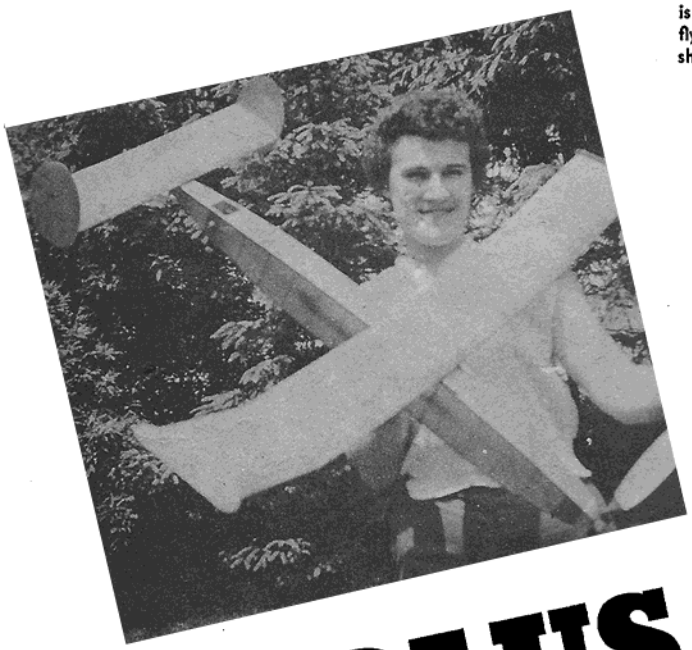

Elsie Phillips holds "Aeolus" skyward. The ship has a light-weight frame that is suited for Unlimited Rubber contest flying. A slightly heavier airframe should be used if you plan Wakefield.

AEOLUS

by Art Phillips

Aeolus is the god of the Winds. Winds or winds, this ship will hold its own with the best ones.

Square and functional lines, typical of practical contest models, are used throughout the design.

● A rubber job is a welcome relief from the scream of hot engines and the ever-present nerve racking possibility of an over-run. Also, nothing is more aggravating than finding you left your props, fuel, or battery behind when you reach the field. With a rubber job all you do is bring your winder. Within minutes your model is in the air. Rubber motors never fail to start.

If you have never tried a model of this type why not let this be your first? The author's averages close to three minutes per flight in cool evening air, which means that the Aeolus could be the answer to your contest needs for this season. Why not give it a try?

FUSELAGE: Enlarge the side view of the fuselage. This should not be difficult as all the necessary dimensions are on the plan. Construct the 2 sides of the fuselage over your drawing in the conventional manner. When the sides are dry, cut the twenty 1/16" x ⅛" x 1⅞" balsa crosspieces from medium-hard stock and cement them in place. Make sure the assembly of the fuselage sides is as square as possible.

Next, cement the nose crosspieces in place and join the 2 fuselage sides at the rear only. When the cement has dried thoroughly, add the remaining crosspieces. The fuselage sides will follow the natural bend of the wood used for the longerons. Cut the crosspieces to fit.

Next, add the ⅛" sheet balsa nose sheeting and the ⅛" sheet for the motor dowel retainer. Dope the entire fuselage frame for added strength and, as protection against the rubber lube. The last step is making the stabilizer platform. Cut out the parts and cement them in place making sure the platform is square with the rest of the fuselage.

WING AND TAIL: After drawing full-size layouts for the wing and stabilizer, cut out the required number of ribs from 1/16" and 1/32" stock as shown on the plan. Begin construction by placing a 1/32" shim under the front of the ⅜" x 3/32" wing trailing edge. This strip keeps the trailing edge at the correct angle for the proper undercamber. From here on, the construction is conventional. Add the ribs at the dihedral joints after the breaks have been made. Add the spars, cutting the notches deep enough so that the spars will not interfere with a smooth covering job. The rudders are cut from 1/16" sheet and sanded to a symmetrical section. The trim tab is on the right rudder only.

COVERING: The wing and stabilizer are covered with Jap tissue and given

3 coats of Testors clear dope. The fuselage can be covered with Silk-Span or 2 layers of tissue. The Silk-Span is a little easier for the beginner. Dope the fuselage with 5 or 6 coats of dope.

PROP AND NOSE BLOCK: Select a soft block for the prop and carve it to shape making sure there is at least ⅛" undercamber in the blade. Give the prop 2 coats of dope and cover it with silk. Ten more coats of dope are then applied. This type of construction produces a strong, lightweight prop. Bend the metal and wire parts as shown on the plan. Work carefully, the prop is the heart of any rubber job.

When the metal and wire hinge is in place, bind it well with thread. The same procedure is followed for attaching the counterweight. The nose block is made from ¼" sheet balsa, laminated as shown. Make sure the shaft is true and does not wobble in the nose block. A piece of 1/16" i.d. brass tube is used to make a good bearing.

FLYING: Test glide the model until a flat glide is obtained. Any stalls or dives can be corrected by moving the wing forward or backward until the desired glide is obtained. Next, put in about 50 turns with a winder and launch the model. If the model stalls under power add 1/16" down-thrust. Try the ship again on the same amount of turns and if no stall develops add right-thrust until a wide right-hand turn is obtained. Gradually increase the power until the ship climbs in a tight right spiral. Glide turn can be adjusted with the rudder, if the built-in offset is not enough to produce a wide left-hand glide circle.

We hope that you will have many happy hours flying "Aeolus."

BILL OF MATERIALS
(Balsa unless otherwise specified)

18—1/8" x 1/8" x 36" (Hard)	Fuselage longerons, wing and stab. leading edges
6—1/8" x 1/16" x 36" (Medium)	Fuselage uprights and cross-pieces
18—1/16" x 1/16" x 36" (Medium)	Wing and stab. spars
1—1/32" x 3" x 36" (Medium)	Wing and stab. ribs, stab. platform, gussets, tip rudders
1—1/16" x 2" x 36" (Soft)	Rudders, wing and stab. ribs, stab. platform
1—1/8" x 2" x 36"	Nose sheeting, motor dowel retainers, wing rails
1—¼" x 2" x 36"	Nose block
3—⅛" x 3/32" x 36"	Wing and stabilizer trailing edges

Prop block 9" x 3" x 1½"; ⅛" plywood; .015" brass; .045" wire; 1/16" wire; spring; bobbin; aluminum sheet; lead for counterweight; thread; wood screw; ¼" o.d. tubing; tissue or Silk-Span; dope; silk; cement; 3/16" x 1/30" T-56 or similar rubber for motor.

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