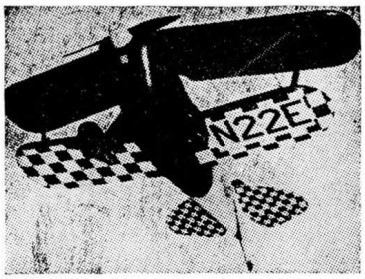
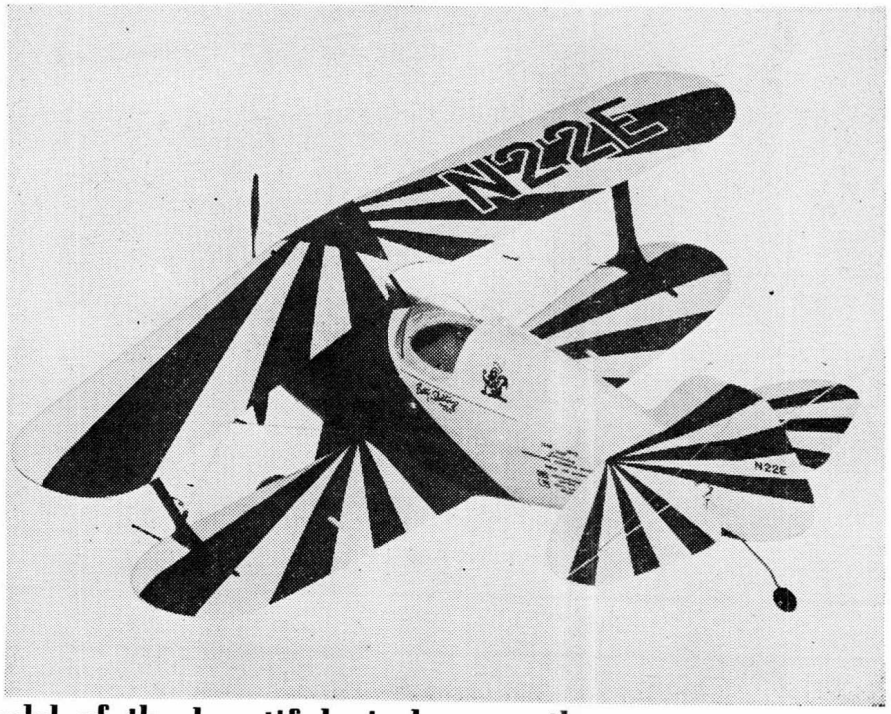

N22E

MODEL



PITTS SPECIAL



Build your own flying model of the beautiful airplane on the cover.

BETTY SKELTON'S brilliantly decorated tiny aerobatic biplane is one plane that model builders will find hard to pass up. Besides its obvious good looks, our model is easy to build and handles beautifully at the end of 40′ lines. The beginner will find construction very elementary while the more advanced modeler will enjoy decorating the model to perfection. This potential Beauty Event winner can accommodate engines from .19 to .33 cu. in. displacement, and although we used a *Bantam .19,* there is plenty of room in this 1-1/2″ to the foot scale model for larger engines. The prototype model weighed 17-1/2 oz. ready to fly and was built for sport flying; however, it was evident from the very first flight that the addition of a stunt tank and a symmetrical airfoil would create a super scale stuntster. Now let's get to work on this 190 sq. in. replica of the plane flown by the Feminine International Aerobatic Champion.

Plans are presented one-half size so double all measurements when enlarging them. Perhaps the following construction procedure may seem strange in that we jump from one structure to another and then back again. It has been observed that modelers in general do not wait for the cement to dry, etc., before starting on the next item; therefore we have described the procedure exactly as we built the model. It took 58 hours total to do the job.

Select 1/4″ medium soft balsa sheet for the fuselage sides. Trace the side outline onto them and when these are cut out, join them at the rear and install bulkhead "E." Apply cement liberally. While this is drying, cut out the remaining bulkheads from the specified stock as well as the balsa nose piece. Install the bulkheads one at a time using a clamp, if necessary, to hold the fuselage sides to the bulkheads. The nose piece is cemented in place last. Set this assembly aside to dry thoroughly.

Cut out the lower wing ribs and pin directly to the plans, then add the leading and trailing edges. The lower wing is built in two panels and connected by means of two plywood joiners after each panel is complete with soft balsa tips. Install the joiners plus the center section leading and trailing edges. Make certain of the proper dihedral, apply plenty of cement and set aside to dry.

Unlike the lower wing, the upper wing is built in one panel. Splice the leading edge as shown. This is very important and should not be overlooked. Follow the same construction procedure as in the lower wing.

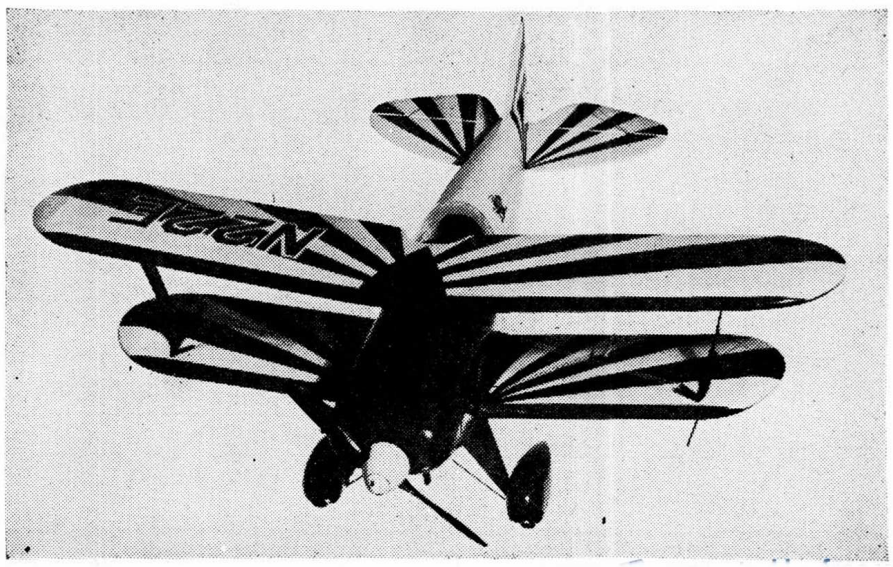
When both wings are dry, the leading and trailing edges and the tips are cut to shape with a very sharp knife or razor plane. Sandpaper the structures smooth and cover with light weight *Silkspan,* or *Sky-Sail,* using a mixture of dope and cement as the adhesive. Do not cover the lower wing center section yet. Cement the lower wing securely to the fuselage.

The landing gear is bent entirely from 1/16″ music wire. Bind the joints with soft fine wire (not aluminum) and solder well. Notice that the wheel axles are integral with the "V" spreader and that the remainder of the landing gear is bent in one piece. Attach the landing gear to the 1/4″ plywood firewall and front lower wing joiner. Use crinoline and plenty of cement. Crinoline is the same material as that used for the backing (which you tear off) on *Band-Aids;* this is cemented to both sides of the bulkhead and joiner, and around the strut. Smear with plenty of cement.

All tail surfaces are cut from 1/8″ sheet and sanded to a streamline cross section. Cement the elevator halves to the hardwood spar and install the control horn. Hinge the elevator assembly to the stabilizer and cement the stabilizer to the fuselage top. Cut the hardwood bellcrank support to size and bolt the bellcrank to it. Install the 1/16″ wire control rod and cement the bellcrank assembly securely to the fuselage sides. Cover the fuselage bottom with 1/4″ sheet and the lower wing center section bottom with *Silkspan.*

Cut the fuselage top and nose blocks roughly to shape and spot-cement in place. Using a very sharp knife (we use an *Xacto* No. 26 blade) cut the blocks to shape, as well as the fuselage sides, following the cross sections shown. Sand smooth and apply one coat of Testor's *Sanding Sealer.* Carefully remove these blocks and hollow with a gouge as the plans indicate. Now cement the blocks permanently in place and sand the entire fuselage. Apply two more coats of *Sealer* and sand smooth.

by WALTER MUSCIANO



Model Pitts Special

The wings can now be water-sprayed and, when dry, clear-doped three times with fine sanding between each coat. Add the fin and rudder, and be sure to offset the rudder as required. Fillet the wing and tail to the fuselage with cement. Several coats are required. Use 1/8" sheet balsa to fill in the space between the landing gear struts. Fillet these to the fuselage with cement and apply *Sanding Sealer* to these and to the tail surfaces. Bend the tail wheel strut and attach to the fuselage. Cut the wheel pants to shape, hollow and sand smooth; these are added at the same time as the wheels. Fillet generously with cement and apply *Sanding Sealer*.

While the fillets are drying, the cabane and interplane struts are cut to shape. Install the interplane struts by forcing them into the fuselage top about 3/16" and applying plenty of cement.

In view of the fact that so many engines could be used in this model, we decided to use bulkhead beam mounts. *Air-o* steel mounts were used. These are screwed onto the bulkhead with round head wood screws. First, carefully cut the cowl hatch off along the line indicated on the plans. Install the mounts and bolt the engine to them. The nuts can be soldered to the steel mounts. Install the tank. Any commercial tank of the approximate size shown will do. Carefully cut away the cowl for the engine cylinder, needle valve, filling and vent lines etc. Fuelproof the cowl interior. Spot cement the cowl hatch in place again.

It is advisable to paint the model before attaching the top wing. We painted the entire model white first. Four coats were used, with each coat thinned a little more as we went along. Before the last coat was applied, we added the bubble canopy. This was cut down from a large standard canopy purchased from the local hobby shop. When the white paint is thoroughly dry, mask off the white portion and paint the forward fuselage half, landing gear, wing leading edges, bottom surface of top wing, and struts a bright red. Two coats should be

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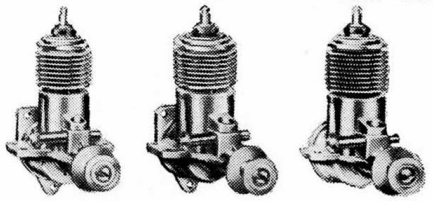

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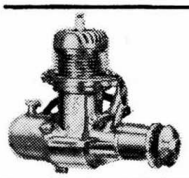

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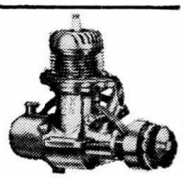
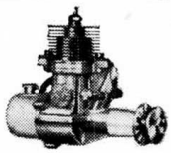


1950 CLASS "B" BARGAIN OF THE YEAR



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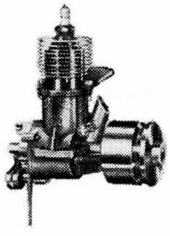

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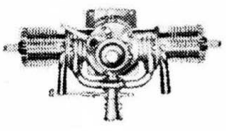

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enough but more won't hurt, All license numbers, sunburst design and checkerboard were cut from red *Trim-Film*. This is very easy to work with and insures a good job. The checkerboard on the underside of the tail is standard *Checkerboard Trim-Film;* however, the checkering under the lower wing is made by cutting 1" squares of *Trim-Film* and applying it from corner to corner as the photograph shows.

Generally it is quite difficult to letter anything directly onto a model, therefore try this trick for the lettering on the fuselage side as well as the "skunk" behind the cockpit. Most stationery stores can supply you with a product called *Duro-Seal.* This is a gummed cellophane sheet with a waxed paper backing. It will take ink quite well if it is first gone over with drafting pounce or an eraser. It is also transparent while still on the backing. Letter what is required, cut it to size, peel off the waxed paper and stick the cellophane to the model, press in place with a cloth and it's done! No glue is required.

Cement the interplane struts to the lower wing, forcing the prongs into the strut foundations. Apply plenty of cement. When dry, the upper wing can be added by forcing both the interplane and cabane struts into it and cementing liberally. Fuelproof (*Comet* proofer was used in this case) the entire plane and add the button thread rigging. The wing rigging is attached to celluloid anchors which simulate the fairings on the full scale plane. The celluloid is cemented to the wing. We used a *Froom* spinner, but a plastic or wooden one will do.

The model must balance as the plans indicate. The addition of lead weight in the nose or tail will remedy any unbalanced condition. The length of lines as well as the thickness will depend on the power used. Our *Bantam .19* job was flown on 40' (.008") steel lines, however, lengths up to 70' can be used with larger engines. The lines must also be heavier. The prototype model was flown with cowl hatch removed but this is not necessary as long as an exhaust escape is provided. Take off downwind and we suggest flying from a paved surface. The model leaves the ground with hardly any roll so do not try to "lift it off." Do not fly in windly weather unless you are sure you can handle the model perfectly. When built and flown with care, you will be the proud owner of the snappiest model on the flying field.