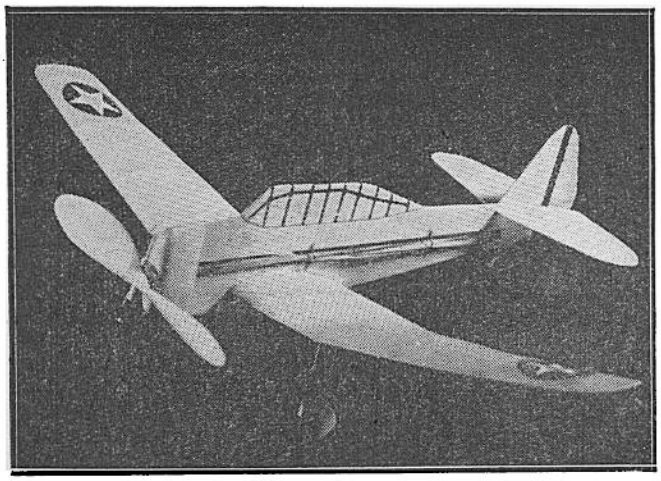
FLEETWINGS PROFILE FLYER

by Hy Scher



The author claims this ship can stand up with the best of the built-up flying scale jobs.

OF COURSE many model building fans will not agree with me when I contend that a well-built profile type flying scale model can outfly a built-up flying scale. If you're one of the disagreeing hordes, then an invitation is extended at this moment to disprove my contention.

On the opposite page you will find full size plans for building the profile model. Using the same outlines and dimension of the body you can build to your own design a built-up fuselage, attach the wings and tail surfaces and in general ready it for flight. Next, if you're still doubtful, build a model faithfully from the plans presented here. Take both crates outside and put them to the test. Don't say I didn't tell you.

The writer could spend more time in trying to convince you of the waste of time in building up a body just to house a few strands of rubber when you could just as well construct the profile-way and get as much if not double the fun flying it. But we won't. Information concerning the real ship will prove just as interesting.

First off, the Fleetwings Trainer is an all-metal job built by Fleetwings, Inc., of Bristol, Pa. It is almost 100 percent stainless steel construction. It has a double spar wing center section and a single spar outer wing panel which is detachable just outward from the landing gear leg. The ship is extremely sturdy in construction and offers excellent visibility to facilitate student instruction. Power is supplied with a Pratt & Whitney Wasp, Jr., of 420 h.p. It has a wing span of 40 feet. Length measures 29 feet 2 inches and height overall is 104 inches. At the time of this writing, the Army is giving the ship workout tests prior to ordering them in quantity. Its designation is known as the XBT-12 and when accepted for service the "X" will be dropped.

Helen Bauer built this ship from the designer's plans.

Fuselage and Landing Gear

FIRST MAKE a stiff paper template of the outlines of the fuselage and then lay the pattern over a carefully selected piece of balsa 1/8" thick. Trace its outlines with a sharp pencil point and then proceed to trim with a razor or sharp knife. Finish off the edges by sanding them slightly round and smoothing the fuselage in general. The next step is to outline the portion along the sides of the body which must be cut away to make room for the power strands.

The cowling pieces are made from 1/4" sheet balsa shaped in profile as shown on the plans. Before cementing to the sides of the nose, portions of the inner sides of the cowling pieces should be carved out to facilitate easy operation of the power strands. This will leave the wall at the rear of the cowling where the strands pass through about 1/32" thick.

Apply cement generously to the sides of the nose and the cowling halves and press the latter against the nose of the body firmly. After these parts have become hardened, sand the cowling all about so that its shape is exactly that of the cowling shown on the plans.

Soft music wire is used for the rear hook and is cemented into position as shown. The tail wheel fork is also fashioned from music wire. A small hard wood wheel serves the purpose. The "cans" are also shaped from music wire of the same gauge and cemented at the points along the fuselage as required.

The landing gear legs are made from hard sheet balsa in the fashion shown. Note that their upper portions are notched so that they may be cemented flat against the wing ribs. The outer sides of the wheel spats are made separately and are cemented to the legs. Music wire is used for the wheel axle. A pair of hard wood wheels are suggested in this case for weight value.

Wing and Tail Surfaces

THE WINGS are made in halves. They are very simple in construction as can be seen on the drawings.

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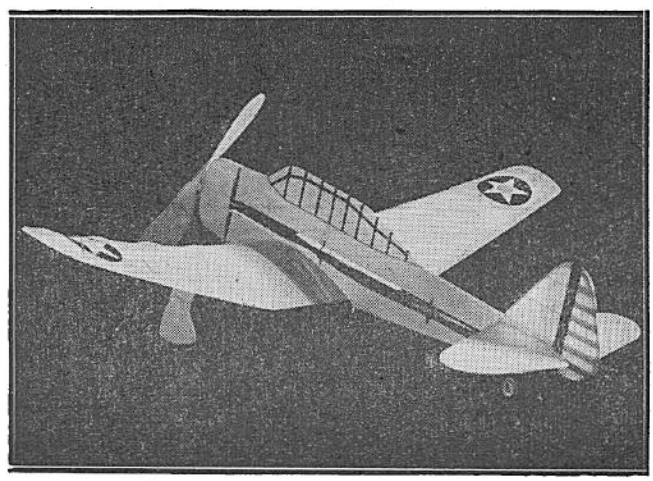

The little profile job looks like the real ship, alright.

PROFILE FLYER

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Use hard balsa for the leading, trailing and center spars as well as the ribs, too. Dihedral begins outward of the center section panel. Crack the wings slightly at these joints and raise the extreme tips to the required angle. Apply cement at the cracks and then place a weighted object on the center section panel. Place a "prop" block at the tip of the wing and allow to dry in this position until the cement hardens.

The stabilizer and rudder are made of simple frame construction. Leading and trailing edge of the horizontal stabilizer and rudder are made from 1/16" square balsa. The curved tips of the tail parts are shaped from 1/16" sheet. Keep these surfaces perfectly flat while the cement dries so that there will be no tendency for the parts to warp out of shape.

COVERING, ASSEMBLY AND FLYING

ALL FRAME PARTS are covered with yellow tissue paper. Banana oil is used for the adhesive. Trim the excess material carefully and tuck in the rounded edges neatly. All the covered parts should be given a water spray and set aside to dry in normal temperature. Do not place these parts near a heated radiator or they'll warp like a propeller set for high pitch.

In assembling, first mount the horizontal stabilizer. To do this, a slot must be cut out of the tail end of the body to accommodate this surface. Apply cement at all joining edges and set the stabilizer in position. Immediately afterwards, cement the rudder in position. Check for alignment. While these parts are drying cut a small slit in the paper covered wings alongside the rib where the landing gear leg is to be cemented. Apply a generous coat of cement to the side of the leg and along the front part of the rib and insert the leg. Do both parts at the same time so that small model making pins may be inserted into the cemented areas to aid in holding the landing gear legs upright. Attach the bamboo brace as shown. Later the pins should be removed.

When dry, attach your propeller with hardwood nose plug in place and rubber strands ready. The "glass house" outlines should be drawn with a hard pencil point and then filled in with dark ink outlines before attaching the wings and tail.

The wing panels are cemented to the fuselage in the position shown on the fuselage drawing. Use the cement generously and insert small model pins. Allow the model to stand on its own "legs" and if a bit wobbly place "props" on either side to prevent swaying.

Regulation stars and stripes are cemented in place as shown. U. S. Army may be set in position on the underside of the wings in the usual manner. Test glide your model and adjust the rudder and elevators to obtain maximum gliding distances. Fully wound, the model really turns in some spectacular flying and soars about gracefully.

In the event weight in the nose is required it may be had by applying, with cement, ordinary silver wrapper as found in tobacco packages. Smooth out pieces before applying.

THE END