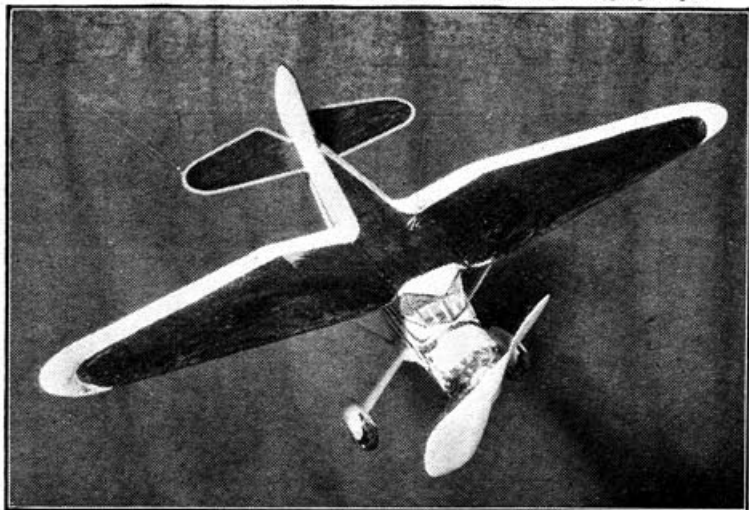


Your completed '36 Stinson should look like this when it taxis down the model runway. That's the flying prop you see mounted in the nose, so you can be sure she's all set for the air. And she's GOOD when she gets there! A scale propeller is also included in the plans for you fans who go in for display ships.



* * *

Remember the 1935 Stinson we gave you in our December number? Well, that swell flying-and-display model was so popular that now we present the 1936 Stinson, the latest in the famed line of Reliants. You wouldn't think that their '35 craft could be beat, but the 1936 job does just that with a brand new tapered wing and a slew of other special features. Take it away, Bill—

* * *

Build the 1936 Stinson

* * *

By William Winter

THE Stinson Reliant has won its spurs as a world famous commercial design noted for its reliability, performance, and smart appearance. The 1936 model Reliant, with its beautiful tapered wing, is now fast attaining the highest level of popularity.

Its super-clean design is evident, and the use of a tapered wing has enabled the builders to eliminate nearly all of the external struts common to ships of this type. In flight, the latest Reliant is suggestive of a soaring gull.

The model retains the smooth appearance of its big sister; and by reason of the sound design embodied by Stinson, the model has proven itself to be an extraordinary flyer.

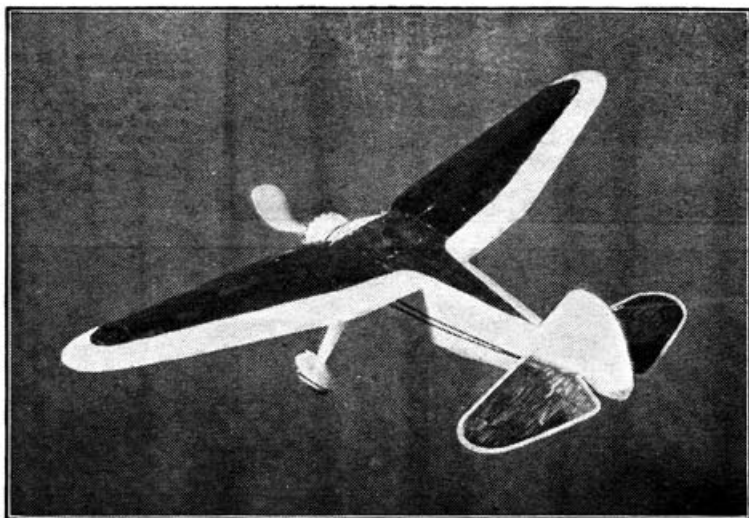
FUSELAGE

OUR main fuselage frame is built entirely of 1/16" sq. balsa. The two fuselage sides are pinned directly on the side plan. Wax paper is advisable to prevent the adhesion of the work to the plans. Cut all the cross pieces visible on the side view to their proper sizes and cement them in place. When dry remove the pins and separate the two sides by sliding a double edged razor blade between them. Cut the widest cross pieces shown on the top view of the fuselage and cement them into position. Light straight pins are used to hold the frame intact until the cement has had chance to set.

It will be noticed that the sides of the main frame run straight from the trailing edge to the windshield. It is the fairing that gives the curved effect to the sides as seen on the top view. Bend the rear of the fuselage and assemble the cross pieces as shown on the plan. Note that the curve extending rearward from the trailing edge section is ended at the first cross piece to the rear of the wing. The rudder post is a piece of 1/8" x 1/4" balsa cut to size and glued in

place. The rear hook is a piece of .028 music wire bent and imbedded in the rudder post as shown.

To construct the front of the fuselage it is necessary to crack the four longerons at the second cross piece as seen on the top view. The front is then bent inward until the proper size cross piece will fit. Former "A" is a piece of the softest 1/4" sheet obtainable. It is shaped and sanded as called for by the detail on Plate 3 before it is cemented into position. All the formers, the patterns of which are given, are cut from 1/32" sheet and glued in position. The letters T, B, & S are used to denote the top, bottom and side formers, respectively. The long fairing strips are 1/16" sq. The shorter pieces about the nose are 1/16" x 1/32". The instrument panel also cut from 1/32" sheet serves as a former. Two stub ribs are cut in accordance with the pattern. They are attached permanently to the extensions of the top formers



This rear-quarter view of Bill Winter's original model brings out details of the fuselage and tail members. Note the "gull" touch embodied in the center section. That's the new feature that so strongly emphasizes the flying lines of the ship.

T-1 to T-4 (shown in Plate 3).

The windshield peak block is cut as shown on the side, top and detailed perspective on Plate I. This block (D) is cemented flush to the front face former T-1. A $\frac{1}{8}$ " sq. strip shown on the front view directly below the wing is also shown in full scale on Plate I. and serves as a fillet.

To cover, use a separate piece of tissue for each of the flat portions of the completed fuselage frame. The rounded portions must be covered with narrow, longitudinal strips to avoid wrinkles. The finished covering is lightly sprayed and doped.

The windshield framework of $\frac{1}{16}$ " sq. balsa is cut to size and cemented into place. Cover the windshield sections and the side windows with cellophane. Trim the edges with black lacquer or dope. The outlines to be painted are shown in solid black on all the views of the fuselage.

LANDING GEAR

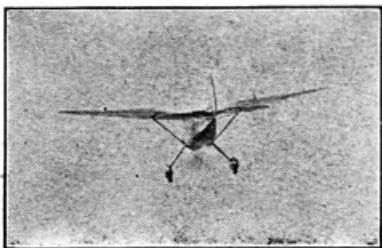
THE landing gear fillet blocks are shown in detail on Plate I. They are shaped from soft balsa and attached to the fuselage with a generous portion of thickened cement. The landing gear legs are cut from $\frac{1}{4}$ " sheet and streamlined. They also are detailed on Plate I. The wheel pants are glued up for three plies, as seen on the front view cross section (Plate I), before their shaping is attempted. The thickest, or center ply, is cut out to receive the $1\frac{3}{8}$ " wheel. When the semi-completed unit is thoroughly dry, the streamlined shaping is accomplished. The wheels are mounted on short straight axles cut from .014 wire. The legs are attached to the pants and then to the fillet blocks at the proper angles by means of the short bamboo pegs, wire stiffeners, and heavy cement, as explained on Plate I. A piece of .028 wire is run beneath the fuselage and bent against the landing gear legs to give strength.

The $\frac{1}{2}$ " tail wheel is mounted, as shown on Plate 3, on an .014 wire axle and cemented to the middle lower stringer.

TAIL SURFACES AND WING ASSEMBLY

THE main $\frac{1}{16}$ " x $\frac{1}{8}$ " strips, or spars, are pinned to the bench. The cross pieces, with the exception of those that form the contact with the fuselage, are all cut from $\frac{1}{32}$ " sheet balsa. The other cross pieces noted are $\frac{1}{16}$ " x $\frac{1}{8}$ ". The curved portions are cut, as shown on the plan, from $\frac{1}{16}$ " sheet. The sizes of all the tail members are given.

Cover each side of both stabilizer and rudder with individual pieces of tissue. Doping alone is sufficient treatment for the covering of the tail surfaces when they have been completed.



En avant! She flies through the air with the greatest of ease!

The stabilizer fillets to which the stabilizer halves are cemented are cut and shaped from $\frac{1}{8}$ " x $\frac{1}{4}$ " strip. The $\frac{1}{16}$ " x $\frac{1}{8}$ " stabilizer braces are shown full size on Plate 2.

Spars are cut to the taper shown in black on the wing plan (Plate 4) from $\frac{1}{16}$ " sheet balsa. The ribs, with the exception of the first in both panels, are cut from $\frac{1}{32}$ " sheet (see Plate 4). The first ribs are $\frac{1}{16}$ " in thickness. The leading edge is $\frac{1}{8}$ " sq. The

trailing edge is sanded down to $\frac{3}{32}$ " x $\frac{3}{16}$ ". The tips are cut from $\frac{1}{16}$ " sheet. Before covering be sure that the first rib in both the left and the right panel is slanted $\frac{1}{16}$ " to allow for the dihedral.

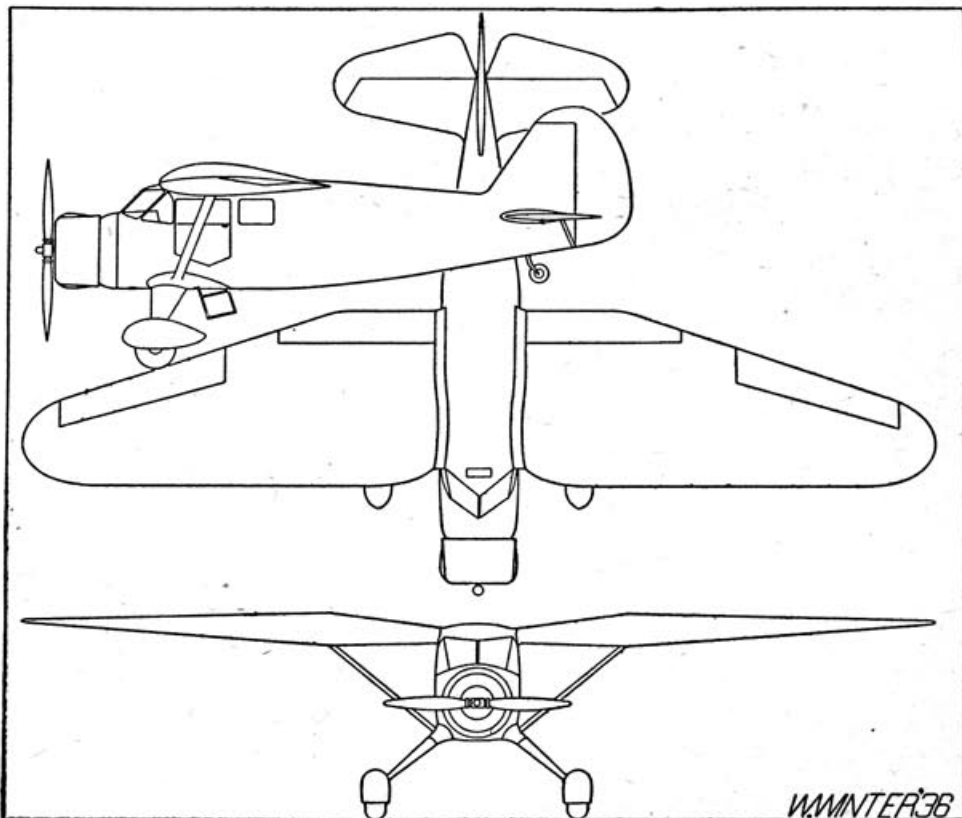
The bottom of each panel is covered with one piece of tissue. Each top surface is covered with two separate pieces of tissue due to the double taper. The finished wing surfaces are evenly sprayed and doped.

Cement each panel to the stub rib built integral with the fuselage. Cut the wing strut to the length given on Plate 2. The position of this strut is seen on the side view. Be sure that each wing panel has the same dihedral.

COWLING, PROP, AND MOTOR

OUR first two cowling formers are cut, as shown on Plate 5, from $\frac{1}{4}$ " sheet balsa and glued up. The rear former is cut from $\frac{1}{8}$ " sheet. Sheet balsa braces, shown in detail and on the side view of the cowling, separate the rear and front formers and help form the support for the stiff paper that forms the rounded surface of the cowling. The eighteen bullet-shaped pieces are streamlined from a $\frac{1}{8}$ " strip and glued into their positions on the cowling.

The details of the dummy motor are given on Plate I. (Continued on page 94)



Here's a three-view drawing of the real Stinson which will aid you in constructing your model. Note the wing flaps incorporated in the trailing edge of the wing.

WINTER '36

Build the 1936 Stinson

(Continued from page 39)

The nine cylinders, the crankcase, and the square piece that forms the rear of the assembly are constructed as one unit to form a detachable nose plug.

The thrust bearing is cut from a piece of tin bent to shape and imbedded in the front of the crankcase. One similar to it is provided for the rear of the propeller hub.

The propeller is shown in full size in the blank on Plate 5. The tips are rounded, as shown by broken lines, after the blade carving has been accomplished. Devote care to the exact balancing of the prop. The shaft of .028 is bent to shape at the prop end imbedded in the hub face. The extra tin bearing is slid over the shaft and pushed into the rear of the hub as previously mentioned. Place a loose washer and the combination motor-plug on the shaft and bend the rubber hook. The motive power is eight strands of $\frac{1}{8}$ " flat rubber.

FLYING THE MODEL

TEST your ship over deep grass if possible. If not, fly it R.O.G. on a few turns. As the correct balance is

ascertained, increase the turns gradually to capacity. Do not hesitate to use a small weight (if necessary) to aid in balancing, as the original model showed an ability to fly farther when loaded in this manner.

BILL OF MATERIALS

9— $1/16$ " sq. x 36"
2— $1/8$ " sq. x 24"
1— $1/8$ " x $1/4$ " x 12"
1— $1/16$ " x $1/8$ " x 18"
1— $1/8$ " x $3/16$ " x 24"
1— $1/16$ " x 2" x 12"
1— $1/32$ " x 2" x 24"
1— $1/8$ " x 2" sq.
1— $1/4$ " x 2" x 12"
1— $5/16$ " sq. x 3"
2—2" x $5/8$ " sq.
2— $2 1/2$ " x $1 1/8$ " x $5/16$ "
1—10" x $3/32$ " x $1 1/8$ "
1— $7/8$ " x $5/16$ " x $2 5/8$ "
1— $5/16$ " x $7/8$ " sq.
1— $1/8$ " x $3/8$ " x 5"
1—7" x $1 1/8$ " x $13/16$ "
1 pr. $1 3/8$ " wheels
1 pr. $1/2$ " wheels
9"—.028 music wire
6"—.014 music wire
6 ft. $1/8$ " flat rubber
cellophane
2 sheets Jap tissue
1—1 oz. cement
1—2 oz. clear dope