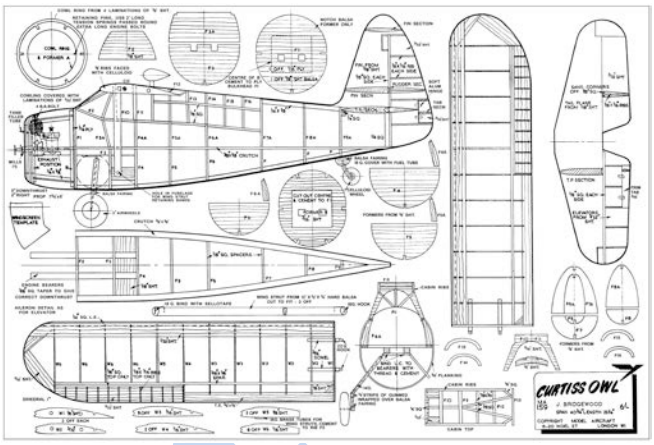
Curtiss Owl



A really robust and simple-to-build F/F scale model by J. Bridgewood.

This is the writer's second model of a U.S. Army observation monoplane, and it was originally designed around the E.D. Bee. The scale is one inch to a foot and the completed model weighs 14 oz. After only two hand-launch tests, it " flew straight off the drawing board " requiring only a small amount of weight on the tail. After sixteen flights the writer decided to install a Mills 0.75 and remove the tail weight. This still gives ample power, and forty-six flights have been made to date. The first of seven flights made during the Daily Dispatch Rally gained second place in the E. J. Riding Memorial Trophy scale event.

Commence by carving the fin and tail plane from 3/8 in. sheet as these are fixed permanently before completing the fuselage planking. There are two reasons for the sheet fin and tail plane to give the true scale metal covered finish, and also to put a little extra weight at the tail, which all high wing monoplanes seem to require.

Fuselage: After building the crutch fill in between F3 and 4 with 1/8 in. sheet, then cement engine bearers in position, and add the bottom half formers F3 to 9. Make certain that the crutch is securely pinned down before the 1/4 X 1/8 in. strip is attached. Fix two planking strips, one on either side, to ensure the lower half of fuselage is kept true when it is lifted from the plan. Now add F1 and top half formers F2, F3A, 7A, 8A and 9A, and 1/4 X 1/8 in. strip from 7A to 9A, also cement in position F4A, 5A and 6A adding 1/8 in. square strips which run from top of F3 to F7. Note that this strip does not run straight, but requires cracking between 5A and 6A. Two pieces of 1/4 in. square are needed to support the tail plane. The fin may then be cemented on top of the tail plane. It is advisable to complete the undercarriage before commencing with the 1/16 in. planking. This is made from one length of 14-G. wire using two pieces of 3/16 in. square for each leg fairing, by cutting a groove in each piece and sandwiching wire leg between the two, using plenty of cement. When dry, sandpaper to shape and bind the top with Gellotape. Complete the fuselage planking before commencing with the cabin framework. Especial care should be taken in lining up F10 and 11 truly, also the two cabin ribs. Add 1/8 in. square vertical strips behind F11 and also the strips that run down to F7A. The rest of the fuselage construction is now quite straightforward. Five pieces of celluloid are used to cover entire cabin. The engine cowl is made of two rings, A of 1/8 in. sheet, B of 3/16 in. sheet, spaced with six pieces of 1/4 X 1/8 in., and covered with four laminations of 1/32 in. sheet. Before cementing on the cowl ring and carving to shape, clearance for the engine cylinder head will have to be made. The cowl rests on this, and is held firm by a 2 in. tension spring which is passed behind the two front engine bolts. The cowl has only one hole in it, this is for the 4 B.A. bolt which replaces the compression lever. The tank is filled through the tubing protruding from cowl front. Blowing down this tubes also chokes the engine for starting.

Elevators and Rudder: These are built up from 3/32 in. sheet with ribs either side, and tissue covered

Curtiss Owl

before cementing on permanently. The trim tabs should be ample for flying adjustments.

Wings: These are fairly straightforward except for the main spar which has to be notched, and the ailerons which have to be built up in a similar way to the elevators, and serving the same purpose, that is, to give extra scale appearance.

Finishing: The wings, elevators and rudder are covered with lightweight tissue, given one coat of dope, two of banana oil and two of silver dope, the latter being well thinned down to avoid brush marks showing. If a concours finish is required the silver will have to be sprayed on. All other parts are given one coat of sanding sealer and sanded well down before giving two coats of banana oil and two of silver.

Check that all control surfaces have been truly cemented on. The model is extremely fast both under power and on the glide and although it weighs only 14 oz., it requires quite a heave when launching. Do not attempt to test-fly with the c.g. any further aft than shown on the plan, as this is almost certain to result in too steep a climb, and the model will not flatten out into a safe gliding angle, unless there is sufficient height.

Model Aircraft Magazine August 1953