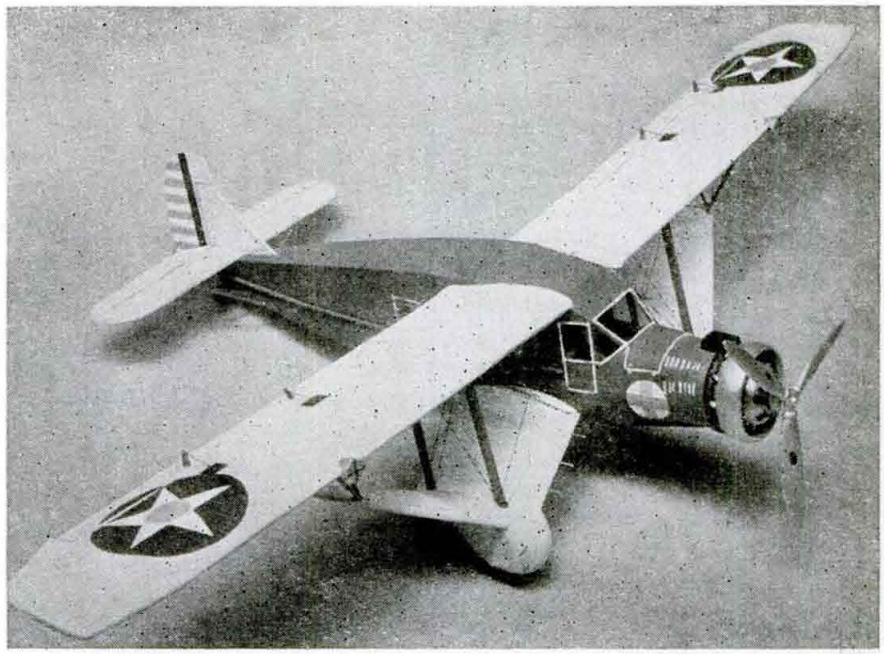
A Bellanca Aircruiser Model

by
PAUL W. LINDBERG

Model Editor of POPULAR AVIATION



This completed model of the Bellanca Aircruiser is one of the most beautiful flying scale models that has yet appeared in this department. It is an excellent flyer.

THE Bellanca Aircruiser makes a fine flying scale model. It has been accurately designed to scale and our laboratory tests show this high wing monoplane has plenty of pep and takes the air like its prototype.

The landing gear struts have been cleverly worked into a streamline airfoil section which stabilizes the ship while in flight. Flights of over 300 feet are easily obtained and another beauty of the Bellanca Aircruiser is that you can adjust your controls (for they have aluminum hinges) so that your model will perform exactly as you wish. It can be made to fly a straight course or in a large circle. You will thrill at the sight when she comes in for that three-point landing after the rubber motor has become exhausted.

In the building of the Bellanca Aircruiser all dimensions can be quickly and accurately determined, by placing a ruler on the part to be measured, for the plan is printed full size. If you wish a larger model, multiply this measurement by the amount of increase.

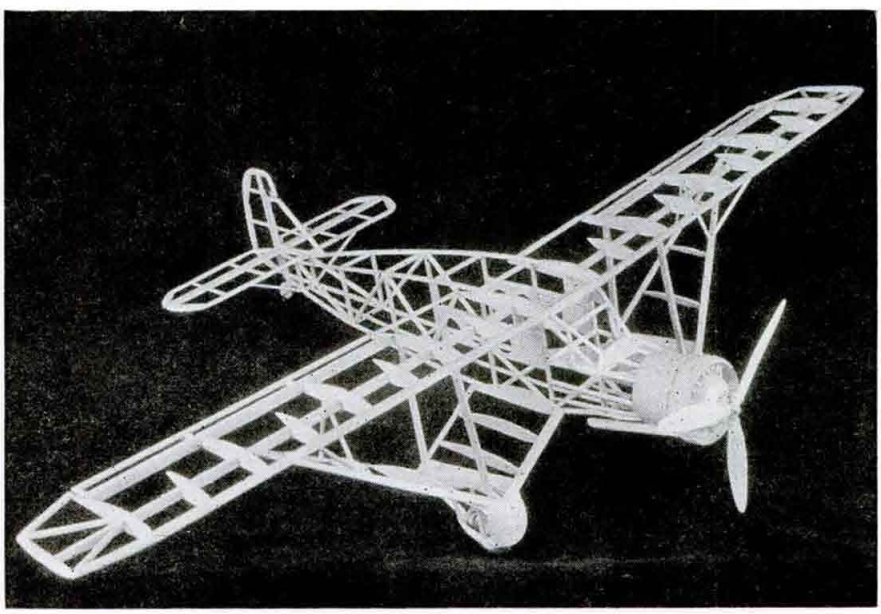
The color scheme can be obtained from the cover of the April issue of POPULAR AVIATION.

CONSTRUCTION OF FUSELAGE

The fuselage sides are built from 1/16 inch square balsa. The longerons, verticals, diagonal braces, etc., are held in place until securely cemented by inserting straight pins on either side of the strips wherever needed.

After the two sides are completed, they are pinned to the top of the plan in such a manner that the top longerons face down and so that the sides form right-angles with the surface of the plan. The cross-members are now cemented in their proper locations. Cut formers from 1/32 inch sheet balsa and cement in their respective positions as shown on plan. These are necessary only at the front of the fuselage, as the rest of the body is more or less square in shape, tapering off to the rear.

A solid balsa block is carved to shape and fitted to front of body. It not only makes a neater model but is also necessary to add the required amount of weight to the nose. Stiff paper is used from solid balsa nose over former one and along sides of cockpit enclosure to receive wind shield. See plan.



Study the framework, particularly the wing frame, very carefully, for the construction is out of the ordinary.

DUMMY MOTOR

The motor is built up entirely of balsa, using 1/32 inch square strips for rocker arms and push-rods. These are cemented into position after the fuselage has been completely covered and doped. Paint each cylinder black.

LANDING-GEAR

This portion of the ship is built piece by piece. The two struts are built directly upon the plan and it's absolutely necessary that the ribs are cemented at their proper angles as specified. After the parts have become thoroughly dry, remove from plan and cement ribs (C) and (C) at the center so that the proper angle is obtained.

The streamline wheel covering should now be built into the strut. A little patience is required here, but your efforts will be well repaid if this part of the job is given a greater amount of time and attention. Having finished the struts with their streamline wheel coverings, the wheels are now placed in position, with a short length of piano wire passing through wheel and ce-

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BUYER'S DIRECTORY

Racing Rules

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not fly toward, over nor within 500 feet of grand stands or spectators. No objects shall be dropped so that they will fall within 500 feet of grand stands or spectators. Home stretches of race courses are to be laid out so that they will parallel grand stands or other space reserved for spectators. The home pylon is to be located at least 800 feet from grand stands or spectators.

Racing pilots are required to stay at least 50 feet apart and an overtaking pilot must be 150 feet ahead of the plane overtaken before cutting in ahead of it. Race horse starts are prohibited, except in cases where the entrants can line up with at least 100 feet between airplanes, and when the first pylon is a scattering pylon, which will draw the racing craft apart from each other. Many accidents have resulted from race-horse starts in the past and it is hoped that this will be an improvement.

Other rules define the responsibility of the air meet or race management with respect to compliance with Air Commerce Regulations and other requirements, for policing of the airport, for marking the area which may be used by spectators and that reserved for participating aircraft.

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mented to tops of lower balsa curved parts on wheel coverings.

The tail-wheel is very simple to construct, having a short strut on either side of wheel which is cemented to rear bottom of fuselage.

CONSTRUCTION OF WING

Cut all ribs from 1/32 inch sheet balsa. Lay a sheet of wax paper on the plan and pin leading and trailing edges and center spar in position. The ribs are now placed in an upright position in their proper locations and cemented.

Make wing tips as shown on plan. We recommend this type of wing tip, as it is far simpler to construct and neater in appearance.

The ailerons are now built into the panels. Ailerons will eliminate the need for building "wash-in" into wing. We recommend that you build your model with all movable controls, as you will need these to control your model under flight. Cover wing with tissue making sure all wrinkles have been stretched out of the surface. Cover ailerons separately.

TAIL GROUP

This is made entirely of balsa and is constructed upon the plan. Cover each part separately with tissue in much the same manner as the wing. Aluminum hinges are cemented into position after framework has been completely covered so that the tissue will be taut. When thoroughly dry give a coat of dope.

FINAL ASSEMBLY

The finish on the parts of the model, such as all exposed balsa parts, etc., can be greatly improved by giving them three to four coats of banana liquid, so that they will have a smooth and glossy finish. Where the wings meet at the top of fuselage, it is necessary to make two balsa fairings which finish off the wings at top of body. All other struts are now cemented in their proper locations.

PROPELLER

Many model builders require two types of propellers. One for flying and one for display purposes. We have correctly shown on the plan how to construct both of these types. The flying propeller is very simple to construct.

A propeller with a broader face than the scale propeller is necessary in order to contact a sufficient amount of air to drive the model and to hold down the speed of the rubber motor. Another important item is the bearing which must allow the propeller shaft to turn freely and yet must be tight enough to prevent "wabbling" or vibration.

FLYING THE MODEL

Where possible, it is best to give the model a gliding test over tall weeds before attempting to fly it with the motor. When properly balanced, it should glide steadily without diving or stalling.

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