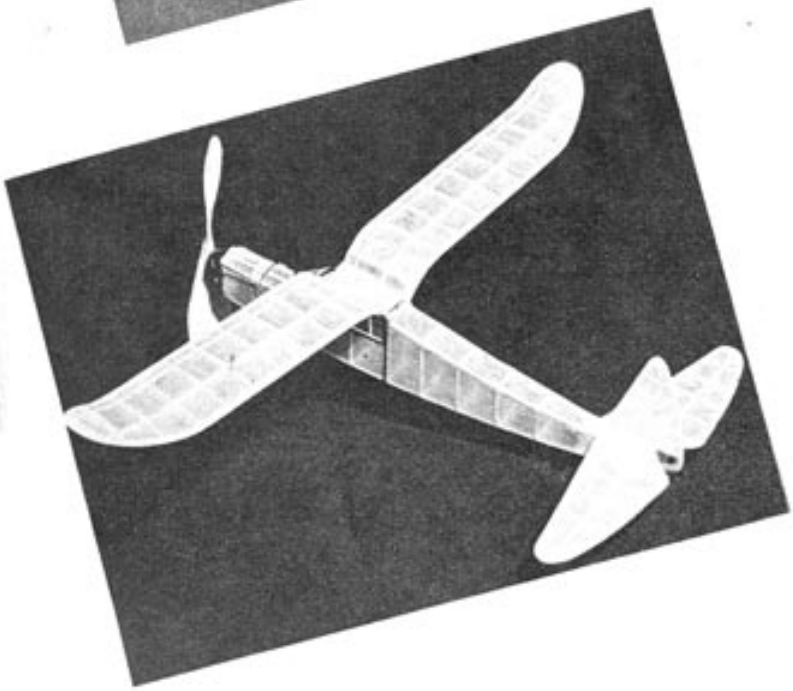
CABIN GULL WING



by **WILLIAM VASSALLO**

THIS distinctive looking model should catch the eye of even the most discriminating model builder. Its excellent flying qualities combined with simplicity of construction—and ruggedness as well—should make many builders keen on building this one.

Designed solely for the sport fan this little job can be made to produce—and with ease, too—flights that will open the eyes of many an expert. The plans have been further simplified by drawing full size layouts.

Just a final word before you start construction; take your time, using the utmost care with each step so the finished product will be a tribute to your craftsmanship.

FUSELAGE—Tack the plans to the bench, using wax paper between them and the work. Pin down the longerons and crossmembers of 3/32" square medium hard balsa. Both sides are made at the same time, one over the other so that both will be identical. When the sides are thoroughly dry take them up and separate them with a razor blade, making sure not to slice any of the longerons. Only half of the top view is shown so the dimensions will have to be doubled to acquire the proper sizes. Glue the top and bottom crossmembers in their respective positions, making sure the fuselage is kept straight as the work progresses.

When all crossmembers are in place and waiting to dry, cut out formers 1, 2 and 3. The nose block is made from a medium hard block measuring 1-1/2" x 1" x 5/8". It is cut and sanded to shape as shown on the side and top views. A piece of aluminum tubing is pushed through the block to prevent wearing away by the prop shaft. Pieces of wood are glued in place at rear of the block, as shown on the plans, to prevent slipping. Now cement the formers in place. Add 1/16" square stringers and cabin pieces. The rear hook is bent to shape and forced through two pieces of laminated 1/16" sheet balsa. Glue in place at rear of the fuselage. This completes the fuselage with the exception of covering.

LANDING GEAR AND PROPELLER—The landing gear is bent from a length of .028 music wire. It is next glued and threaded in position at bottom of the fuselage. Slip a pair of 1" celluloid wheels on the axles and bend the ends back.

The propeller is carved from a medium hard block measuring 7-1/2" x 1-1/8" x 3/4". Blank it out as shown on the plans. Carve it as accurately as possible. Round off the tips and finish with rough and then fine sandpaper. Undercamber should be at least 3/32". Dope and sand until a high luster is obtained. A free wheeling device should be used for maximum efficiency. The builder can choose one of his own liking.

TAIL SURFACES—The stabilizer is built of 1/16" medium hard stock. Leading and trailing edges are cut out and pinned in place. Pin down the spar and

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braces of 1/16" square. Next the tips are added. Construction of the rudder is similar. After both sections are dry take them up and set them aside until needed.

WING AND COVERING—The centersection of the wing is the most meticulous job of all but well worth the time spent. Before starting make templates of ribs 1-A, 2-A and 3-A. Then trace onto a sheet of 1/32" sheet balsa. Cut out the required number and sand to shape.

Now to tackle the centersection. The leading edge is shaped from a medium hard block measuring 3/4" x 1-1/2" x 1/8". To be more accurate a template should be made from the front view on the plans. This is cut out and traced onto the block. Cut the excess wood away and sand to desired shape. The trailing edge is 1/16" x 3/16". This piece should be soaked in hot water. Take the piece between your fingernails and shape to match the leading edge. The spars are done in a similar fashion. Next apply a coat of glue to them and let dry. Prop up the leading and trailing edges with small blocks holding them in place with pins. Glue the ribs in place. After the glue has set add the spars.

When the assembly has thoroughly dried take it up and apply another coat of glue over the leading and trailing edges. The rest of the wing is built in the conventional manner with the exception of the tips. The tips can be shaped as were the spars in the gull section, i.e. by soaking in hot water. When the wing has dried thoroughly put in the dihedral. Pin down the centersection and with the aid of blocks prop up the outer wing portions making sure that each tip has 2-1/4".

FINISHING AND FLYING—Glue the stabilizer and rudder to rear of the fuselage, making sure the stabilizer has 1/16" negative incidence. The wing is held on with rubberbands. For power use 6-8 strands of 1/8" flat lubricated rubber.

Glide the ship several times to attain a flat glide. After the desired glide is attained a powered flight should be tried. Wind about 75 or 80 turns by hand and launch. If the model stalls try giving it some downthrust. Now try another flight. Properly adjusted it should climb out of your hands into a rapid right spiral. Once this point is reached you are ready to go places with your gull. Wind her with your trusty 4-1 winder and if you are surprised at the result don't say I didn't warn you. Good luck!