



The model in flight.

Speed Wings

Complete and detailed plans for constructing a flying scale model of the most efficient American plane—

By
Alan D. Booton

The CESSNA C34

THE Cessna C34, a four-place, Warner Super Scarab powered job, was judged to be the most efficient American airplane. Cessna has always built planes noted for their unprecedented wide range of performance.

Experienced model builders have known, since the advent of the first real Cessna, that a flying-scale model of that ship is perfection in performance. No other plane duplicated in miniature can surpass its stability, speed, climb and endurance.

In building this month's project, all modelers will agree that the Cessna is the most worthy selection for many hours of building and flying pleasure.

To build the model, follow accepted model construction methods. First, build the sides to the extent shown on the nonscale detail on sheet #3 and then start with B and C to install the spacers. Cut the former A as a unit and cement it to the four extending longerons. Complete the fuselage frame by adding parts shown on the drawing.

WINGS

Make a left-wing tracing and build both frames at the same time—that is, let each operation apply to both frames. The drawing is self-explanatory, though it is good advice to build the ailerons in with the wings and cut them loose later. A line on the drawing gives the flap location, though no operating flap is provided.

TAIL SURFACES

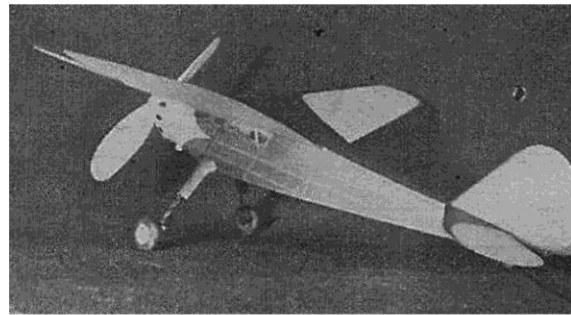
Build these up on the drawing for accuracy. Use standard stock to build the frames from and then trim and sand them

to shape when they have dried. The stabilizer should be made as a unit to permit accurate and easy installation.

LANDING GEAR

The landing gear is of a special design that can be pushed up for scale appearance and pulled down to let the long propeller clear on take-offs and landings. Make four $\frac{1}{8}$ " sheet blanks and groove them so the flattened $\frac{1}{8}$ " aluminum tubing can be easily sandwiched between.

Bend #12 music wire double (like the slide of a trombone) to the desired length. Leave enough for the axle and cut off. Make a pair of these and slide them into the flattened tubes. Crimp the lower ends to keep them from being pulled completely out. Cement the balsa blanks over the tubes, the lower ends of which are kept $\frac{1}{2}$ " from the axles. When dry, carve out the struts and cut through them $\frac{1}{2}$ " from the axles to separate them as

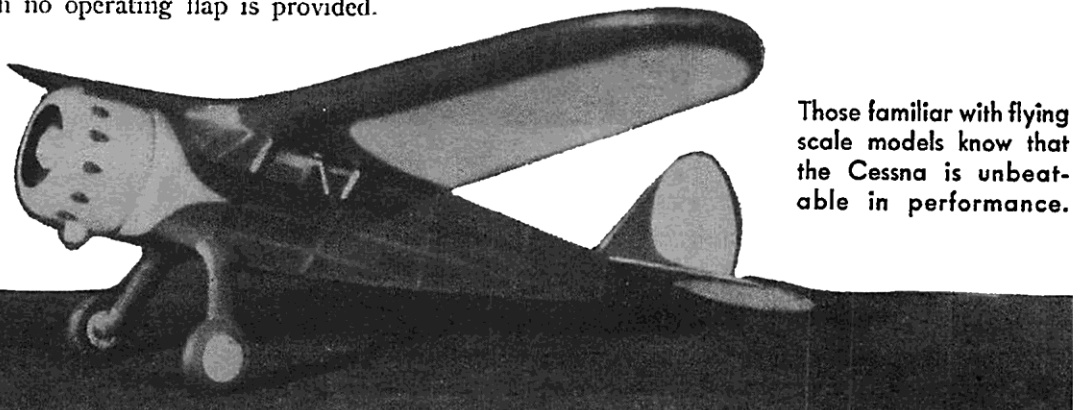


The landing legs are telescopic, combining the advantages of scale and flying features.

shown on the drawing. The inside wheel disks are cemented to the strut ends, while outer disks are left off until the wheels are secured on the axles with washers and cement. Make the tail wheel assembly as shown.

COWL

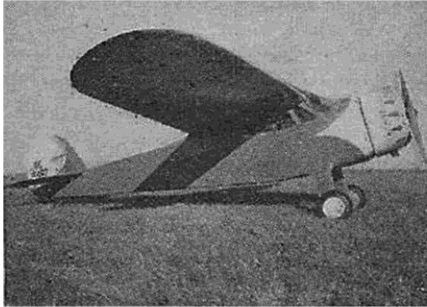
The detail and instructions are on sheet #2. It will be the best idea to leave off the worts and scoop until the cowl has been finished smoothly.



Those familiar with flying scale models know that the Cessna is unbeatable in performance.

SPEED WINGS

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The Cessna C34.

PROPELLERS

Carve a wooden-type prop from a $\frac{3}{4}$ x 1 x 7" block for flying purposes. Sand and dope it several times to obtain a glossy finish, but also balance it well. Assemble the prop, washers, nose plug and shaft.

COVERING AND ASSEMBLY

Cover the fuselage from B to G with red tissue. Carefully continue the red above and below the color line forward of B with yellow or cream tissue completing the forward portion. Cover the wing panels and tail surfaces with yellow or cream and carefully add red tissue to all leading edges as shown by the color lines. Cover the cowl with yellow or cream and the worts with red. Cover the landing gear struts with red and the outer disks of the wheels yellow or cream. The only liquid color used

is black ink for the motor, tires, license and details.

To apply the tissue on the framework use dope thinned to half the original consistency.

Now cement all the parts to the fuselage with pins to hold the parts in their proper places until set. Spray the covering with water, which will tighten the tissue when dry. When thoroughly dry, dope the model completely with the thinned dope and then add all the markings. Finish the covering from G to the trailing edge of the rudder and fit the celluloid windows.

Only four strands of $\frac{1}{8}$ " flat rubber are enough for the motor. Tie the rubber with about two inches of slack and lubricate it.

Test the model in tall grass until the proper adjustments are assured and then fly it in areas free from obstructions.

MATERIAL LIST

Blocks	Miscellaneous
1 $1\frac{1}{2}$ x 2 x 2"	$\frac{1}{2}$ oz. tube cement
1 $\frac{3}{4}$ x 1 x 7"	1 oz. clear dope
2 $\frac{1}{2}$ x $1\frac{1}{8}$ x $1\frac{1}{8}$ "	$\frac{1}{2}$ oz. thinner
Sheet	2 sheets colored tissue
1 $\frac{1}{4}$ x 2 x 4"	1 wide bamboo strip
1 $\frac{1}{8}$ x 2 x 9"	(to split)
1 $\frac{1}{32}$ x 2 x 18"	18" #12 music wire
1 $\frac{1}{16}$ x 2 x 6"	4" $\frac{1}{8}$ " aluminum tube
1 $\frac{1}{64}$ x 2 x 18"	1" $\frac{3}{32}$ " aluminum tube
Strips	1" $\frac{1}{16}$ " aluminum tube
6 $\frac{3}{32}$ sq. x 18"	Cleaned photo negative
2 $\frac{1}{8}$ sq. x 18"	6 $\frac{1}{8}$ " washers
2 $\frac{1}{4}$ x $\frac{1}{8}$ x 18"	48" $\frac{1}{8}$ " flat rubber
4 $\frac{1}{8}$ x $\frac{1}{16}$ x 18"	