

## THE COMET



by **SAL TAIBI**

**THE BROOKLYN-BRED HOOSIER HOT SHOT GIVES YOU THIS FINE FREE FLIGHT JOB FOR LARGE CLASS A ENGINES**

**K**EEP your eye out for the *Comet*! After eight long months spent between the drafting board and the testing field, this Class A free flight model-builder's dream is here—ready to fly!

The experimental model had a much thicker airfoil, which gave it no advantage over the one used in the perfected model. Using a thinned-out airfoil, the rate of climb was increased considerably, and nothing was lost in gliding ability.

At first a four-percent rudder was tried, but the model lacked directional stability. Adding several square inches of rudder area worked wonders, and gave the *Comet* a lively, steady climb. The plane has a very slow, flat glide, and its speed is extremely slow. Consequently it has an unusual ability to ride low ground-risers and gain those precious minutes which win contests. So let's get out the drawing paper, fellows, and get to work! The ship is well suited (Turn to page 90)



● Simple set-up of wing and tail surfaces is shown in this shot. Square fuselage will appeal to many.

● Sal warms up the *Comet* for a test hop. Polyhedral wing helps model "hang up" aloft for long flights.



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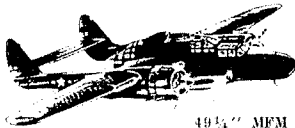


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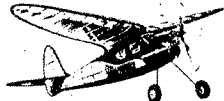
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# THE COMET

(Continued from page 53)

to any of the larger Class A engines such as the Bantam, Ohlsson "19" and Arden .199. For the "hot rock" free flighters small Class B power plants might be utilized.

## Building and Flying

Study the plans and familiarize yourself with the small details, next get a large piece of drawing paper or shelving paper and scale the plans to full size.

It is advisable to build the Wing, and tail assembly first. The Wing must be completely finished except for covering so it can be used to obtain a good fit on the wing mount.

## Wing

Cut out all the ribs and the wing tip, note that the ribs #1 are cut away 1/16 of an inch on the bottom to allow for sheet covering. Taper the spar as noted on the plans. I'd suggest shaping the trailing edge before cementing it to the wing. It saves bruising the ribs and keeps lightly glued ones from loosening. Notch the trailing edge to receive the ribs as shown on the plans.

There are two methods of building the wing: The outline and ribs can be cemented together and the spar inserted after the structure is removed from the board. Or the spar can be elevated off the board the correct height so the spar and rib make a smooth joint.

It is necessary to elevate the front of the trailing edge 1/16" to obtain the true rib section at the trailing edge. To prevent wing warpage, cement the gussets at the trailing edge before taking the wing off the board.

After the wing panels have been removed from the board the dihedral of the wings is set at the angle shown on the plans. Give the complete structure another coat of cement.

The leading edge of the wing is not shaped until after the sheet covering is cemented to the wing. This assures a neater looking joint and a smoother leading edge. Use 1/16" medium balsa for sheet covering. The bottom of the wing is sheet covered on the center section only. Add the 1/16" x 1/8" strips on the top of the center section.

You will notice that there is a piece of .040 music wire set into the trailing edge at the center section. This will save the trailing edge from being chewed up by the rubber bands that fasten the wing to the fuselage. Simply notch the trailing edge just enough to receive the wire so it will blend in smoothly, and the wing is ready for covering.

## Stabilizer and Rudder

Cut out all the ribs, shape and notch the trailing edge. The stabilizer tips are cut out of 1/8" sheet balsa. It will be necessary to cut away the spar as shown on the plans to receive the stabilizer

tips. The spars are tapered down just enough so that the covering will not touch them. Shape and cement the balsa skids to the bottom of the stabilizer. Note that pins are bent around the bottom of the skids and cemented in place. The rudder outline is cut from 3/16" medium sheet balsa. The ribs are cut from 3/16" sqs. Copper bell wire may be used for hinges on the tab. Cut the rudder as shown on the plans so it will set in the stabilizer, then cement the rudder into it.

## Fuselage

The fuselage is built up of 3/16" square balsa. Construct the two sides. Note that the longerons extend beyond the forward balsa braces. The firewall is notched and fitted into the extended longerons. After the sides are removed from the board give them a second coat of cement. Angle and cement the rear of the longerons together and then cement the firewall in place. Add the rest of the cross braces in the fuselage. The landing gear is fastened to the rear of the firewall, with the bottom clamp placed close to the bottom so the bolt heads won't interfere with the tank when the motor is mounted. The engine mounting bolt holes are drilled into the firewall. The nuts are soldered to a small sheet of brass or copper plate and then the plate is fastened to the rear of the firewall with small wood screws. The ground connection may be soldered to this plate. Give the wood screws a coat of cement so vibration will not loosen them.

Inlay the top and bottom of the fuselage back to the fourth crossbrace with 3/16" sheet balsa as shown on the Isometric view. Next insert the piece of 3/16" sheet balsa to which the bottom of the forward wing strut is cemented. Cut out the longerons and cement the 1/16" plywood stabilizer support in place. Cement a piece of 1/16" music wire to the lower rear of the fuselage as shown on the plans. Drill a 1/8" dia. hole through the rear of the fuselage for the 1/8" dowel.

The wing struts are now ready to be placed into the fuselage. Mark a centerline down the top of the fuselage, measure 1/4" on either side of the centerline and 3/16" back of the first cross brace. Cut this portion out and insert the forward wing strut until it touches the lower brace, then angle it for a good fit. The leading edge of the wing should be one inch forward of the firewall. Cement the forward wing strut so the leading edge will be in the proper position. Repeat the procedure for the rear wing strut. Be sure that the distance between the two struts is the same as the wing chord. Slot the wing struts to take the plywood wing dihedral braces.

The plywood dihedral braces are cut