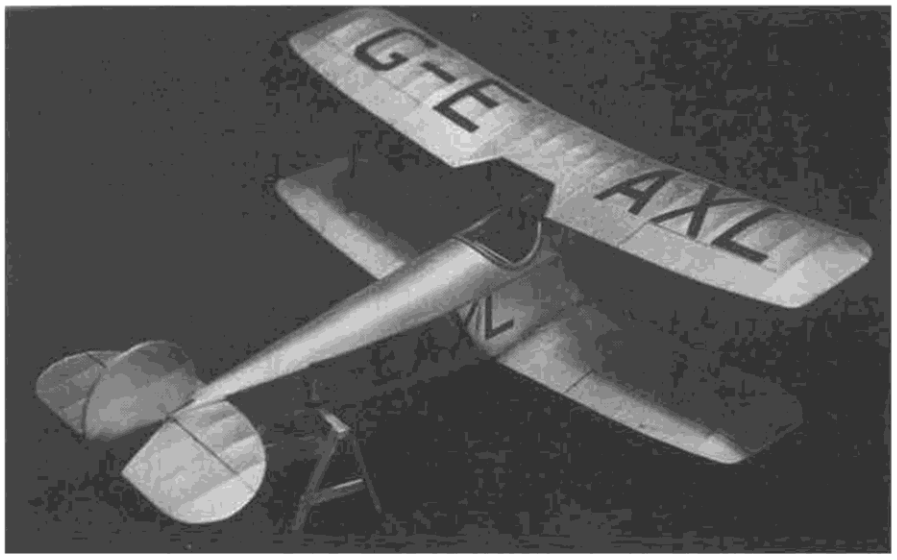

A real classy looking biplane, the AVRO is all silver with black lettering. Extremely short nose moment calls for light tail construction and a bit of ballasting.

Lighting gives impression that lettering is raised, but it isn't. Rigging adds realism!

Peanut Scale AVRO 534C

By WALT MOONEY . . . A great Peanut for the two-winger set, the AVRO is a good subject for CO_2 power as the weight (?) of the motor will help to overcome the short nose moment.

● This is a peanut scale model of a little racing airplane built by AVRO in 1921. It was ill fated, in that it never raced, but was lost due to power failure, crashing in the water. This particular version of the AVRO Baby was selected for a peanut scale model because it had shorter wings than any other version and therefore scales into a larger peanut. Its proportions are just about ideal for a model with one exception . . . the nose is rather short. Because of this, it is important to keep the tail end of the model as light as possible. A heavy nose end for extra strength and weight is not amiss, either.

The model is complicated enough to require more than the usual amount of time in construction. The main rib spacing is scale, however, the leading edge riblets, between each rib, were omitted. On the model in the photos, all of the surface outlines, vertical tail, horizontal tail, and the wing tips and trailing edges, were laminated from three layers of 1/16th by .020 model railroad basswood strip. The technique for doing this has been covered before, in MODEL BUILDER, so there is no need, I hope, to go over it again. The wing tips and trailing edges have been drawn to be made out of sheet balsa for those who may prefer it. Obviously, the tail outlines could also be made out of sheet balsa.

The fuselage is a very conventional structure. Where the real airplane had metal panels at the nose, we have shown 1/16th sheet sides and bottom to simulate the metal. The upper cowl is made up of two layers of 1/32nd sheet, to make the wrapping easier and still maintain the nose strength and weight desired. From the instrument panel back, the top of the fuselage is covered with 1/32nd sheet. Make sure that this is very light balsa. Sanding it a little thinner before applying, will help also.

The nose block is made from a solid balsa block and has a square (approximately a square) of 1/8th balsa cemented to its back side to locate it in the front of the main fuselage structure.

The landing gear wire is bent to the shape shown in the front view (Only about half is shown, so be sure your wire is long enough to include the other

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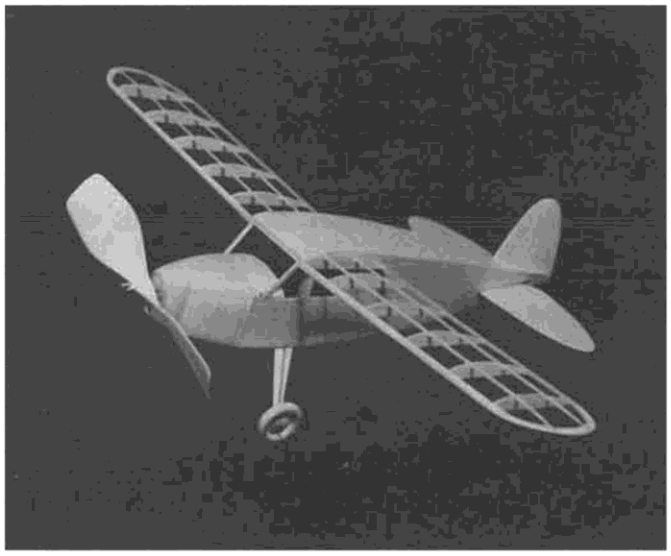
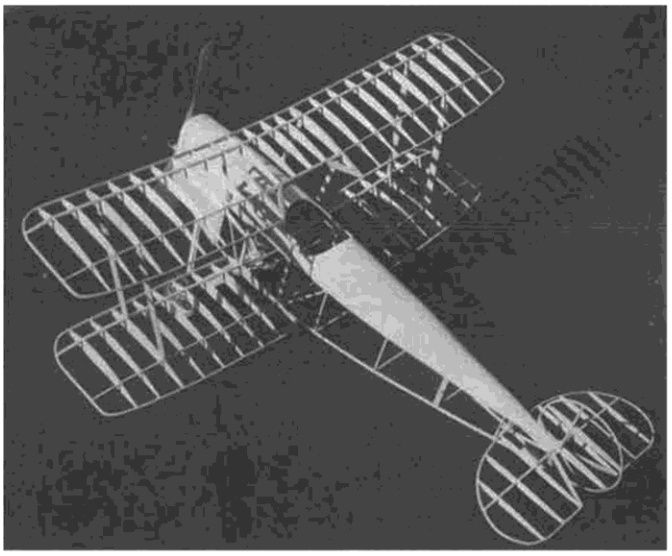


Next month's peanut is the Avions Paul Aubert "La Cigale," which means "Grasshopper." . . . Not a drink.



Something more than a "Megowlike" peanut in construction, the AVRO nevertheless is devoid of tricky building details.

AVRO . . . . . *Continued from page 39*
side as well). A slit is cut in the bottom of the fuselage and the landing gear wire is inserted up into the nose and cemented to the sidewalls of the fuselage. Following my usual custom, the landing gear struts are built up and cemented in place on the fuselage, but not attached to the wire. The wire is thus allowed to flex on a hard landing and usually the struts will not break, because they don't feel the impact. Fill in the little triangle at the bottom of the aft end of the fuselage to support the tail skid.

Wing and tail structure is generally conventional. The wing cutout is framed out of 1/8th thick balsa sticks. The tail is built up out of 1/16th square sticks and then the top and bottom of the ribs are added as soft balsa sticks which are then sanded to the rib section shown.

All the struts are made from 1/32nd thick model railroad basswood. At the top and bottom of the struts, as indicated by the small dots, drill a small hole. This hold will make rigging the wires much easier after assembly.

After sanding the structure thoroughly, the model is covered with lightweight tissue. This model was painted with silver lacquer, so to keep the paint job as light as possible, it was covered with black tissue. The tissue covering was water-mist shrunk, and after it was dry, two light coats of clear dope were applied overall, with four coats over the balsa on the nose. When the dope was dry, the lettering was masked off, using letters cut from drafting tape. Then, using a can of silver lacquer spray, a light coat of silver was applied on all surfaces. Silver covers very effectively, so make sure the coat is as light as possible. Real airplanes painted silver are not very glossy, so the peanut shouldn't be either. After the silver paint is dry enough to handle, carefully remove the masking tape. The black tissue thus uncovered makes just fine lettering, as shown by the photos.

To assemble the model, make a jig-board out of a piece of one sixteenth sheet. This piece should be as long as the top wing center section is wide, and as wide as the distance between the front of the front spar and the back of the aft spar. Make a notch in each corner of the jig-board to locate the top ends of the center section support struts. Press the top ends of these struts into the notches, and then cement the bottom ends of the struts into slots cut into the top fuselage covering at the proper places. The jig can now be carefully adjusted to properly simulate the wing center section. When this assembly is dry, the jig can be removed from the top of the struts, which will now be rigidly secured in the correct position for attaching the upper wing. The lower wing halves are simply cemented to the sides of the fuselage and the outer wing struts are cemented in place. The outer wing struts are located on the third rib from each wing tip, directly over or under the spars, as the case may be.

There are two horizontal tail braces going from the lower longeron to the leading edge and to the spar at the second rib out from the fuselage. These are 1/16th by 1/32nd basswood.

Details are what give these old biplanes character. The exhaust stacks are made from 1/8th diameter aluminum tube. The rim around the cockpit is made from a piece of brown plastic tube. My source was the insulation off a common piece of household electric cord. Slit the insulation carefully and remove the wire, then fit the slit around the edges of the cockpit opening and cement in place.

A detail on my model that was not visible on the real airplane is wire wheels. Fulton Hungerford, of 1770 Lilac Circle, Titusville, Florida 32780, makes such nice wire wheels that I hate to cover them with fabric, as they were on the full size airplane. They are 1-3/8 inch diameter by 3/16 wide for this model.

The last detail is the wire bracing. I prefer monofilament fishing leader for this, but any thin thread will do, if you prefer. This is where the holes in the struts come in handy. Just thread the wires through the holes, pull them taut, and tape them in place with masking tape outboard of the struts. Then put a small drop of cement on the strut where the wire enters it. When dry, cut the excess wire off the outside of the strut and remove it and the masking tape. It's easy to get tight wires this way. Incidently, use monofilament of five pound test or less. I used 20 pound test on the model, and it has so much stiffness that it is too hard to straighten out under tension.

My model was very tail heavy, and required ballast to get the balance point in the position shown. Normal flight flight adjustments; elevator, rudder, and thrust line, can be used to adjust the flight path once the model is balanced.

GO BABY, GO! ●