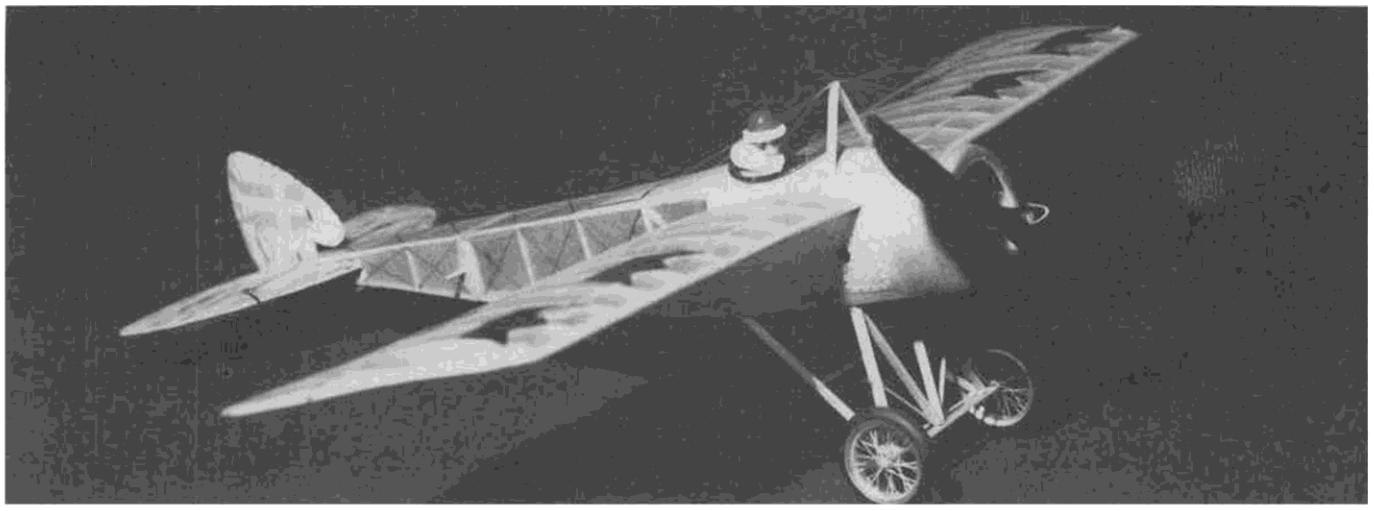

SWEDISH THULIN-K

By WALT MOONEY . . . Looking quite similar to last month's Siemens-Schukert E-1, this Swedish design from the same era has a few hardly noticeable deviations which make it just a touch more interesting.

• This airplane follows a classic trend in aircraft configurations that was started by Morane before World War One, and was carried along by such famous names as Fokker, Phalz, and Siemens-Schuckert. Probably the most familiar similar airplane was the Fokker E-111. In any case, the design is not new or strange, so why build a Peanut Scale model of it?

There are several reasons that can be mentioned. First, there was an excellent 3-view of this particular aircraft drawn by Bjorn Karlstrom several years ago, that gave good documentation on structure, finish and color. Second, the Thulin K had a larger set of tail surfaces than most of the other "look alikes", and thus can probably be made to fly better as a model. Third, the tail surfaces were plywood covered, and can thus be simply made of sheet balsa while keeping to scale type structure simulation. Fourth, the fabric was clear varnished, and a good simulation can be achieved with condenser paper covering, and fifth, the wing insignia consisted of three black crowns, easy to create out of black tissue and a nice change

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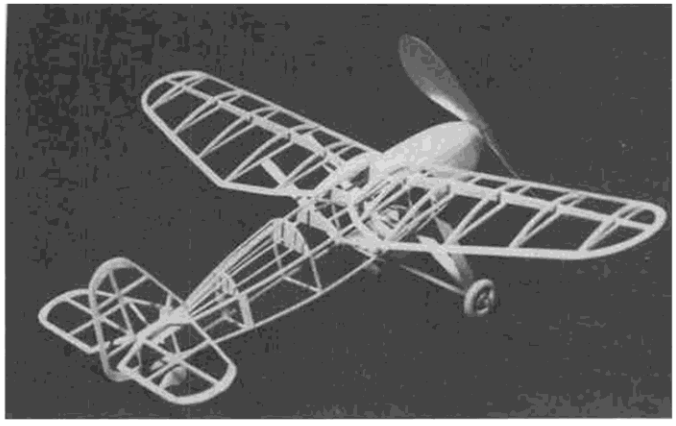
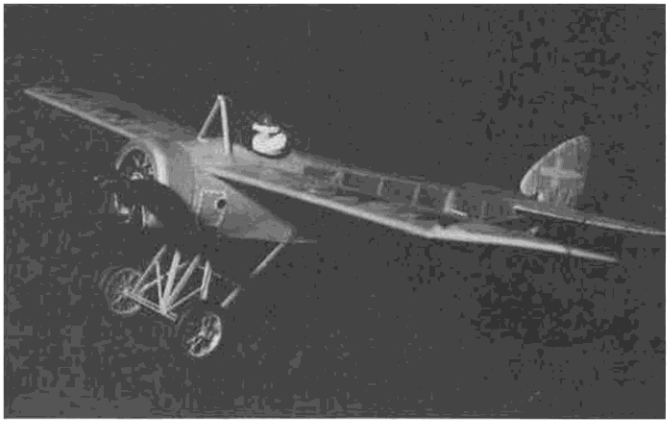
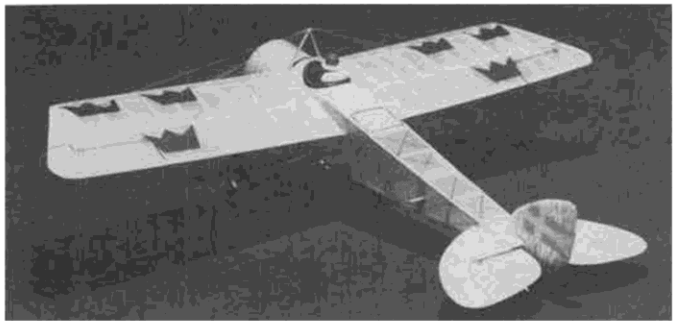


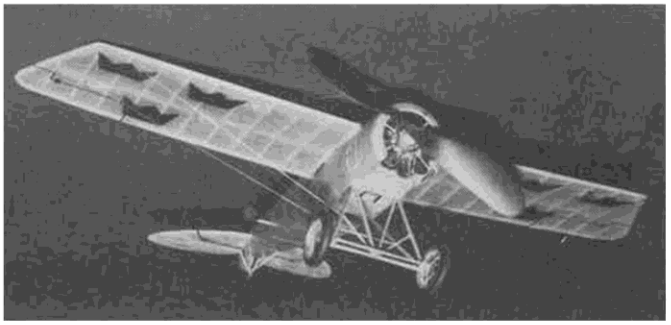
The next Peanut by Walt Mooney will be this Yugoslavian Ikarus IK-2, a World War II fighter.



Enough details to pick up some static points in competition.



Very typical design layout of early World War I aircraft. Similar to Fokker, Phalz, and last month's Siemens-Schukert.



This underside shot is a help to detailing the landing gear. Swedish markings are a nice change from the usual circles and crosses.

Peanut . . . . . *Continued from page 79*

from black crosses or blue, white, and red circles.

This model follows the structure of the original airplane fairly closely. Sheet balsa is used wherever there was plywood sheet on the original. All ribs, spars, fuselage uprights and crosspieces are in the proper position. The tail is solid, however, and the ribs are not built up, but are simply cut from sheet. The rigid landing gear structure is made from model airplane basswood, which hopefully won't have to take up any of the landing impact loads. The wheels are carried on a wire landing gear that extends parallel to the front struts and is not attached to them. It is therefore free to flex somewhat and will not break even under an impact that might completely remove the rigid structure.

One benefit of such a landing gear concept is that in the event of a hard impact that destroys the other structure, you are not eliminated from the competition. Your model can still be operated from the wire landing gear because the wheels are still in place. Another advantage is that with the wire in place, it's easy to locate the rest of the landing gear structure and hold it in the proper position while the cement is drying.

The wing bracing on this model is made from two-pound test monofilament fishing leader. This material is available from sporting goods stores, Thrifty Drug, and many other places. A roll is fairly inexpensive, and will last for a lot of models. It makes nice smooth wires and can be tightened by holding over a source of heat. It can also be retightened, which makes wing warp adjustments fairly simple if you find they are needed during flight testing.

The fuselage bracing is simulated by inking fine black lines on the tissue covering after it is shrunk and doped. If you want more authenticity, use monofilament line to brace the fuselage before covering.

The wheels are by Fulton Hungerford, and although they should be tissue covered to match Karlstrom's 3-view, it just seems a shame to cover up those beautiful spokes.

The engine on the model is a true rotary. It rotates with the propeller. It was obtained from a 1/32 scale Fokker Triplane plastic model airplane kit, and modified to go on the propeller shaft. It looks great spinning around, but if you are interested in maximum duration I would suggest that you make it fixed and only rotate the propeller. The cylinders pump quite a bit of air as they spin around, and that takes energy which could be driving the propeller. Almost surely you'll pick up more flight points with the energy than scale points with the "rotary" engine.

The 3-view shows a pilot, and the pilot adds a lot to the airplane. The head was carved from styrofoam, as was the fur collar on his coat and the fur rim on his hat. The top of his hat was made from half of a medicine capsule (The medicine tasted awful, but a cap for the pilot was worth the sacrifice).

Tail skid structure was built up using model railroad basswood. Most other details were drawn in with black pen. The movable surface outlines and hinges as well as the step and baggage hatch are so depicted. The surface hinges are painted silver inside the small rectangles to simulate metal. The engine cowl is painted aluminum.

The fuselage is a simple box structure made four longerons and uprights and cross braces. Build the two sides over the plans. When dry, remove from the plan, separate the sides and add the cross braces to the sizes shown in the top view. Then add the top and the side formers at the forward end, and the sheet balsa forward panels.

The tail surfaces on the model in the photos were made from 3/32 sheet. Shape them to the proper airfoil section. The flag that is painted on the vertical is light blue with a yellow cross.

The wing surfaces are built directly over the plans. Ribs are cemented in place between the leading and trailing edges. Cement the spars in the notches after all the ribs are in place. Bend the landing gear wire to shape and install it in place on the fuselage.

Sand all the structure to remove any roughness and sharp edges. Shape the wing leading and trailing edge to give the proper airfoil shape.

Cover the fuselage and the wings with condenser paper. It will have to be attached to the lower surface of all the ribs. When the tissue is securely attached, water shrink the tissue by fogging on a light spray. When it is dry, give the tissue two or three light coats of clear dope. Assemble the wings to the fuselage. Make sure that they are at the same angle of incidence and at the proper dihedral angle. This may require a little cutting and trimming at the wing root, or even a little fill in with a thin shim of balsa.

The horizontal tail is installed in the last bay of the fuselage. Cement it only to the last cross sticks. The front of the horizontal tail should be left free for future flight trimming. The vertical tail is cemented in place. When the tail is dry, turn the assembly on its back and build the tail skid assembly in place on the fuselage. Then build the main landing gear structure in place between the wires of the landing gear. There are a lot of small sticks in the landing gear structure, so be patient with the effort, and cut and fit them accurately.

Build your dummy engine (or buy a plastic kit with a suitable one, to save the time). Set up the cowl and firewall so that the entire firewall, cowl, and engine assembly can be used as a removable nose block.

Add cabane struts in front of the cockpit and then install the wire braces. Note that the brace wires are attached to the landing gear legs about halfway up.

Windshield, cockpit combing, fuel and oil tank caps, and side access panels on the fuselage sides, including the carburetor air intake, complete the details.

This model, with all its wires and braces, to say nothing of its revolving engine is rather high on drag. Flight times are not likely to be high unless you've been very careful to keep the weight as low as possible. Flight times with the original have been around 20 seconds. Flight weight with a loop of 3/32 rubber, 10 inches long, is half-an-ounce. If you are flying indoors and the flying site is small, a drag flap on the left wing, about 3/16 by 1-1/2 inches long can help to get a tighter but safe circle.

Have fun with your Swedish Peanut. •