the planeteer

by Maurice V. Schoenbrun

Build this proven Class B contest design featuring a box fuselage with simple streamlining.

- The Planeteer has been evolved from a series of new-rule models. In its original conception, the plane was designed with a wing loading of six ounces per square foot, using the basic twenty-nine ounces required by the Torpedo engine. This called for a wing area of approximately 700 square inches. The glide, as one can imagine, was simply out of this world. But of course, the power was inadequate to carry the model to a high enough altitude to hook a riser.

Next, a ship with a wing area of 550 square inches was built. This plane gave much better results. But, after exhaustive tests, we discarded it and designed the present ship, The Planeteer, which has a wing area of only 400 square inches, and uses the same power plant, a Torpedo 29.

The present wing loading is approximately 9½ ounces per square foot which, for the present-day model, is a bit high. However, its performance will amaze even the experts. The climb is sensational, and the glide fast and flat.

The Planeteer represents a clean, simple, yet rugged airplane, a prerequisite for contest work. A highly efficient airfoil (Davis 5) is used, because of its high lift drag coefficient at low speeds.

The drawings do not locate the coil, batteries, etc.; however, the center of gravity is shown. Be sure to locate your ignition so that the C.G. will fall in its proper location.

A one-wheel retractable landing gear has been installed for those interested in competing for national records.

We suggest you use a dethermalizer on the model—the original model had to be chased cross country through cornfields, stone quarries, and over rivers on six different occasions.

A careful study of the plans will convince you of The Planeteer's simplicity, so what say we get into the construction.

BUILDING THE FUSELAGE:
The basic frame is built the same way as any other box-type fuselages. The two sides are built on the plan and joined as per top view. Be sure to cement all the joints securely.

The next step is to cut the plywood firewall. Slip it over the gumwood motor bearers up to the first upright, and cement. To make the installation of the landing gear easy, construct the bracket as shown on the plan and bolt it to the firewall with two 2-56 machine screws.

Bend the landing gear and insert through the bracket. Solder a washer on the end of the wire landing gear to hold in position. Make certain that the gear swings freely back and forth. Also solder a washer, as indicated, to the landing gear proper, to take care of the rubber band which is used to retract the landing gear.

Cut parts two and three to the proper shape and cement in their respective positions on the basic frame.

At the front end of part three, which falls at the trailing edge of the wing, cement a fairing block across the fuselage and carve to the required contour and cross-section.

On part two, add the 1/8" square members at every upright position. This is clearly shown on "Section B" of the plan. Cement the rear rudder block in place and add the 3/16" square stringers.

Next, cement the lower cowl block in position, then the wheel fairing block. Make sure you hollow out both blocks. Now make the proper cutouts for the landing gear and wheel so they can partially retract into the fuselage. Add the landing skid to the lower cowl block, holding it in place with two screws.
The top cowling can be made by cementing 1/16" sheet around the firewall. Cut out the opening for the engine.

Part four is a windshield former set at approximately 45° to form the nose of the cabin. Cement the windshield in place.

Drive 1/8" hardwood dowels in place to hold the wing and tail units. The front wing dowel serves to anchor a wire hook in the center of the fuselage (top view), to which the other end of the rubber band is attached for the landing gear retraction.

Sand the entire fuselage to a smooth finish, eliminating all irregularities in the woodwork so that the covering will be flawless.

Now install the ignition and add your dethermalizer unit.

Next, the fuselage is completely covered with silk; this is neces-
ecessary to get a smooth, strong turtle-back effect at the top of the fuselage. Drill through the motor bearers and install the motor mounts (which are $\frac{3}{4}$" by $\frac{1}{2}$" hardwood). Then mount engine.

BUILDING THE WING: The wing is of conventional structure and spar location, insuring a maximum of strength. Lay down the leading and trailing edges and cement ribs in place. Add the wing tips and the tip ribs. Remove from the plan and insert the main spar. At the tip panel from the last of the R-1 ribs to the end of the wing, be sure to taper the spar from $\frac{1}{4}$" in depth to $\frac{7}{32}$".

Next add the dihedral. Sandwich the spar between two $\frac{7}{8}$" sheet wing joiners at all the dihedral joints, and allow to dry over night. Add the sheet covering to the leading. (Turn to Page 55)

NOTE:

SCALE IS $\frac{1}{4}" = 1"$

Planeteer
Plate 1 (ctd.)
Planeteer Plate 2

⅛ SH. COVERING TOP ONLY

1/4 SH. T.E.

⅛ RIB

1/16 RIBS

1/2 x 1/8 TAPERED

1/4 SQ.

1/16 SH. COVERING TOP ONLY.

WING & ELEVATOR ARE 1/2 SCALE

FLYING MODELS