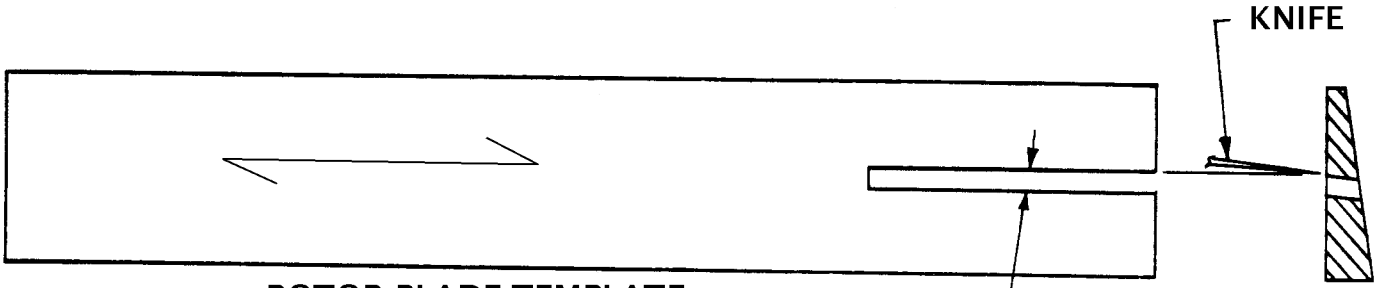
BLADE SUPPORT TEMPLATE



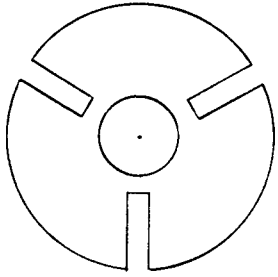
VIEW - A - A
BLADES IN OPEN POSITION

PARTS LIST

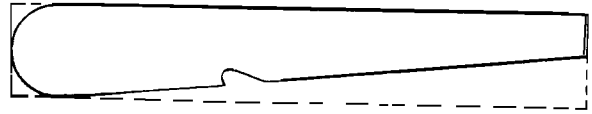
1- ROTOR NOSE CONE
1- 12" LONG DOWEL ROD
3- ROTOR BLADES
1- SEAT BLOCK
1- ROTOR DISC
1- ROTOR TUBE
3- HINGE PINS
2- ½" DIA. RETAINER RINGS
1- HINGE BLOCK STOCK ¼"x½"x6"
3- RUBBER BANDS
3- BLADE SUPPORTS (HARDWOOD)
2- LEAD WEIGHTS



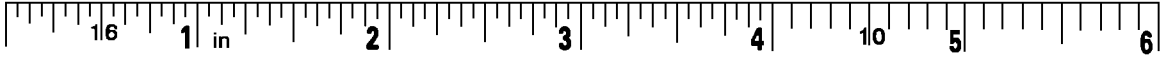
ROTOR BLADE TEMPLATE

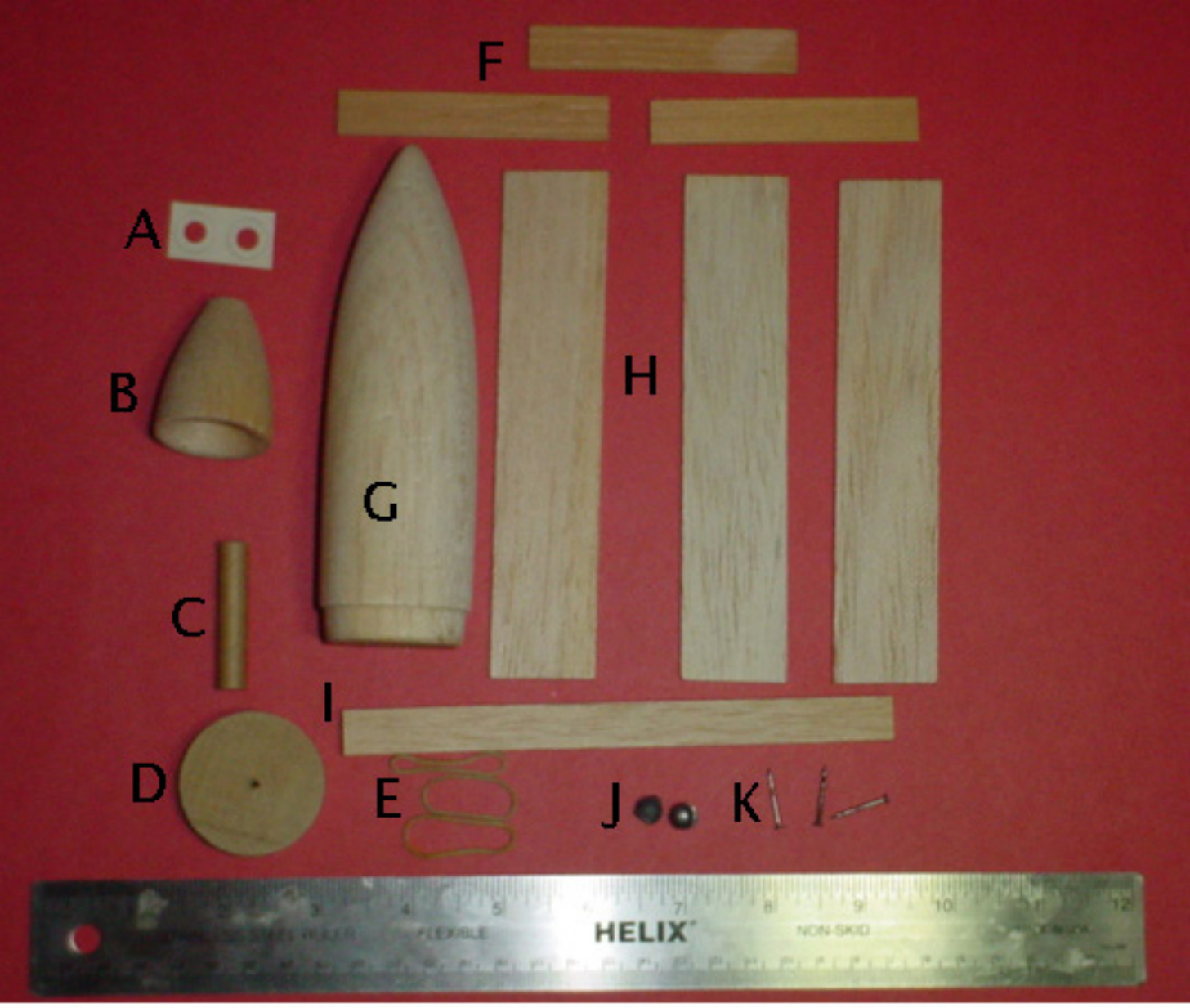


HINGE PIN SUPPORT
AND BLADE SPACING
TEMPLATE



BLADE SUPPORT TEMPLATE





A - Retainer Rings (2), .5 1/2) inch diameter card stock with .25" center hole.
B - Seat Block, Make from NB-60 nose block or upper portion of BNC-60 nose cone. Sand rounded depression into base. Must slide easily in/out of BT-60 body tube.
C -Rotor Tube, 1.5 inch length of .25 (1/4) inch launch lug.
D - Rotor Disk , .5 (1/2) inch thick balsa disk, 1.57 inches in diameter. Make from NB-60 nose block and sand to slightly smaller diameter for loose fit in BT-60.
E- Small rubber bands (3) for rotor tensioning.
F- Blade Supports (3), .125 x .5 x 3.0 inch hardwood.
G- Main Nose Cone, fits BT-60. Cut shoulder to .5" and sand to fit into TC-60 tube coupler.
H - Rotor Blades (3), .25 x 1.0 x 5.5 inches hard balsa. Taper trailing edge to .125".
I - Hinge Block Stock, .25 x .5 x 6.0 hard balsa.
J - Lead fishing Weights (2) - .25" diameter. Approx. .07 oz (2 grams) each.
K - Hinge Pins (3), .625 (5/8) inch braids.
Note Shown: .25 (1/4) x 12 inch harwood dowel.