

Race planes of aviation's golden age have a way of quickening the pulse and misting the eye of scale modelers. For the Walter Mitty's of the Flying Aces Club there are even two Mass launch re-creations of that era, the Thompson Trophy and the Greve Trophy, the former for radial-engined scale models of 30s racers and the latter for inline types.

Who isn't familiar, by now, with the *Gee Bee* racers, *Travelair Mystery* ships, Art Chester's *Jeep* and perhaps a few others? But how many of you have ever heard of such esoterica as the *Sundorph Special*, the *Haines Racer*, the *Rasmussen Skippy*, or the *Rowinski* racers? There were many such ships, which, because of bad timing, bad luck (often fatal), or both have remained in obscurity.

A few months ago I had the good fortune to buy a two volume history of air racing (*The Golden Age of Air Racing, pre-1940*), published by the EAA Foundation, PO Box 2065, Oshkosh, WI 54903, an inspiring collection of article, photographs, and 3-views. All of the old favorites are discussed but so too are many of the barely remembered race craft, including, of course, Claude Flagg's diminutive racers.

The F-15 San Diego Flagship

Flagg was the designer and builder of several race planes, many of which were based on small radial engines like the Cirrus and the Pobjoy. In 1936 he created the *F-15 San Diego Flagship* around the Pobjoy seven cylinder Niagra engine, a craft so small that its elliptical wings spanned little more than 14 feet.

The plane was slated to be flown in the 1937 National Air Races by young Tony LeVier but was seriously damaged in an ill-fated qualifying run. Claude Flagg, ever the optimist, embarked on an extensive rebuilding program, replacing the original wing with a tapered version that incorporated larger ailerons. The landing gear was replaced with a retractable version, and a new, tight-fitting cowl crowned the engine. Finally, the little racer was given a livery of Sunburst Yellow and Robin Egg's Blue.

Although the reborn *F-15* managed to set a new speed record for its class of over 250 MPH, it was once again damaged in a take-off mishap at the 1938 National Air Races at Cleveland and never raced again.



PHOTOGRAPHY MARK FINEMAN

Designed for the Thompson Trophy races of the 1930's, the full size *F-15 San Diego Flagship* managed one speed record for its class before mishap ended its career. Mark Fineman's model translates the plane to peanut size.

a Peanut Scale San Diego Flagship

By Mark Fineman

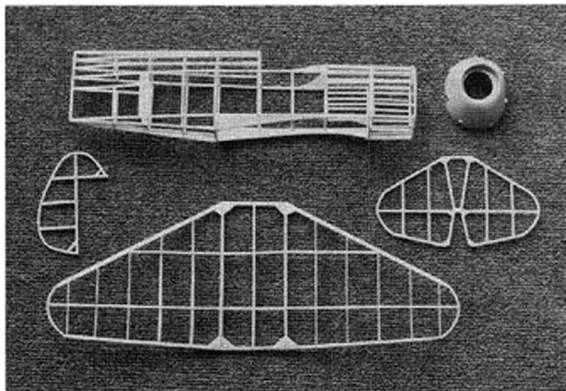
An illfated 1930's Thompson Trophy racer
now brings home the freeflight hardware.

Building the model

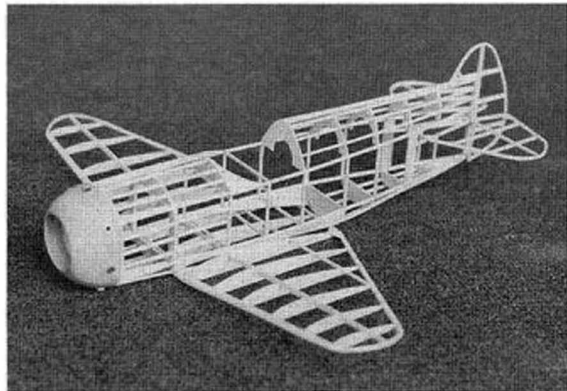
The rebuilt *Flagship* had a wingspan of exactly 13 feet, which in peanut scale produces a model with a fuselage length of nearly the same dimension - very good proportions indeed for a peanut, with lots of room for a long rubber motor. Construction of the model is quite conventional, the princi-

pal challenge being reproduction of the dazzling paint scheme of the real airplane.

Fuselage. This is built by first laying down a fuselage side directly over the plan and then constructing the second side directly over the first. Longerons, uprights, and cross pieces are all made from $\frac{1}{16}$ inch square stock. Cross pieces are determined from the



Each of the major frame components can be assembled before final alignment (above left). The fuselage longerons and crosspieces are $\frac{1}{16}$ square balsa stock. The curved outlines are laminations of $\frac{1}{32} \times \frac{1}{16}$ balsa, wetted and bent



around forms. Assemble the major components (above right) and check for proper alignments. Note the how the turtledeck formers, F-6 to F-10, have been relieved to allow clearance for the rubber motor. Helps save weight, too.

fuselage top view, except at the locations of F-6 (top former) to F-10 (top former), where the formers are used. This is necessary to allow clearance for the rubber in the completed model.

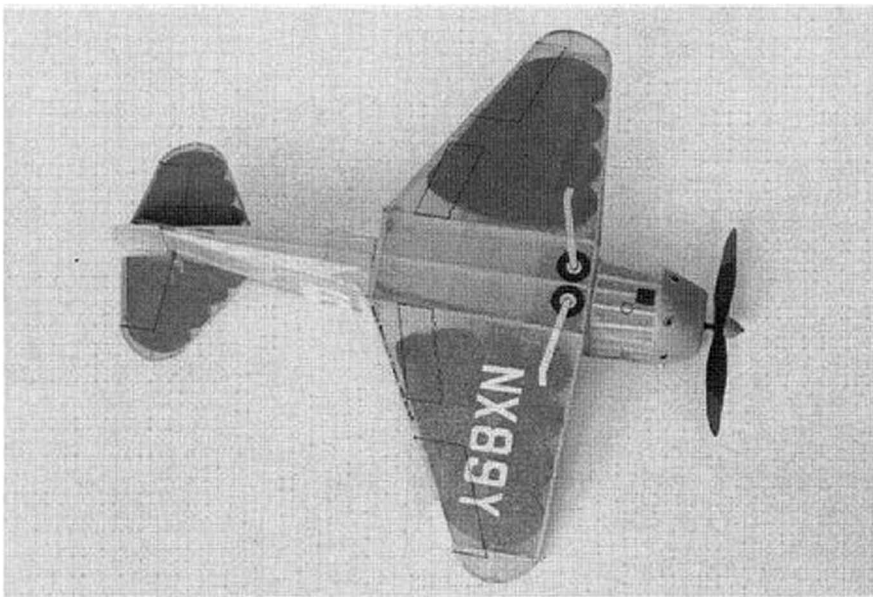
The area behind the side former 3 is slightly indented and then faired into the fuselage contours at the upright beneath former 5. In order to achieve this effect, make sure that side former 3A is glued to former 3 but indented about $\frac{1}{16}$ inch. Separate $\frac{1}{16}$ inch square side stringers are fitted between former 1 and 3, and 3A and the upright at position 5. The cowling is made up of cross-laminations of $\frac{1}{8}$ inch sheet, carefully carved to shape and hollowed out for lightness. No prop assembly is shown because everyone seems to have his own special way of handling this mechanism. The nose plug on my model was fitted against a bulkhead formed by the third lamination from the front. A fairly large $\frac{3}{4}$ inch diameter nose opening allows easy access to the interior of the model.

Don't forget to drill seven $\frac{3}{16}$ inch holes in the cowling to accept the aluminum tubing exhaust stubs. These should be added only after the cowling has been painted.

Flying surfaces. These are completely conventional. Curved outlines are made by laminating strips of $\frac{1}{32} \times \frac{1}{16}$ inch balsa around waxed cardboard forms. The strips were soaked in boiling water, laminated with diluted white glue, and allowed to dry overnight.

Finishing. The entire model was covered with yellow Japanese tissue, and, with the exception of the tail surfaces, carefully shrunk with a fine mist of rubbing alcohol. Then the tissue surfaces were given two coats of diluted nitrate dope and allowed to dry thoroughly.

The blue stab and wing inlays and side strips were created using a technique first described by Alan Schanzle. A large piece of tissue was taped to a wall protected with newspaper and given a sprayed coat of clear dope. When that had dried, the tissue was turned over and sprayed with several coats of Aerogloss Curtiss Blue dope. The shapes



Bottom surface shows the tissue landing gear retracted. Ink lines depict probable flap and aileron outlines.

were traced onto tracing paper and these patterns were taped over the doped tissue. Then, using a sharp No. 11 blade, the blue shapes were cut from the doped tissue. Each panel was carefully positioned on the structure and affixed with a brush dipped in clear dope. On flat surfaces these sections adhere perfectly, but where there are compound curves, as on the wings, more ingenuity may be required. I had to divide the large wing upper surface inlay into two sections, cutting each along the spar line, in order to get them in place with no wrinkles. Small wrinkles can be removed by shrinking the colored tissue with rubbing alcohol after it has been doped in place.

Exactly the same procedure was followed for the white wing registration and fuselage and wing race numbers ("19"). They were all cut out of white doped tissue and affixed with clear dope. The tail numbers were decals made by applying press type letters to clear decal sheet.

The wheels on my *Flagship* are in the retracted position, simulated with silver paper and black tissue.

Flying.

The plans allow for a very generous stab slot. When starting out, just tack glue the stab into position so that you can alter the incidence if need be. The stab on my *Flagship* is as per plan, but your model may be a little different. Note that the stabilizer is positioned as far back as possible in the slot. When all adjustments have been accomplished a few lengths of stringer and some yellow tissue can be used to close up the slot.

I selected a $5\frac{1}{2}$ inch *Sleek Streak* plastic prop for my model and two 17 inch loops of FAI $\frac{1}{16}$ rubber for power. Experimentation proved a left-left pattern best, with a small paper "down" tab added to the left wing in order to keep that wing level and maintain a flat glide. C

