

The author test gliding the AB version. Climb is toward the right and the glide to the left. Weight averages around 24-26 ounces.

# The SPACER

by SAL TAIBI



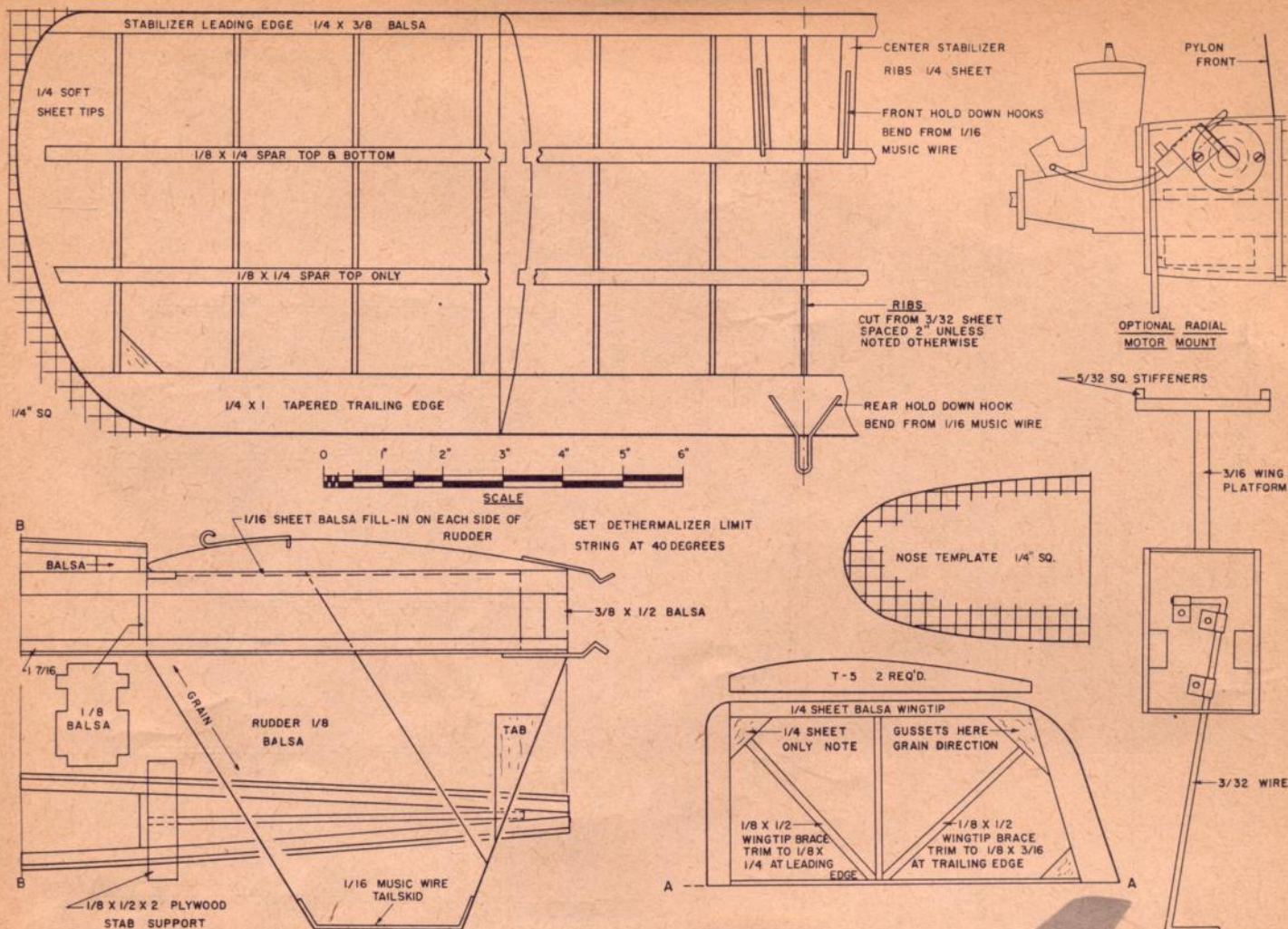
**Winner in really big way is the Class AB job shown here for .19's to .29's. It's the best design published since the Civy Boy.**

► The AB Spacer was designed in January, 1953 and since then has compiled a terrific win record of 22 first places that year, mainly in the California area. Among some of the contests won were the following: Bakersfield, Calif., first place, Class A, 35 minutes 29 seconds (AMA Record); San Dimas, Calif., first place, Class B-ROW (AMA Record); 1953 Nationals at Willow Grove, Pa., first place, Class A, Senior; Fresno, Calif. Annual Contest sweep of both Classes A and B; Los Angeles, Calif., first place, Class A, All Pacific Coast Championships; Long Beach, Calif., first place, Class A-B Junior-Senior-PAA Load, using a slightly widened and deepened fuselage to accommodate payload man, stock otherwise. The Half-A Spacer held both Open and Junior AMA Records in 1953. F. L. Swaney, Long Beach, Calif., 26:54, Open; and D. Farnsworth, Jr., Bakersfield, Calif., 20:02 in Junior Class.

The Spacer has the good flying consistency that







makes a contest winner, is a simple model to construct and extremely rugged and lightweight, averaging 24-26 oz. It will take most of the .19-.29 engines.

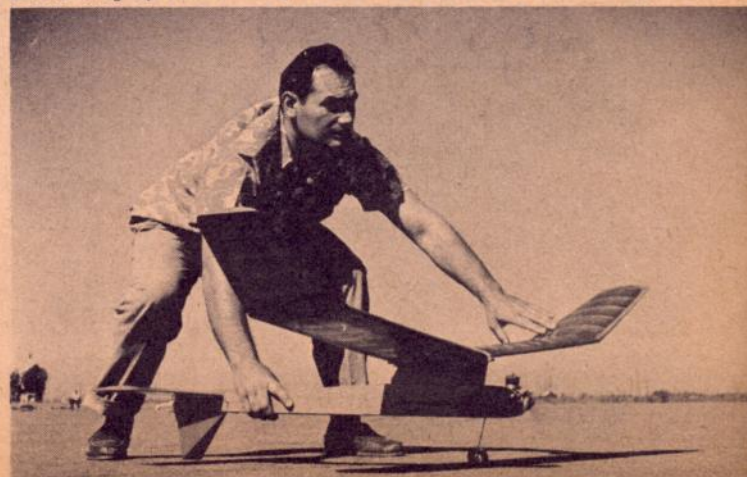
Pin the two lower longerons on the top view of the plans, then cement all the bulkheads in place except the plywood bulkhead. Allow to set at least a half hour and then cement the top longerons and the 3/16 sq. pylon supports in place; next cement the motor mounts in place and then the 3/16 x 3/8 rear stab longerons. When cementing the stab longerons together at the rear of the fuselage use a square, place it against the lower longerons and then pin the upper stab longerons together while against the square to assure proper alignment.

After this has dried cement a piece of 3/8 x 1/2 balsa at the rear of the fuselage. Cement the 1/4 sheet together for the pylon, let set, and then, after sanding, trace the correct outline on the sheet balsa, cut out and then slide the pylon into the slot in fuselage. Remove the construction from the board, drill the motor mount holes, place the tank in position and fasten with wood screws. The tank must be in the position shown on the plans or the fill and overflow tubes will interfere with the timer shut-off installation. Remove tank temporarily.

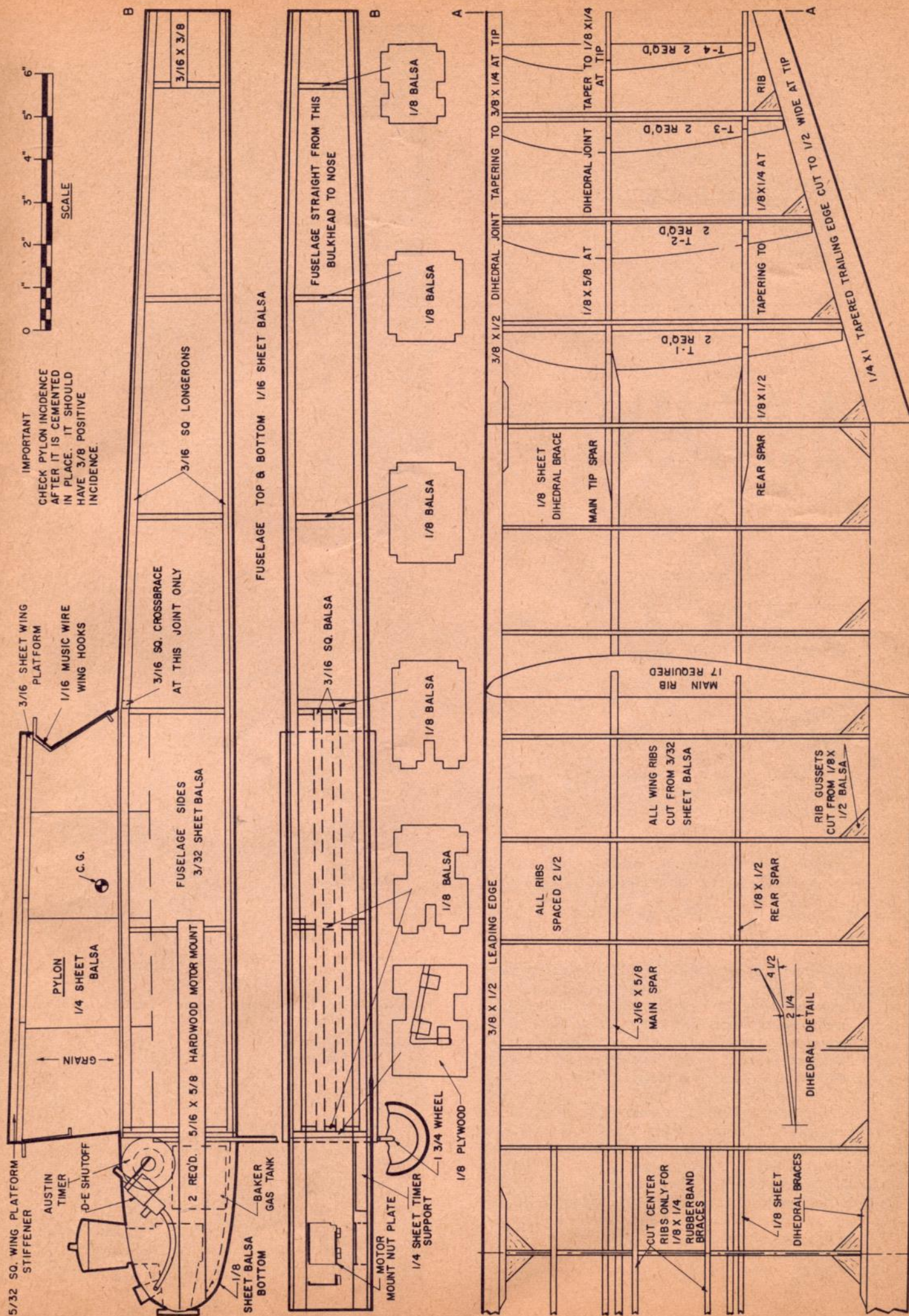
Cement the plywood firewall in place after drilling out the landing gear holes. Let dry, and cut away the balsa behind the plywood firewall that the nuts will (Continued on page 45)

Above—Viewed from the rear, the interesting underslung fin is seen to advantage. The fin does seem to cut down wind-ins. Fuselage is sheet.

Below—Two-point contact with ground isn't handicap as plane jumps off before wing tip can touch. Spacers took 22 firsts in California in year.









## The Spacer

*(Continued from page 10)*

contact, as this will allow the nuts to seat against the plywood instead of the balsa. Cement the  $3/16$  sq. at the rear of pylon and then sheet cover the top of the fuselage, and then the bottom of the fuselage. When it is dry sand off the excess balsa. Cement the rudder parts together and after sanding, trace pattern from the plans, noting that the dotted lines show the rudder coming through the fuselage up to the stabilizer position. Cement the tailskid to the rudder while it is pinned to the board so no warp will develop. Cut the slot in the bottom rear of the fuselage for the rudder, being sure slot is straight, and then cement the rudder in place. Fill in the  $1/16$  sheet balsa at the top of rudder, recementing all the rudder parts where they fasten to the fuselage.

Cut out enough pieces for the wing platform from  $3/16$  sheet, make them longer than necessary, cement together and when dry, mark the correct width and then cement the  $5/32$  sq. platform stiffeners to the platform. Trim and sand to the stiffeners for width, cut to proper length and then cement in place on the pylon. Recement the wing platform after it has dried, applying the cement fillet. This is all that is necessary, if it is done right. Cement the fuselage sides in place,  $3/32 \times 3$  sheet balsa, and do not cut out the side view but merely cement the sheet to the fuselage and then trim when dry. Trace out the nose template on a piece of stiff white paper or thin balsa sheet, mark

# SPITFIRE

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the nose of the fuselage and trim.

Cut the hole for the timer, then lay a piece of 1/4 sheet balsa or 1/8 plywood on the inside of the fuselage and mark with pencil for the timer support. If balsa is used, the bottom of the timer support will have to be cut away where it covers the tank lugs so the tank can be removed when necessary. Drill all the tank and needle valve holes in fuselage sides. Bend the 1/16 wire hooks for the wing and tail and cement in place. Bolt the engine in place and then fill in the bottom of the cowl with 1/8 sheet balsa. Let dry, remove engine and cement again on the inside of the cowl.

Then engine may be radial mounted if preferred. The only important condition is that the distance from the propeller to the pylon be maintained so that the model will balance correctly. This view shows the engine mounted directly to the firewall; if a timer tank is used, then the firewall will have to be moved farther back. Construct the fuselage in same manner as for beam mounts, include the beam mounts in construction to aid in strengthening the firewall, and after locating the firewall, cut off the protruding beam mounts and cement another firewall in place in front. Fill in the top and bottom of fuselage with 1/8 sheet balsa. Cover the fuselage with tissue and dope.

Pin the leading and trailing edges in place, then cement the stab tips in place. Pin the lower spar and then cement all the ribs in place. The upper stab spars are notched slightly at the last rib and then bent down and cemented in place; or, if you like the tip tilted up, place a block under the stab tips so that they are level with the top of the stab airfoil. Sand the leading edge and tips, sand lightly all over and then cover. Give stab one coat of dope and then bend the stab hold-down hooks and cement in place. When all is dry, give a second coat of cement. Finish doping the stab.

Taper the leading edge as noted on the plans and then pin in place. Next, taper the tip spars and tip trailing edge as noted and pin them in place. When trimming the tip trailing edge, the excess is removed from the forward or thick part of the trailing edge. Cement the tips and tip gussets and tip ribs in place. Pin the main spars and trailing edge in place and then cement all the main ribs in place. Cut the wing trailing edge gussets from 1/8 x 1/2 balsa and cement them in place while the wing is still on the board, *carefully noting the grain direction.*

Cut the wing tip braces as noted on the plans and cement them in place. Repeat the procedure for the other half of the wing. Shape the leading edge and sand the leading edges and tips. Dihedral wing as shown, using hard 1/8 sheet balsa braces. Notch the three center ribs on the top only for the 1/8 x 1/4 rubberband braces. Sand wing lightly all over and cover. Before fuelproofing, cement half round 1/4 dowels to bottom of wing on the leading and trailing edges, as this will prevent the wing from shifting in flight.

The AB Spacer climbs to the right and glides to the left. Hand glide the model and shim under the wing until it glides smoothly. Looking at the model from the rear, set the rudder tab over to the left about 3/32 in., and tilt the stabilizer so that the right side is down. An approximate 3/32 shim will produce a nice wide turn. Run the engine slowly and fly with about a 7-10 second motor run. If the model turns too sharply to the right under power, use a little more left tab. Never move tab more than 1/64 in. at a time: go at it gradually—take short flights to check out the power pattern. If the model stalls and the circle is wide, *do not take out incidence* but increase the stab tilt; as the turn is tightened, the stall will diminish. If the stall will not come out by adding turn in the glide, *then* take out incidence. Always use a dethermalizer. Good luck!

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