



# CORSAIR BENT-WING



PHOTOS BY AUTHOR

By MARK DRELA . . . The author/designer of last month's "Rivets" bring us the currently most popular aircraft to be modeled. Everybody's doing it, so why not a Peanut version? Corsairs forever!!!

• The F4U Corsair was one of the finest all-round airplanes of WW II. It could be used as a fighter, dive bomber, level bomber, ground-attack machine, or as a reconnaissance aircraft. Superior to every enemy aircraft it encountered, the Corsair overcame the introduction of operational jets, and lived to see the end of the Korean War, where it was used as a ground-support aircraft.

The Peanut has the markings of a Corsair from the carrier USS Bunker Hill. The plans do not show every little detail. For these, look up the three-view in Profile No. 47. However, except for an enlarged stab, the configuration is faithfully reproduced.

Although the fuselage of the model

is of conventional half-shell construction, the wings are somewhat out of the ordinary, and I will describe their construction in detail.

The two wings are built separately. Start by making two identical spars. Assemble the outer panels first. Shim up the leading edge 1/32 inch at the outboard dihedral break (no shim at tip). This upsweep makes the model more docile and gives a more realistic airfoil. After ribs W3 through W6 are in place, glue down the spar, and finally the tip.

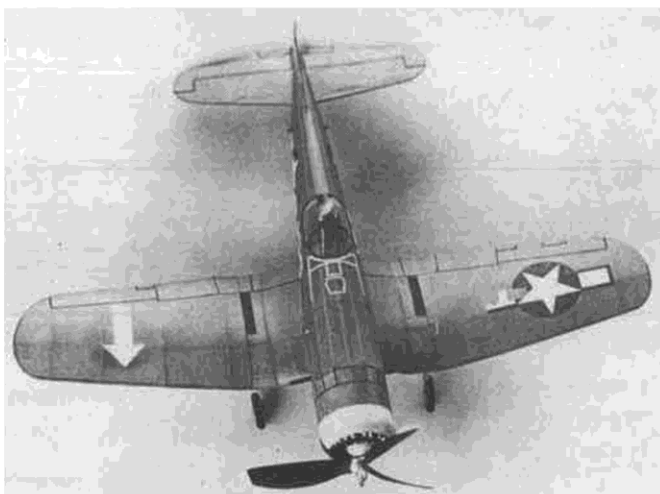
When dry, crack the leading and trailing edges at the dihedral breaks. Raise the outer panel 3/4 of an inch at the tip, while keeping the rest of the wing flat. Maintain a 1/32 shim

under the leading edge. The W1 and W2 dihedral ribs are now slid under the spar and cemented in place. W1 is tilted as shown on the plan. The L.G. support plate is now cut for a perfect fit and glued flush with the bottom surface. Apply thinned-out Titebond to the cracks in the L.E. and T.E. It penetrates and sets the joint permanently. The super-glues are good in this respect also.

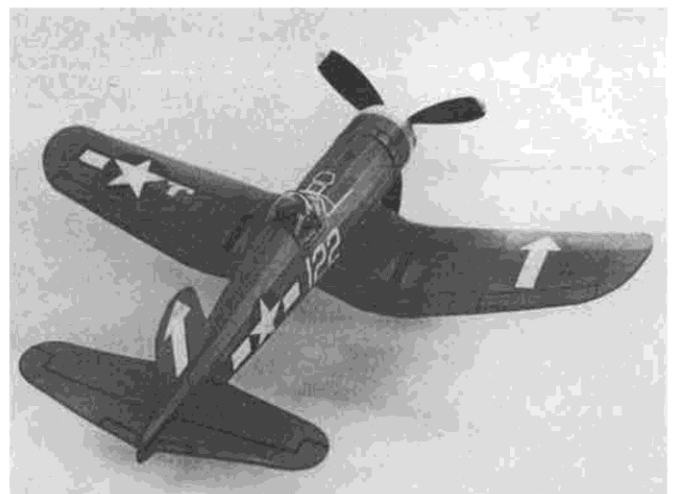
When dry, raise the wingtip 2-1/4 inches and install the remaining W1 rib in the inner panel. The scoops and sliced ribs will be put in later.

When joining the wing halves, pin down the narrow center panels flat

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Enlarged stabilizer is only concession to flying ability from scale. For even better flying, build it with landing gear "retracted".



Building that bent wing is a little tricky, but it sure seems worth it once it's finished and in place.

on the board with the tips elevated 3/4 of an inch each. The inner dihedral breaks should be exactly 2-3/4 inches apart (the plan shows more because it's a flat view). Install the spar center piece and reinforce the L.E. and T.E. joints with scrap.

Before mounting the wing, cover the entire fuselage except for the wing-joint area, which should also be devoid of stringers. The wing should have the landing gear installed and should have the middle and outer panels covered (but not shrunk). Cut away the bottom longeron as shown on the plans, along with the bottom half of F3, and put them in a safe place. Now, cement the wing to the wing saddles. If things don't line up properly, cut one of the saddles loose and reglue in the proper position.

When everything is dry, reattach the bottom longeron and F3, with the latter glued flat against the wing spar. The soft 1/20 sq. members are now cemented in place under the wing, followed by former F4A.

The air scoops are now installed. Cement W7 and W8 together, and tack-glue the assembly in position behind the L.E. Now cut away the L.E. to fair it into the scoop. Glue the scoop in firmly, as it has to take over where the L.E. left off. F9 goes on after everything is covered.

The sliced ribs are now cemented in place, after being formed in the fingers to conform to the fuse. Likewise, 1/16 x 1/32 inch strips are cemented on the bottom of the wing. Just in case you still haven't figured it out, these ribs give you platforms for attaching wing tissue.

The plans show a built-up scale radial engine, and a *sooper*-light scale landing gear. These are a must if you are a super-scale detail nut (like me, for instance). However, if you're the "Joe Flyer" type, you can live without them. As a matter of fact, if you plan to fly indoors, I would recommend that you leave the landing gear off entirely. You will find that the "clean" inverted gull wing looks fabulous up in the air, and the longer flights to boot will leave you smiling from ear-to-ear. You can also use a drawn-on engine for simplicity, but this does nothing to enhance the appearance.

I guess I must tell you that the instrument panel on the plan is not drawn from any photos. It's something I made up so you can cut it out of the plan, stick it on, and go flying sooner.

For the sake of giving a hint . . . have you ever tried a permanent marker for coloring tires, props, or engines on that latest cutie? I am sure many have thought of this, but for

those who are still slopping on that heavy black paint, I guarantee you won't use anything but a marker on your Peanuts. It dries instantly and is practically weightless. Just be sure it goes on last . . . dope dissolves the dye readily.

To backtrack a bit, be sure you steam-shrink your tissue. The procedure was fully covered (no pun intended) in the "Rivets" Peanut article last month. If you insist on water-shrinking a light model such as this Corsair, you will end up holding a balsa-filled tissue sack. You might also try alcohol, although I have never tried it and can't say what will happen. A fine grade of tissue is also important. On my Corsair, I used Peck-Polymers' blue Japanese tissue. Their regular blue tissue is then perfect for the insignia.

I presume that if you tackled building a low-winger, you know how to fly it. Therefore, I won't go into a universally known trimming procedure. Ballast in the nose will probably be necessary, so after trimming, permanently replace the clay with a cement-coated lead chunk dropped in through the front hole. I might also recommend that you make a triangular stab slot to simplify making adjustments for varying conditions.

There you are . . . all ready to soak in the praises at the next informal fly-together. Flying a Peanut Corsair is an exciting experience, and I hope you will enjoy it as I have. ●