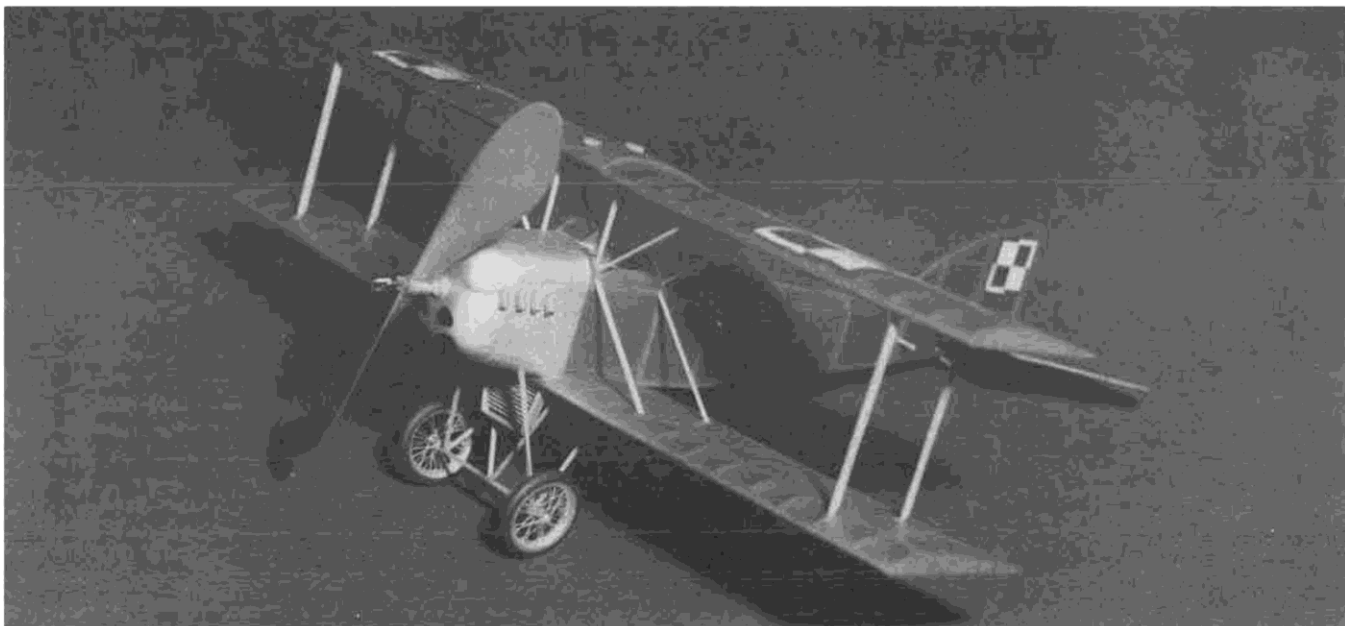




HANRIOT H-19

By WALT MOONEY . . . Latest 13-incher from the Prolific Professor of Peanut Planes is this Polish biplane from the 1920's. Straight lines, no stagger, no dihedral . . . couldn't ask for anything much simpler.

• Well! Another way to inspire the designing and building of a Peanut Scale model has been discovered. A few months ago, a Danish modeler named Eduard Carson enclosed in a letter to me, several sets of Polish and Russian decal insignias. A short time later I received a copy of *Polska Skyrdsla*, a Polish aviation magazine, from another friend, the editor, Marian Krzyzan. In the magazine was a three-view of the Hanriot H-19 as built by the Samolot (airplane) company. Scaling the three-view up to 13-inch wingspan, I was delighted to find that my two friendly correspondents had given me a first class inspirational set-up. The decals were exactly the right size for a Peanut Hanriot H-19.

I will at this point apologize to all the modelers who build this model and will have to make their own insignia. Sorry fellas, but look on the bright side.

Cutting tissue trim is a character-building endeavor, and besides, Polish insignia roundels are made up of straight lines and right angles. Mathematics says that a circle is just an infinite number of straight lines in a plane, connected together at a constant distance from a point. Reducing the number of straight lines by half has almost no effect. So why not simplify your circle down to four straight lines?

The model as built from the plans flew quite well without any adjustments, except for a little nose ballast to get the center of gravity as indicated in the side view. Propeller slipstream effects result in a wide left turn. The wings were built directly over the plan with no dihedral. However, after doping, both wings obtained about 1/16 of an inch dihedral in the leading edge and about 3/16 of an inch dihedral in the trailing edge. This also results in about 1/8 of an inch of

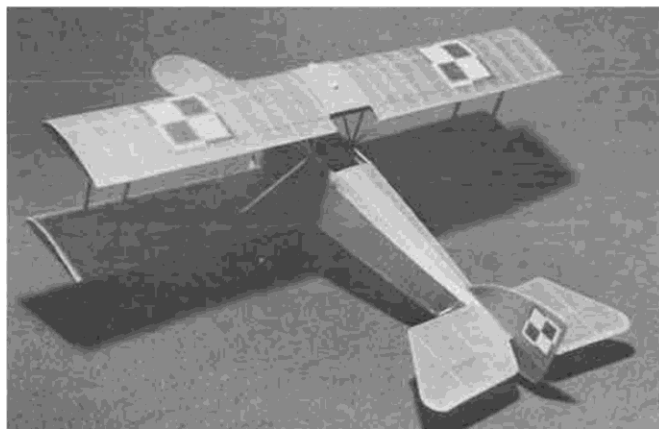
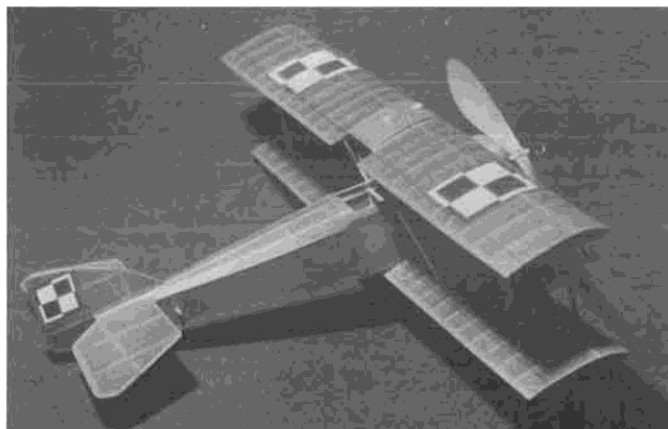
washout at each tip, measured trailing edge relative to leading edge. This is a good adjustment, so I left it in.

The construction used on this model is absolutely conventional. No new or untried techniques were used, so unless you are an absolute beginner, there should be no surprises as you build the model. Therefore, the following discussion will be about details rather than the basic structural assembly.

The wing tips are simply straight ribs on this model. To keep them from pulling in when the covering tissue is shrunk, they should be cut out of fairly firm balsa and the corner gussets should not be omitted.

The radiator is an important detail. Mine was made up with an outline of 1/16x1/8 balsa, and had cross-pieces of 1/32x1/16 balsa at 1/32-inch intervals. It looks quite good on the model and

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Only Walt's DH-6 Peanut can boast more straight lines than the Hanriot. Color scheme is an eye-catching green overall, with those Polish insignias being the only trim other than the control surface outlines. Flies fine with zero dihedral.

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doesn't weigh very much. It's draggy, but it's important to the character of the model.

I omitted all the brace wires because they are awful draggy. They are shown on the three-view, so you can add them if you want to do so.

All the strutting on the model in the photos was made from model railroad basswood. This can be obtained in lots of sizes and looks great when it is sanded to the proper cross-section. Thicker ribs are shown wherever struts are located. The vertical struts are made with pointed ends which penetrate the surface of the wings and are buried for a short distance into the ribs. When properly positioned, a single drop of Hot Stuff or other instant adhesive will make the attachment permanent.

The fuel tank on the Hanriot was in the center section of the upper wing, a fairly common location for gas tanks in early biplanes. To obtain more fuel volume, the tank airfoil is thicker than the wing. After the upper wing was assembled (and in the case of the model in the photos, covered with tissue), the center portion of the top wing was covered with soft 1/16 sheet balsa which was sanded to the correct "thicker" airfoil shape and then covered with tissue. Gas tank caps are simply circular balsa pieces.

The exhaust stacks on the model were made from thin plastic tubing. Balsa dowels will also work.

The model was covered with green tissue. One picture I have of the real airplane shows the engine cowling to be shiny metal, so that area is painted with aluminum dope.

I am thoroughly impressed with Fulton Hungerford's spoked wheels. They are strong, long lasting, accurate, and I think utterly beautiful. Therefore, I used them on the Hanriot. Of course, in reality they were probably almost always covered with fabric, so solid wheels would be just as, if not more, scale, but I hate to hide Fulton Hungerford's handiwork. (Please forgive me, all you scale purists out there.)

Note that the nose block has two bumps at the top front to clear the engine cylinder heads. The bumps are needed to look right, so carve accordingly.

Make the windshield out of thin transparent plastic. Fold it so it looks like three flat pieces.

Cowl openings in the front of the nose block are simulated with black ink, as are the control surface outlines.

The tail skid is made out of two pieces of basswood. Fill in the bottom of the fuselage at the aft end between the lower longerons with a small triangle of balsa to support the tail skid.

The insignia goes on the top of the top wings, on the bottom of the lower wings, and on both sides of the rudder, in the locations shown. As far as I can tell there were no other markings on the real airplane.

Thermals forever! Even indoors. ●