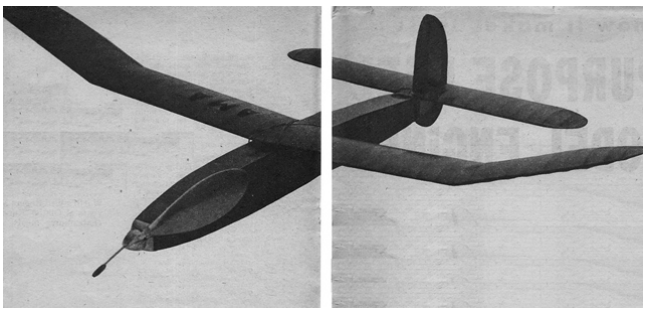
Challenger



Bob's stick model won the famous Mulvihill trophy twice, took 3 firsts at the Nats by Bob Bienenstein.

This stick job was designed with one thought in mind: the need for a consistent contest model that would fly in all kinds of weather and hold up with the best of them. The ship has been thoroughly proven and has lived up to all the requirements. Its contest record is proof enough of its ability to snare top hardware at any meet. Most impressive wins were the taking of first place for three consecutive years at the Nationals, plus capturing the famed Mulvihill trophy twice, which is a record in itself.

There have been two changes made since the original model took to the air. A sheet leading edge on the wing was omitted since it proved unnecessary. We also incorporated a tail pop up which was found to be more effective.

It is also simple and fool-proof. (We can thank Dick Korda for that one.)

With a little care and patience, you too can have a hardware collection. Let's go, and don't spare the glue.

Lay the drawing on a smooth soft board. Clear white pine, preferably. Make certain the board is perfectly straight, as this will assure you of warp-free surfaces.

The fuselage longerons should be straight-grained and medium hard 5/32" square balsa. Place them in their exact position on the drawing. Next, add the cross braces, placing the uprights in position first. When the first side has been completed, build the next side directly on top of the first. This will assure you of similar straight sides. When dry, separate with a razor.

Now join the sides together, starting at the center and working toward the front and back. Then fill in the nose and tail sections. The nose block face of the fuselage is covered with 1/32" plywood to prevent it from splitting, as it takes quite a beating. The fuselage is now ready for sanding and covering.

The best way to start the wing is to make a metal template of the wing sections, using this template to cut out the ribs. These are made from medium 1/20" quarter grain sheet balsa. A good selection of wood will give you a strong and light wing.

Next, taper the trailing edge,' and notch for ribs. Pin this to the plans. The spar should be straight and hard 1/8"x1/2". Mark off the rib location and then slide the ribs over the spar to their proper places. Put glue on all the notches and push the ribs down, making everything line up. Then add the tips, which are cut from 5/32" sheet. Glue on the leading edge. After this is done, glue all the ribs to the spar. When the wing is thoroughly dry, remove it from the plans. Put the correct dihedral in, starting with the tips first. When this is complete, put in all the gussets.

The stabilizer is constructed the same as the wing.

Make the rudder outline first. Then place the ribs and spar in proper location.

After cutting the propeller block to proper outline, carve in under camber, get a smooth job. Finish this completely before working on the front side of the blade. When the prop blade is finished, sand and give two coats of clear dope. The spinner is made from layers of 1/4" hard sheet balsa glued to the prop center. It is best to clamp this until dry. Then carve to shape. When the prop and spinner are complete, cover the hinge and spinner with gauze. Give this several coats of glue. The whole prop is then covered with tissue. This will greatly increase the life of the prop, and give it a satin, smooth finish.

The tail pop-up dethermalizer is quite simple. Start by gluing the hold down wire on the leading edge of the stab. This is one piece. By changing the angle of the wire, you will also change the angle at which the stab will pop up. There is no limit-string necessary with this

Challenger

arrangement. To align the stab, glue a piece of %" square balsa under each side of the stab. This will prevent it from shifting I and losing adjustments.

Power is supplied by 16 strands of 1/4" T-56 50" long. This may vary with conditions. Ship is adjusted to turn to right. Power for climb and glide should be about the same, approximately a 300 foot circle. When the correct thrust adjustments are found, you can carve away or add to the nose block. Calculate all your adjustments carefully, and with thought, for your ship will fly no better than it has been adjusted.

Wind her up and let 'er go. Lots of luck.
P.S. Don’t forget to light the fuse.