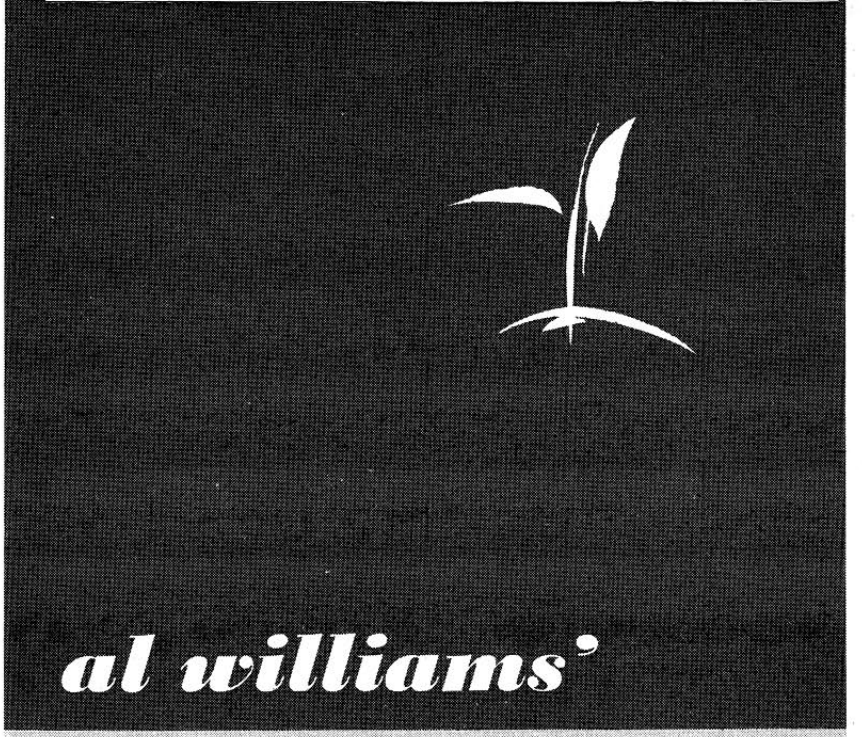


al williams'

GULFHAWK

by Paul Del Gatto

AL WILLIAMS AND THE GULFHAWK MADE FLYING HISTORY AND HAVE PROVIDED MODELLERS WITH ONE OF THE FINEST MODEL SUBJECTS

● Perhaps no other plane and pilot combination has enjoyed a more enviable reputation than Al Williams and his famous "Gulfhawk." Flying throughout the country and abroad he thrilled millions with his aerobatic displays, and in his own way contributed much to the development of high-performance aircraft as we know them today.

Brilliantly colored, in a bright orange with blue and white trim, the "Gulfhawk" was a sight to behold, even on the ground. The color scheme of our model is exactly identical to the one that Al Williams himself flew.

As a model, it measures up as an excellent control-line flier, and one that any avid scale modeller would be proud of, and envied by others.

There were a number of structural design problems that we encountered in evolving the design, but after some deliberation they were resolved satisfactorily and the model was put together quite easily, with all the scale realism of the original "Gulfhawk."

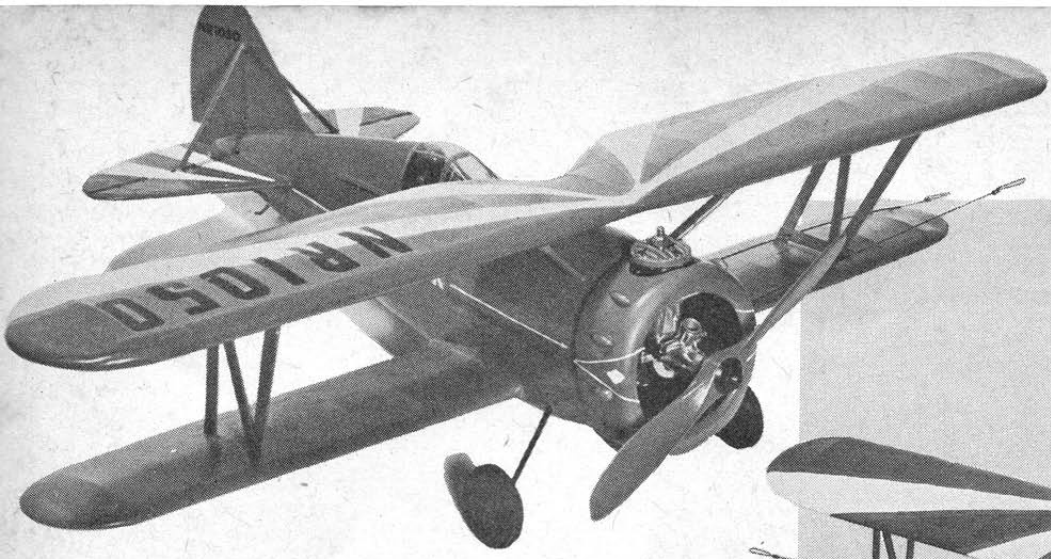
Our model weighed in at approximately fourteen ounces. Despite this seemingly high weight the model was quite easy to fly and control. Particularly noteworthy was the fact that the model wasn't in the least bit sluggish on the lines, a trait which is often associated with authentic scale models. The fact that the model is a biplane, we feel, had a great deal to do with it.

Less experienced modellers need not be afraid to tackle such a project because of the apparent ease with which it can be flown, even with an .09 engine. Then too, it's extremely rugged and will withstand many rough jolts without damage.

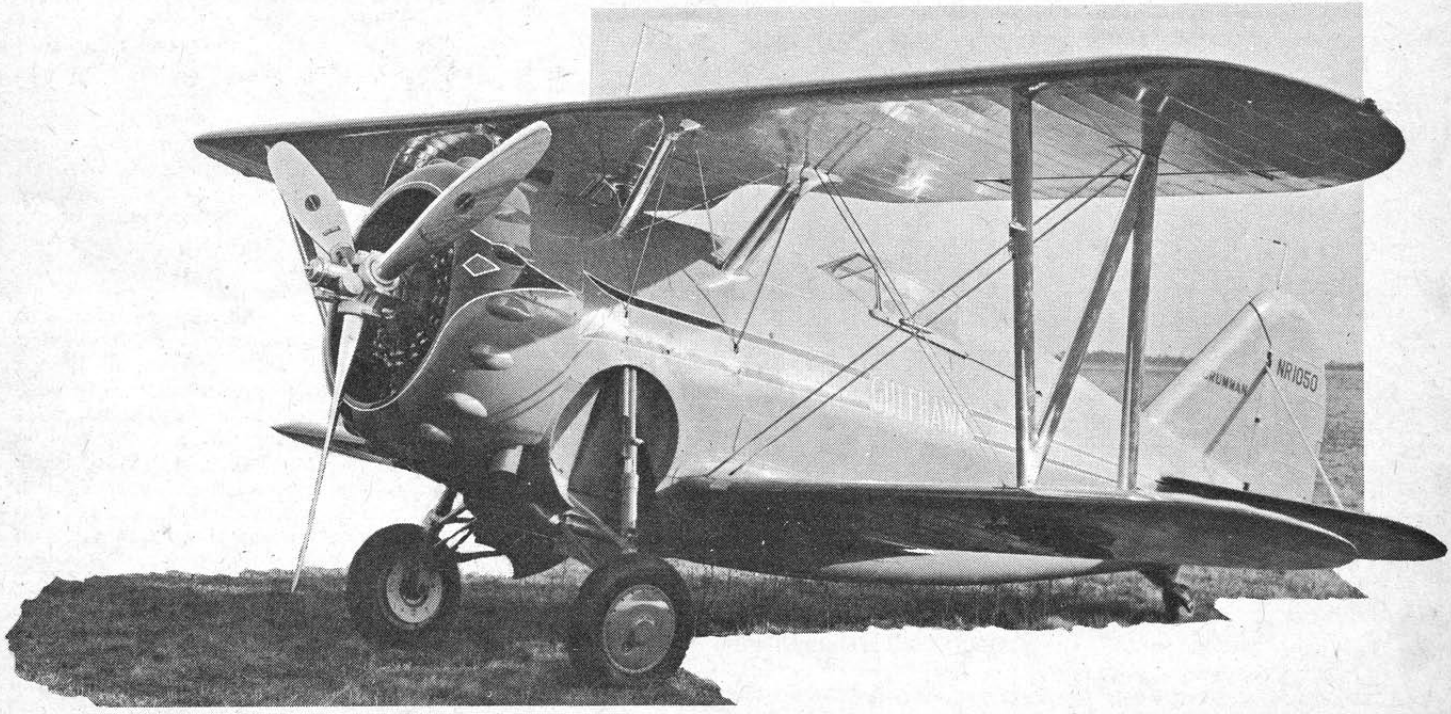
CONSTRUCTION: To speed assembly all the formers, ribs, tail surfaces and miscellaneous parts have been laid out full size. The actual layout drawings have been made half size and dimensioned to insure accurate and rapid enlargement to full size.

A small but valuable tip for those who have not had the opportunity to enlarge plans themselves: For construction purposes all that is required on your layout are the fuselage and wing outlines, plus rib and former locations. For someone who has never done it before, it amounts to less than an hour's time.

(Please turn Page)



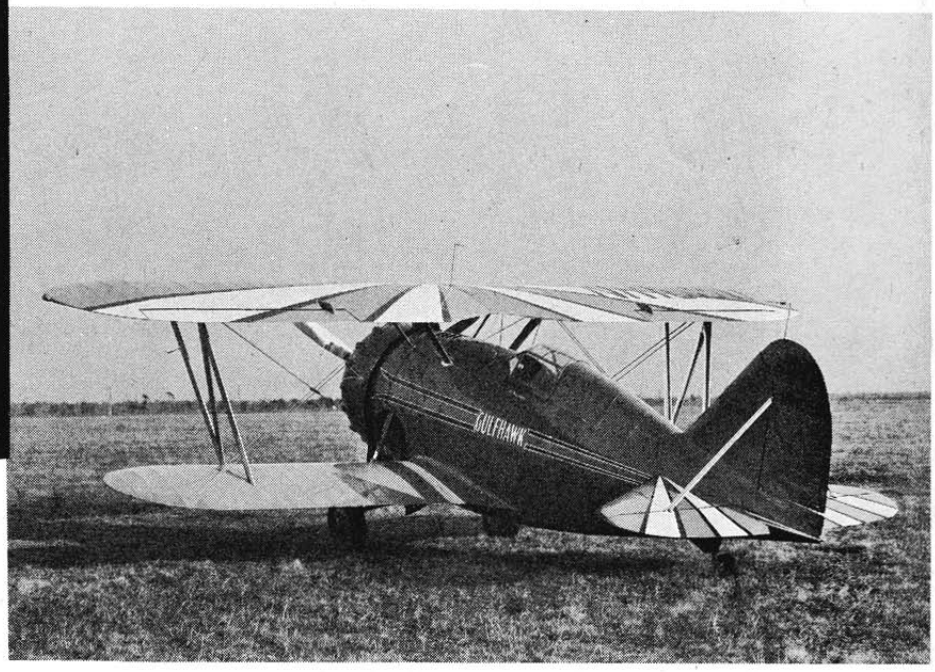
Left: The Torp .099 engine fits comfortably into the large cowl. As you can see, the model follows the lines of the original (seen below) very closely. You can dummy the wheel well with black dope or you can make a cut-out to suit. The model shown here is a slightly modified sport version.

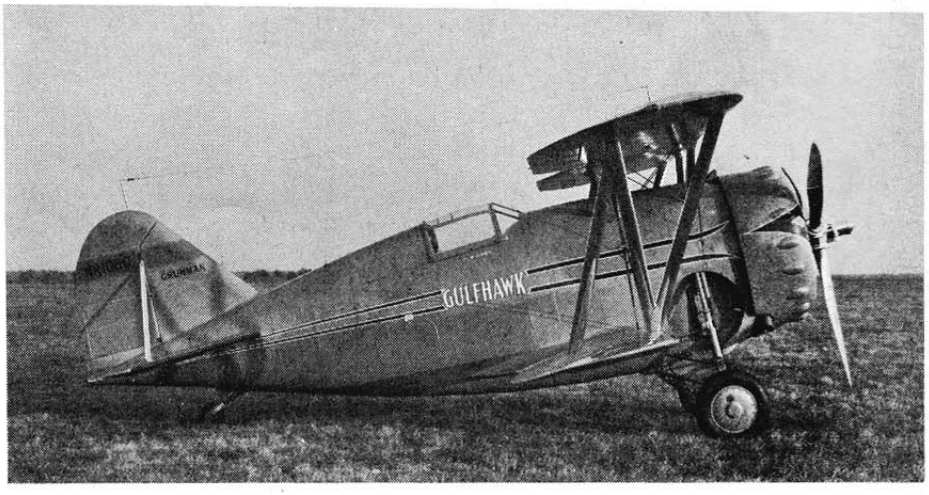


GULFHAWK

continued

The colorful lines of this pot-bellied fighter have been appealing to modellers over the many years. Al Williams' "Gulfhawk" was a slightly modified F3F Grumman fighter plane. Below: You get a better look at the popular sunburst trim.





To help you trim your finished model, we have included the photos of the actual plane which you find on this page. Note that the struts and propeller were highly polished chrome. You might even want to add a few extra details seen here.

Now to get on with the construction; it would be best to cut out all the required full-size parts as indicated on the layout. Begin the actual construction by laying out the top wing.

To your layout, pin the pieces for the wing leading and trailing edges in place. Note that these pieces must be notched to receive the ribs. Such construction helps to achieve a strong frame, which is less susceptible to warping. Once all the ribs have been located, cement the wingtips in place and add the center-section sheeting which is located on the bottom only.

The lower wing is constructed in an identical manner to that of the top wing. When both wings have been completed, shape and sand both the wing leading and trailing edges. Use the airfoil section shown on the plans, as a guide towards obtaining the desired airfoil shapes.

Many model builders tend to shy away from planked fuselages, going on the assumption that they are difficult to build. On a model such as this, planking is far less troublesome than using stringers; which would involve covering compound curvatures of the fuselage with paper.

Begin fuselage by assembling engine mounts to F-1, 2 and 3, being certain to maintain proper alignment. Then cement crutch to formers F-1, 2 and 3. When dry, cement former F-9 in place and then add remaining formers.

(*Please turn to Page* 41)

GULFHAWK

(*Continued from Page* 11)

We used a variety of planking sizes to speed it up and probably you might like to do the same. On the large curved areas we used 1/16" x 3/8", as the curved areas became sharper we used 1/16" x 1/4" and up around the headrest we used 1/16" x 1/8".

Begin planking the sides with several broad strips and then install the bell-crank assembly and the fuel tank. The landing gear assembly and the wire tailskid are also installed before proceeding further.

Hinge the stabilizer and elevator together, at this time, and cement the hinged surfaces in place on the fuselage; to permit proper completion of the planking. Then, bend the 1/16" diameter wire pushrod to shape and fasten the elevator control horn in position to yield approximately 30° up control and 25° down control.

Our model was flown with a Torpedo .15, and needless to say it was more than ample power. Almost any reliable .09-size engine would also be an excellent choice. We would not advise anything larger than a .15 displacement, even though the model is built sturdily enough to take larger sizes. Bolt the engine of your choice in position and fuel-proof the firewall and engine mounts.

Cement the lower wing in position and then complete the basic fuselage by making the required shaped blocks and tailpiece. The centersection wire strut is bent to shape and recessed into the top front block before it is cemented in place. The interplane struts are made from 1/16" plywood and bolted in place against the canted plywood wing ribs. Sheet strips 1/4" wide are cemented alongside for added rigidity and to facilitate wrinkle-free covering.

Complete the remaining fuselage details, such as the laminated cowl and the canopy and pilot assembly. The pilot can be obtained at your local hobby shop.

The canopy is not available at hobby shops, but it can be obtained from Enterprise Models Inc. The canopy comes from a scale version of the Corsair, and is extremely close in scale size and detail to what is required for the "Gulfhawk." Don't forget to mention what you need it for, and where you saw it, when writing.

Cement the fin in place, and offset the rudder 1/8" for flying. Also add 1/2 oz. of ballast to the lower outboard wing.

COVERING AND FINAL ASSEMBLY: Begin covering with the bottom centersection of the top wing, out to the interplane struts. When this is done, fasten the top wing in place, just as the bottom wing was fastened, and complete the covering of the top wing. The bottom wing is then covered in the same manner. After covering, spray lightly with water to shrink covering, thereby removing most or all of the wrinkles, depending on how well you covered the surfaces.

Begin applying finish by brushing on two to three coats of clear dope, smooth-sanding between each coat. Then apply three to four coats of bright orange over the entire model: this is the basic color of our model.

When thoroughly dry, mask off the areas to be trimmed in blue and white. All remaining decals and surfaces markings are then added, thus completing the model.

FLYING: As is the usual procedure, select a reasonably calm day for your first flights. It doesn't pay to be too hasty after putting so much effort into constructing a model.

Unless you are using a .15 displacement engine, do not attempt to throttle down your engine as it's wise to use all the power you have. However, we would suggest that you use only enough fuel for a few laps on the first flight and keep increasing the amount of fuel with each successive flight.

Biplanes in general are inclined to be a little tricky and quick to respond to any control movement, so remember when you're flying to keep both eyes on the plane, and off the spectators.