

The FLOUNDER TAKES WING

How to Build the High Performance
1940 National Senior Second Place
Class A Winner

By "PINKY" FRUCHTMAN

THE Flounder, one of the "hottest" little Class A ships ever to roar off a runway and point toward the blue, is a grand example of a ship designed from time-proved points which has made good in the contest field. From the first day the ship was test-hopped, until the present time, the ship has taken in more than its share of prizes, and it still is a factor to contend with in any meet. In ordinary sport flying it is a pleasure to use, and we heartily recommend it to any builder.

Just before the 1940 Eastern Seaplane Contest the ship was completed and test-hopped. Floats had been made and we were ready (and confident) of a high place for the ship. Alas . . . the Sunday before the meet we couldn't resist the temptation to try the model again, and promptly lost it when it did over ten minutes on a scant 15-second motor run.

The first contest in which the Flounder was entered it took ninth against a strong Class A field. Scores of test flights followed and by the time the 1940 Nationals rolled around, we were confident we knew the secret of its flight. Besides that, the motor was finally broken in, making us all the more sure.

Well, we were right: In its first flight in Class A event (Senior Division) the ship did a minute and one-half. On the second flight the Flounder caught that elusive thermal and disappeared from sight after nearly seventeen minutes. The third, taken after the sun had retired (and the thermals were all used up) was about a minute. These flights won second place in the Senior Division.

After returning from Chicago the ship took first in the American Legion meet at Hadley Field, N.J., seventh at the Mid-Hudson Valley Meet at Poughkeepsie, N.Y., and first at the Prop-Spinners Contest held at Creedmoor, N.Y.

Yes, builders, the Flounder is a proved ship! She takes off the runway with a burst

of power, circles sharply to the left and bores her way to spectacular altitude before those twenty seconds are used. Her glide is quite slow, and as the little ship makes those lazy circles to the right, the minutes and seconds really pile up. At the same time the ship is inexpensive and simple to build. Here are the specifications of the original ship, just to check your building:

Area, 285 square inches;
span, 40 inches; chord, 8
inches; A/r, 5; length, 30 1/2
inches; weight, 18 oz.

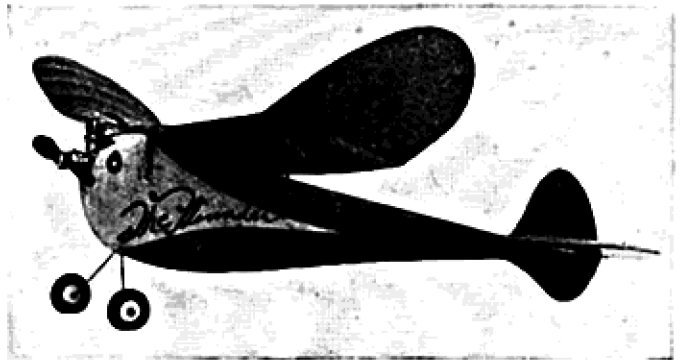
According to several builders who have made the plane from the original plans, it should cost about \$1.25 exclusive of wheels, motor and ignition.

Fuselage

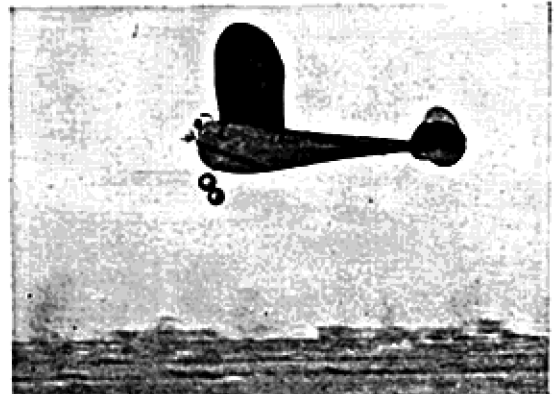
The fuselage is reasonably streamlined, but as simple to build as a box. As may be seen in the drawing, the fuselage is built inverted. The gumwood motor bearers are notched, as shown, and cemented to the 3/16" x 3/8" balsa main longeron. When these joints have dried and are secure, lay them on your top view of the plans. Of course plans must be enlarged from original plates, correct scale for doing this being given in each case.

When the main longerons have been pinned to the plans, insert the cross members of the fuselage, following measurements carefully. Let the longerons take a natural taper to the tail never forcing the wood to bend, but forming a graceful curve. All joints should be cemented securely and allowed to dry. Wood sizes are specified in the plans.

The V-members, which extend to the keel, are of 3/16" x 1/8" medium balsa and are next formed, cemented to the main longeron and to each other. Notice that they do not come to a point, they must butt squarely to the lower longeron. For best results the V-members should be formed before being secured to the main longeron. The V-s are shown on a separate plate and by following measurements carefully no difficulty should be encountered. DO NOT add the keel at this point.



It has been a consistent winner in many contests



"Coming in" on a slow flat glide

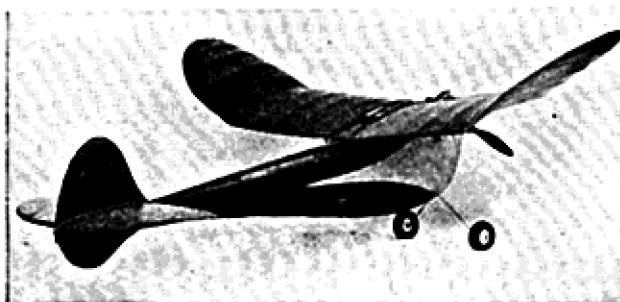


The author and his winner

The next step in fuselage construction is building UP the wing support and deck. Turn your construction right-side-up and get out that 3/16" x 1/8" medium balsa. From that you will build the cabin, (what little the Flounder has) using 1/8" sheet balsa formers, to make up the cross section. The formers are shown, numbered 1 to 9, on the plans. Place the strips of 3/16" x 1/8" in the slots in the formers.

Former 1, you will note, is the firewall, which is of 1/8" sheet balsa. The lower half is of plywood, partially to hold the landing gear and to give strength to the cowl mounting. The first step in installing the firewall is to bore holes for the landing gear. The landing gear is then formed of 3/32" piano wire and bound to the firewall as indicated. Several coats of cement

(Continued on page 50)



Simple, light and well streamlined