

THREE TIMES CONTINENTAL TROPHY RACE WINNER!

Air Trails  
July 1953



By S. CALHOUN SMITH

For your "must" list—a fine control line flying scale of a famous racer!



Maestro of the Pylons, Steve Wittman photoed by Cal Smith at '51 National Air Races. Big and little ships (below). Cal was a "natural" to do model since he's been building a big racer himself during the last several years.

■ Of all the designs to appear in Goodyear and Continental racing, Steve Wittman's "Buster" and "Bonzo" have consistently shown their tail skids to the competition. If ever design simplicity has proven its worth performance wise, these airplanes put the QED on the formula.

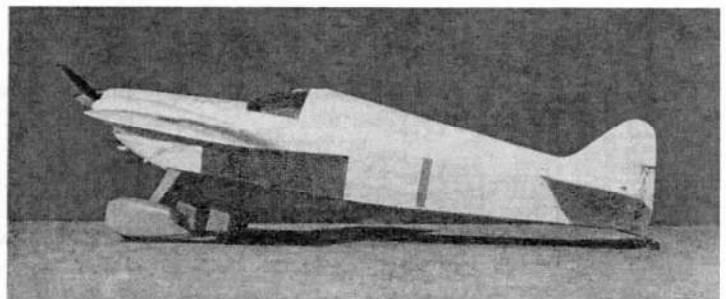
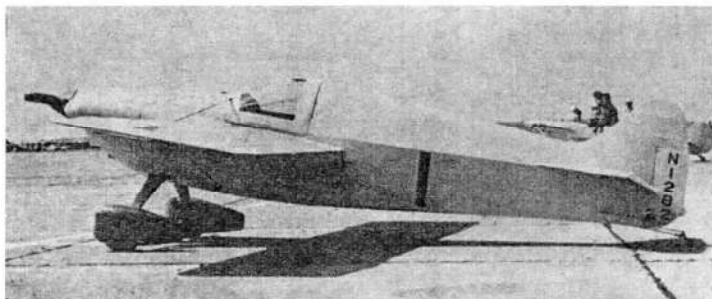
Bonzo could be called a sister ship to Buster and through the latter can trace its ancestry back to the prewar race days. Steve's success since then certainly has not diminished in the midget field, and was climaxed at the 1952 Air Races by his third win of the Continental Trophy. Wittman announced his retirement from air racing as he proudly took permanent possession of the big mug. So Bonzo becomes a piece of aeronautical history; it represents the tops in prop-driven midget racers.

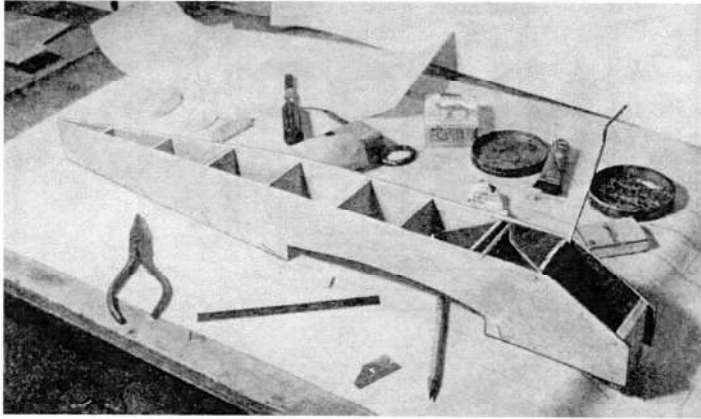
Bonzo's configuration has set the style for many of its competitors. The high mid-wing with engine fairings flowing smoothly into the wing is probably the most copied feature. Construction follows standard lightplane practice with welded steel tube fuselage, stringers and fabric covering. Tails are steel tube, fabric covered, while wings are wood structure with plywood skin. Cowlings and fairings are formed from sheet aluminum.

One feature used by Wittman is the wire-braced wing, saving much weight in structure at very slight additional drag. The flat plate gear invented by Wittman is of course employed. The working end of the 85 hp Continental turned many an experimental prop, notably the scimitar shape pioneered by Wittman. The 1952 win was made with a metal Sensenich scimitar prop. Canopy design is simplicity itself, using flat sheet rather than a blown bubble. Bonzo has lowest aspect ratio wing of any of the racers, slightly less than 4 to 1, giving a span of 15 ft. 4 in. Length is 17 ft. 6 in. Bonzo is an excellent choice for flying scale fans. Its many straight lines lend themselves to easy and quick construction. If the team race boys wanted to fudge a bit and hide the inverted engine with a larger cowling, Bonzo would be a real competitor in the race circle, her size and weight being within all requirements. Although stunting is no longer required for flying scale events, Bonzo is quite capable of all but the most difficult stunts. On the first flight the original model with stunt ribs looped and flew inverted with ease despite an over-rich throttle setting.

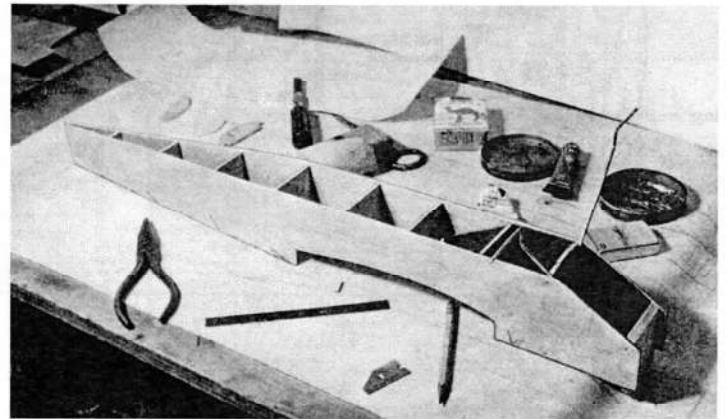
The model is built to the old faithful scale,  $1\text{-}1/4" = 1'$ , which your author feels is just the right size for .23, .29, .32 powerplants. Model span is  $26\text{-}1/8"$ , length is 31", wing area is 197 sq. in., and weight is 1-1/2 lbs., extremely light for most flying scale models. Original engine used was O&R .23 swinging a 9/6 Power Prop, but engines up to .32 or .33 could be used for really high speed. If larger engines are used model will balance fairly nose heavy and lead may have to be added to the tail.

Complete construction details are available on the full-size plans.

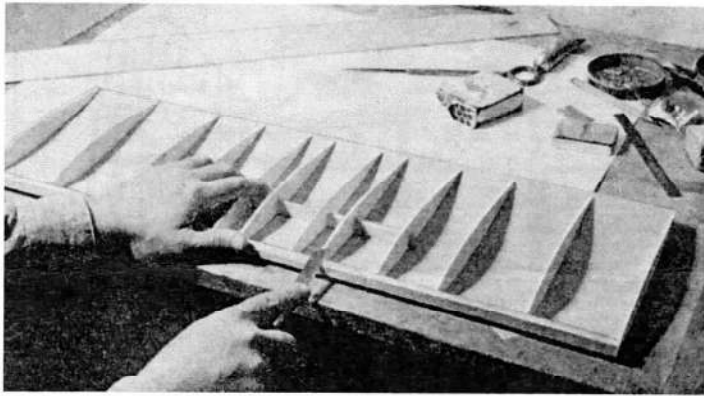




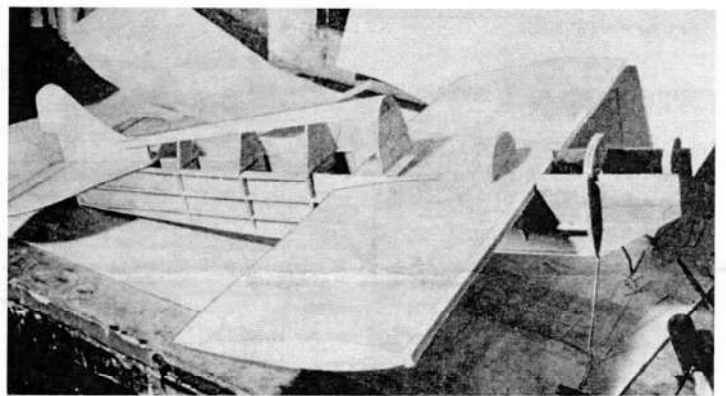
**STEP #1:** Cut out the fuselage sides and doublers and glue together. Mark former positions on sides, then join these upside down over plan. Bend gear wire and "J" bolt to former No 2.



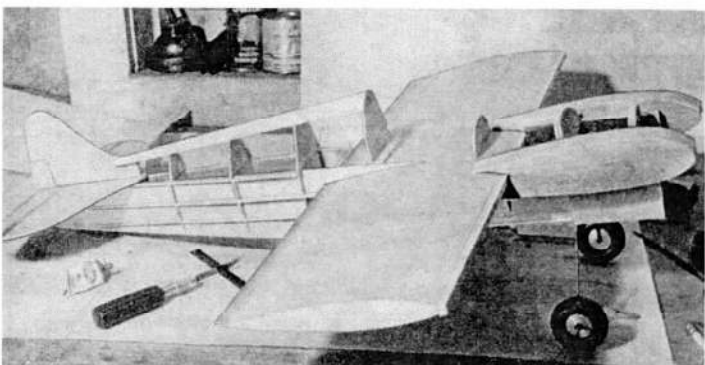
**STEP #2:** Remove the fuselage from your work board and add stringers and gussets to both sides. Next install bellcrank mount, bellcrank and push rod. Leave rod long at rear, bend later.



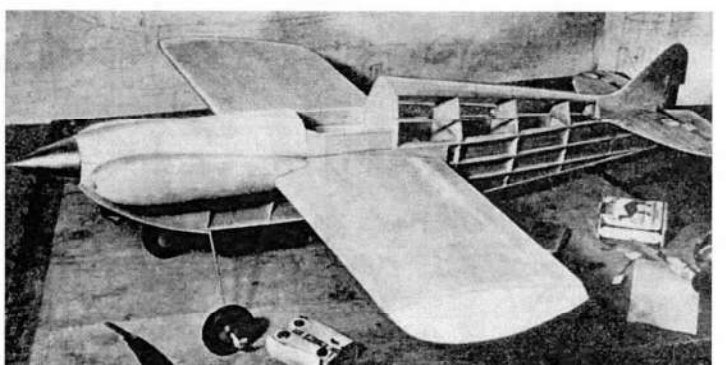
**STEP #3:** Cement wing skin sheets together, mark rib positions, cement ribs to one skin. Add leading edge, spar and other skin. Bevel trailing edge, carve leading edge. Add tip blocks, sand.



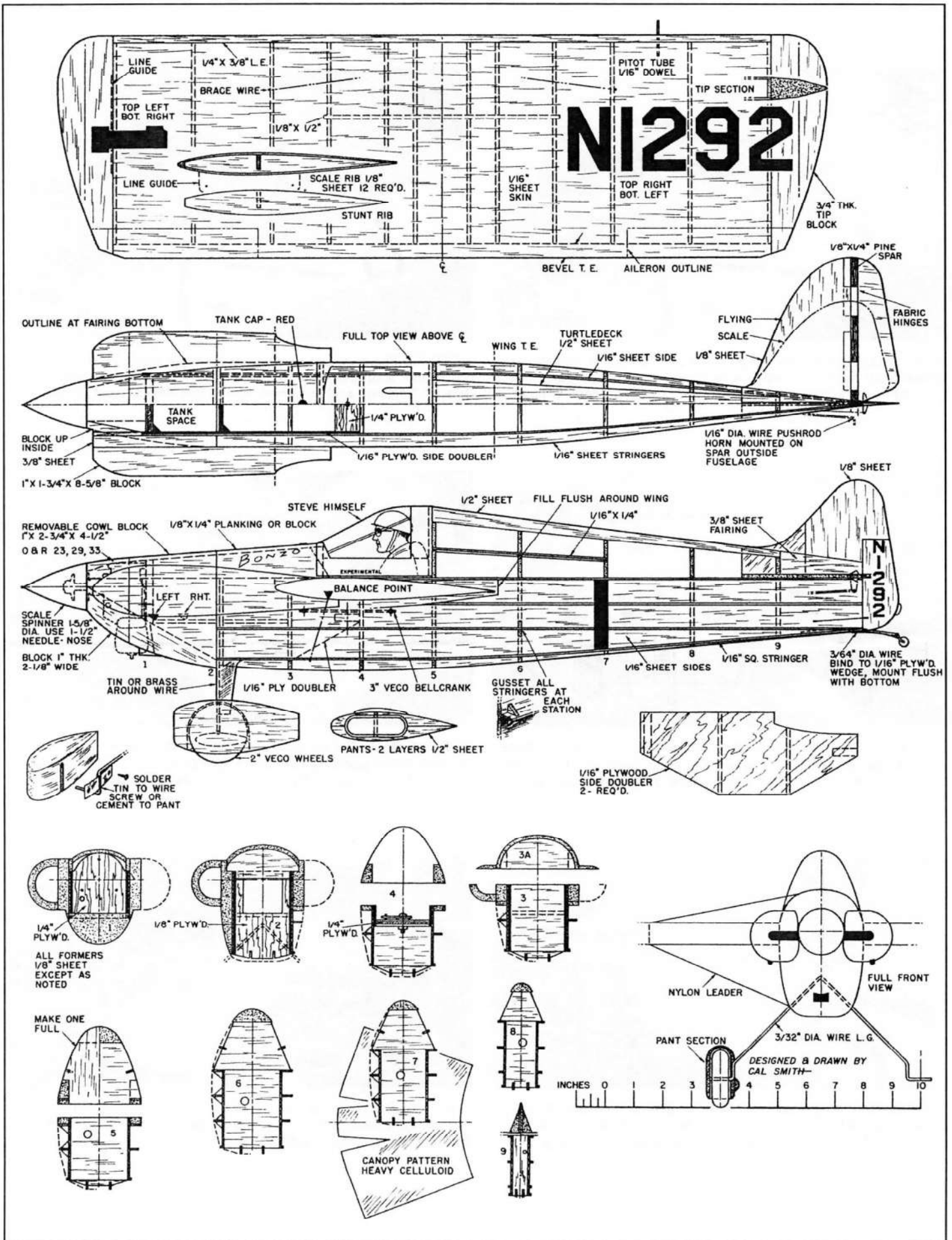
**STEP #4:** Mount the wing permanently on the fuselage. Use plenty of glue, don't spare it. Add top fuselage formers, then the stabilizer and fin. Connect the push rod to the elevator horn.



**STEP #5:** Your model Bonzo really begins to take shape as you add the nose blocks and fairing blocks. Let dry thoroughly before you start carving. Complete remaining work on fuselage top.



**STEP #6:** Carve, sand nose blocks. Install engine and spinner temporarily to aid carving. Build up fin fillet with Plastic Balsa. Fill all cracks, seams. Add canopy. Finally, prime and cover.



Note: The Bonzo plan was originally presented on two separate pages. It has been rearranged slightly for this issue of the *Kollector*.