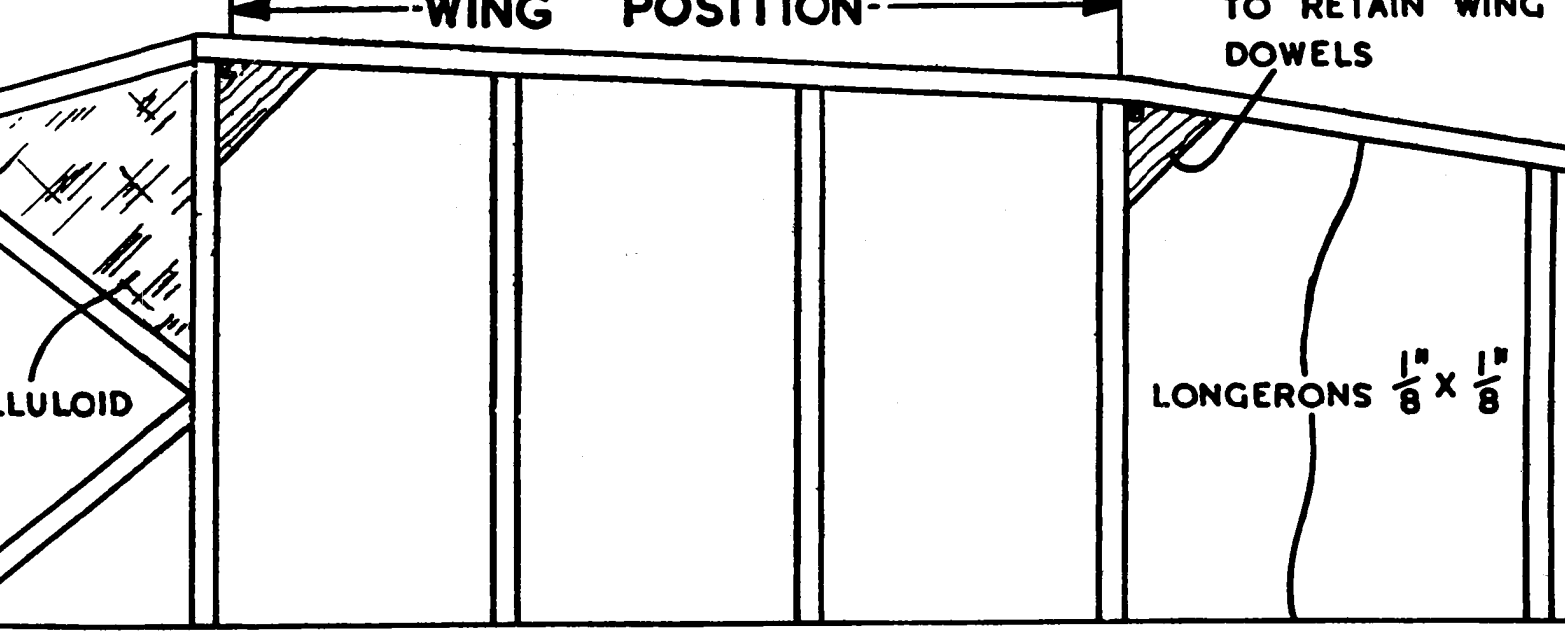
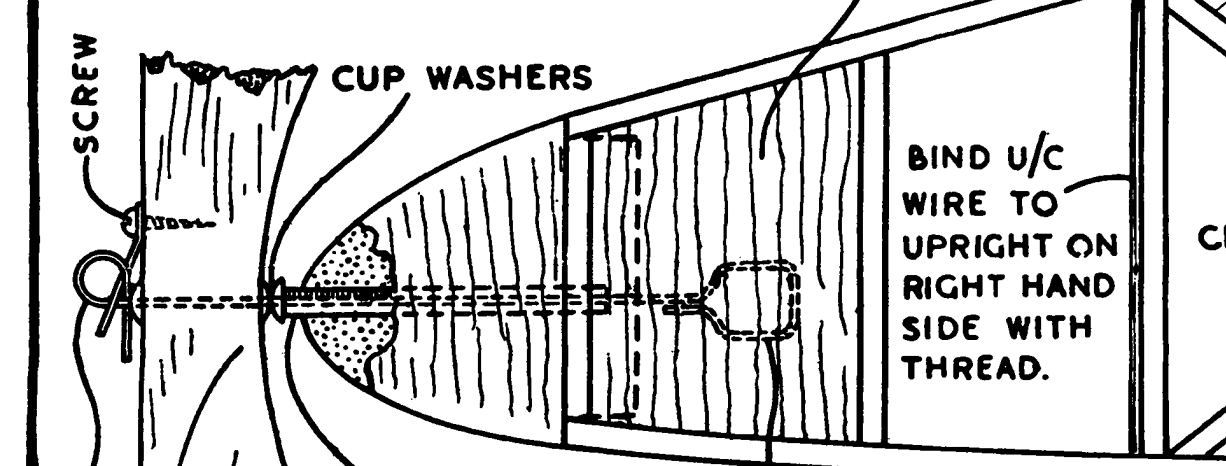
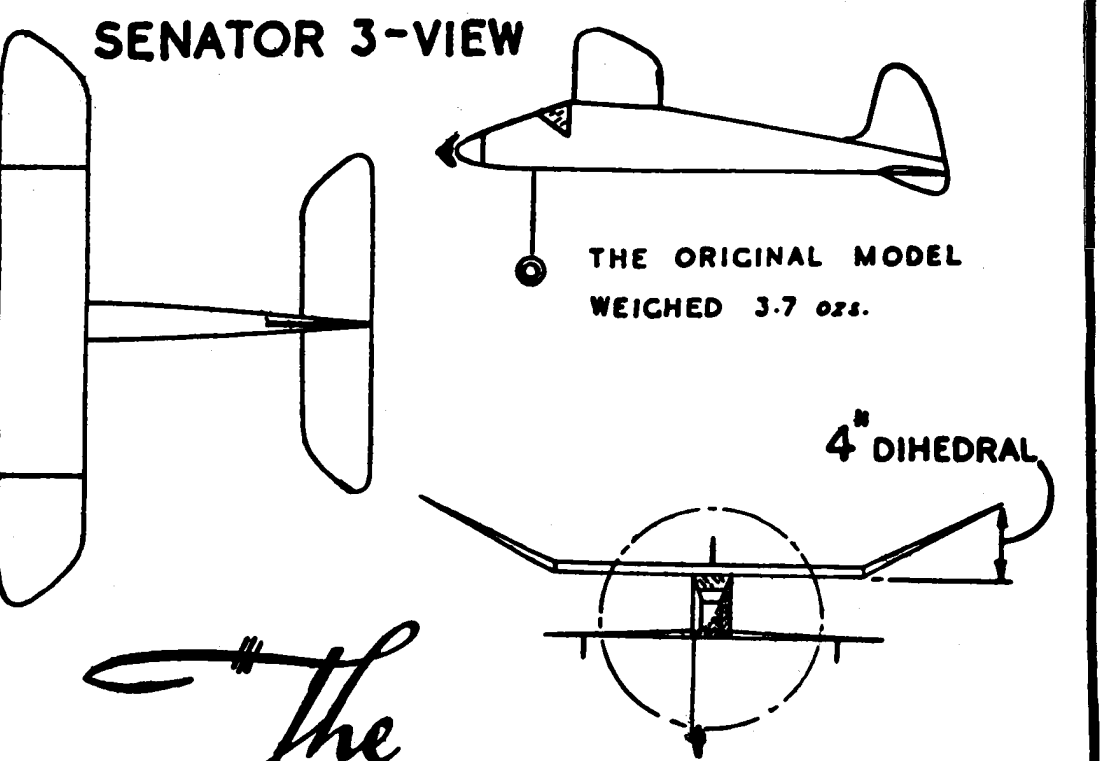
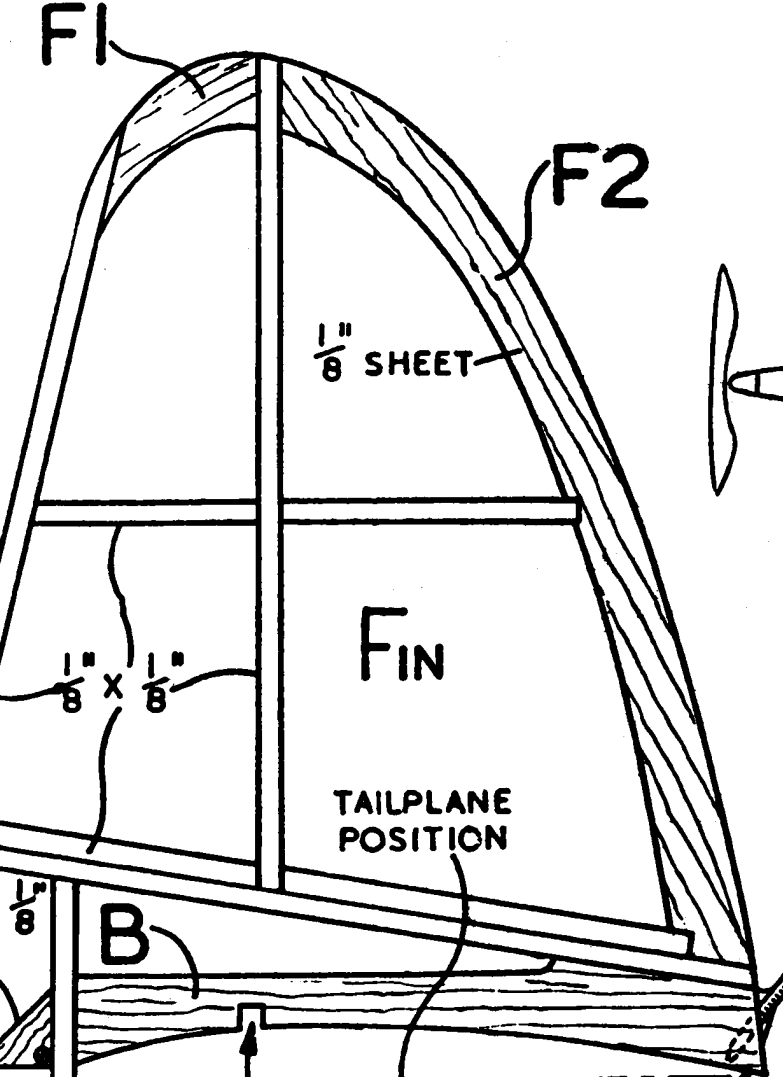


USE TEMPLATE TO OBTAIN CORRECT TILT IN END RIBS OF TIPS. THIS GIVES DIHEDRAL ANGLE.



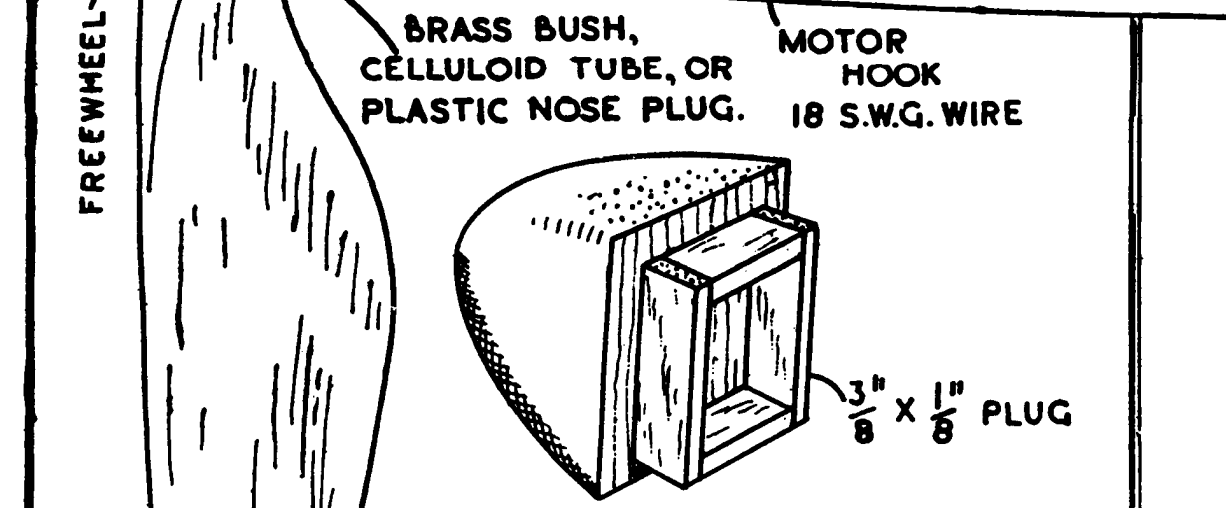
SIDE VIEW OF FUSELAGE

LEAVE UNCOVERED HERE FOR ACCESS TO MOTOR

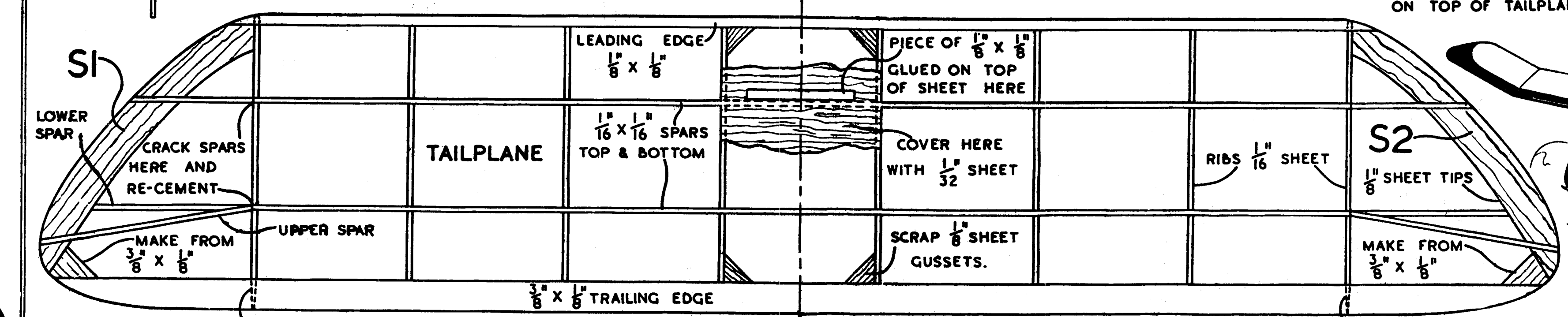
THESE NOTCHES RECEIVE PIECE OF 1/8 x 1/8 GLUED ON TOP OF TAILPLANE

SMALL PEG FOR RUBBER BANDS SECURING TAIL

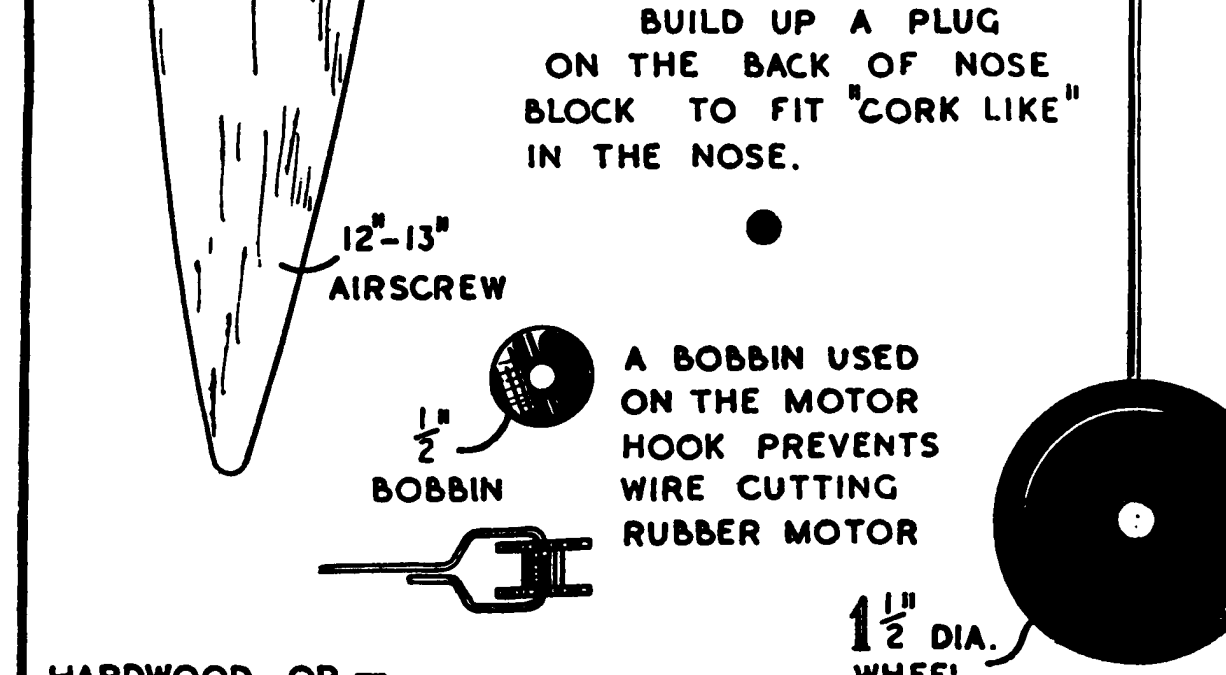
POWER YOUR MODEL WITH 6 STRANDS OF 1/4 x 1/30 RUBBER 24" LONG



FULL SIZE LAYOUT OF UNDERCARRIAGE WIRE BEND TO THIS PATTERN FROM 18 S.W.G. WIRE



SKETCH OF THE COMPLETED MODEL...



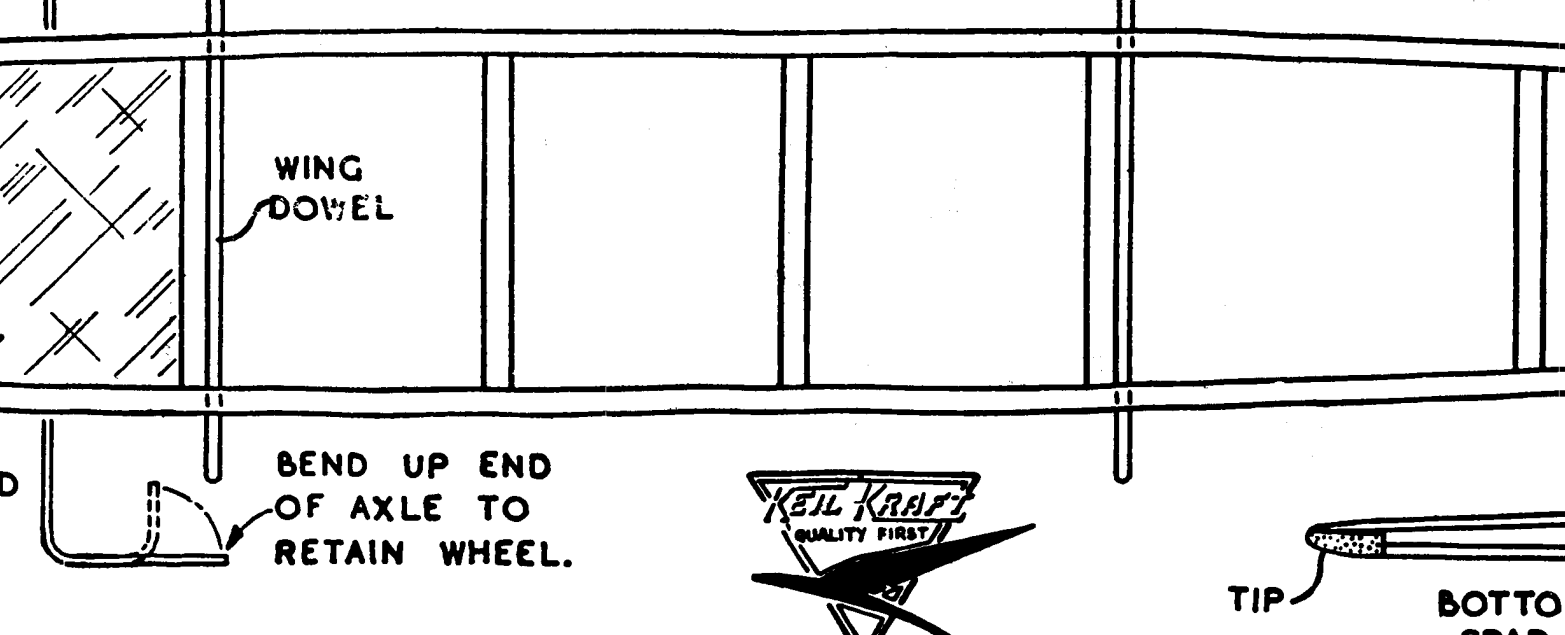
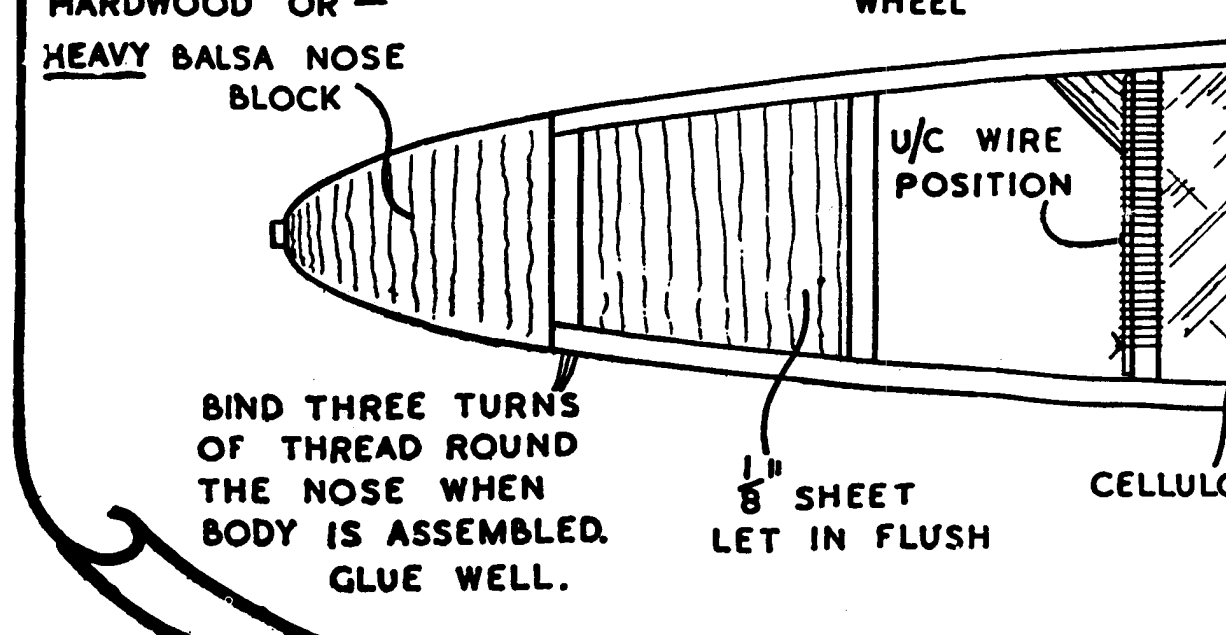
POSITION OF SUB-FIN GLUE IN PLACE AFTER COVERING.

1/8 DIA. DOWELS FOR RUBBER BANDS RETAINING WING

TYPICAL TAILPLANE SECTION

POSITION OF SUB-FIN

GLUE SUB-FINS WHERE SHOWN ON UNDERSIDE OF TAILPLANE.



TOP VIEW OF FUSELAGE

1/8 DIA. DOWEL FOR RUBBER BANDS HOLDING TAIL.

FIN POSITION SHOWN DOTTED, GLUE FIN HERE SQUARELY & FIRMLY.



SECTION THRO' TIP OF TAIL SHOWING JOINTS TO TIP PIECE

BUILDING INSTRUCTIONS

FUSELAGE
Pin down the longerons for one fuselage side by placing pins on either side of the notches. Cement leading edge into front notch provided in ribs, then add top three spars in between pins as for the Centre Section, pin down the Trailing edge, position the ribs with pins apply glue to the lower rib notches and pull the ribs up to these notches. SEE NOTE REGARDING TILT IN END RIBS as this governs the amount of dihedral at the extreme tip. Add the leading edge and top spars to the spars to the tips as shown. The bottom spars terminate inside the tip pieces, the top spars are carried over the tip as can be seen in the sectional view through tip. When the three wing sections have set glue the sides in with a rubber band until set, then bend nose with thread and cement well. (see Top View) add the remaining cross braces top and bottom checking for squareness as you proceed. Glue 1/8" sheet flush in top and bottom of nose, glue 1/16" flush in the top at fin position. Bend U/C wire to shape, place wheel on axle and bend up the end of the wire to retain the wheel. Bind wire in place where shown in Side View apply cement over thread for extra strength. Cut the sheet celluloid to shape and glue in place for the cabin. Add wing and tail fitting dowels and the gussets to strengthen them. Roughly carve nose block to shape, build plug on back face as noted, plug into nose and sandpaper to a smooth finish while on fuselage, remove and drill hole in position shown to receive propeller shaft bearing bush. Glue this bush firmly in place. Bend motor hook, thread nose block, cup washers and airscrew on the shaft and with pointed nose pliers bend the freewheel loop. Bend the freewheel latch to shape and attach to airscrew. Pin the outline of the fin to the plan, add pieces of 1/8" square, when dry sandpaper the rear edge to a taper and round off the leading edge. Glue the fin in place squarely on top of the fuselage where indicated, glue the fin in place. Sandpaper the whole fuselage with fine sandpaper to obviate rough edges, etc.

TAILPLANE
Build the tailplane in similar fashion to the wing, cover the centre portion with 1/32" sheet, and glue a piece of 1/8" square exactly where indicated on the top surface. The sub-fins are added after covering with tissue. Round off the leading edge and tips, tape the trailing edge down and fine sandpaper all over.

COVERING
When covering the model use tissue paper or tissue cement for an adhesive. Cover the fuselage sides then top and bottom applying paste to the actual outline only. The wing is covered in six pieces, three above and three below. It is important that the tissue should be made to adhere to the lower spars of the wing also to the under side curve of the ribs which is known as the "undercamber". Use two pieces of tissue for the top of the tailplane and one for the underside. While covering any part of the model endeavour to eliminate as many wrinkles as possible. When all the parts are covered spray lightly with water and allow to dry. This tightens the covering prior to the application of dope. Apply two coats of dope to the fuselage, two thin coats to the wing and one coat to the fin and tailplane.

FLYING INSTRUCTIONS
Assemble the model and insert the specified rubber motor in to the fuselage. Choose a comparatively calm day for test flights and select a field with fairly long grass. For particular model may need balancing and this is executed by adding ordinary plasticine to the inside of the nose block or inside the extreme rear end of the fuselage i.e. directly over the tail position. The model should be made to balance level when held on the fingertips at the third spar back from the leading edge. Now glide the model into the wind, launch it firmly and parallel to the ground. If it dives or noses down place a thin 1/32" x 1/16" strip of balsa under the leading edge of the tail. If it stalls, i.e. noses up and wavers unsteadily, add a small amount of plasticine inside the nose block (or remove any previously placed in the strip). Continue test gliding until a long floating glide is obtained. Give the motor 100 to 200 turns preferably from the top of the fuselage. Continue the left hand side of the nose block, then the side thrust and should impart a right handed circling climb to the model. A small celluloid "trim tab" 1/8" x 1/8" glued down the trailing edge of the fin may be used to obtain a tighter turn under power followed by larger gliding circle.

The "Senator"

30" SPAN CABIN DURATION MODEL
— MANUFACTURED BY —

KEILKRAFT KITS

DESIGNED & DRAWN BY ALBERT E. HATFULL

