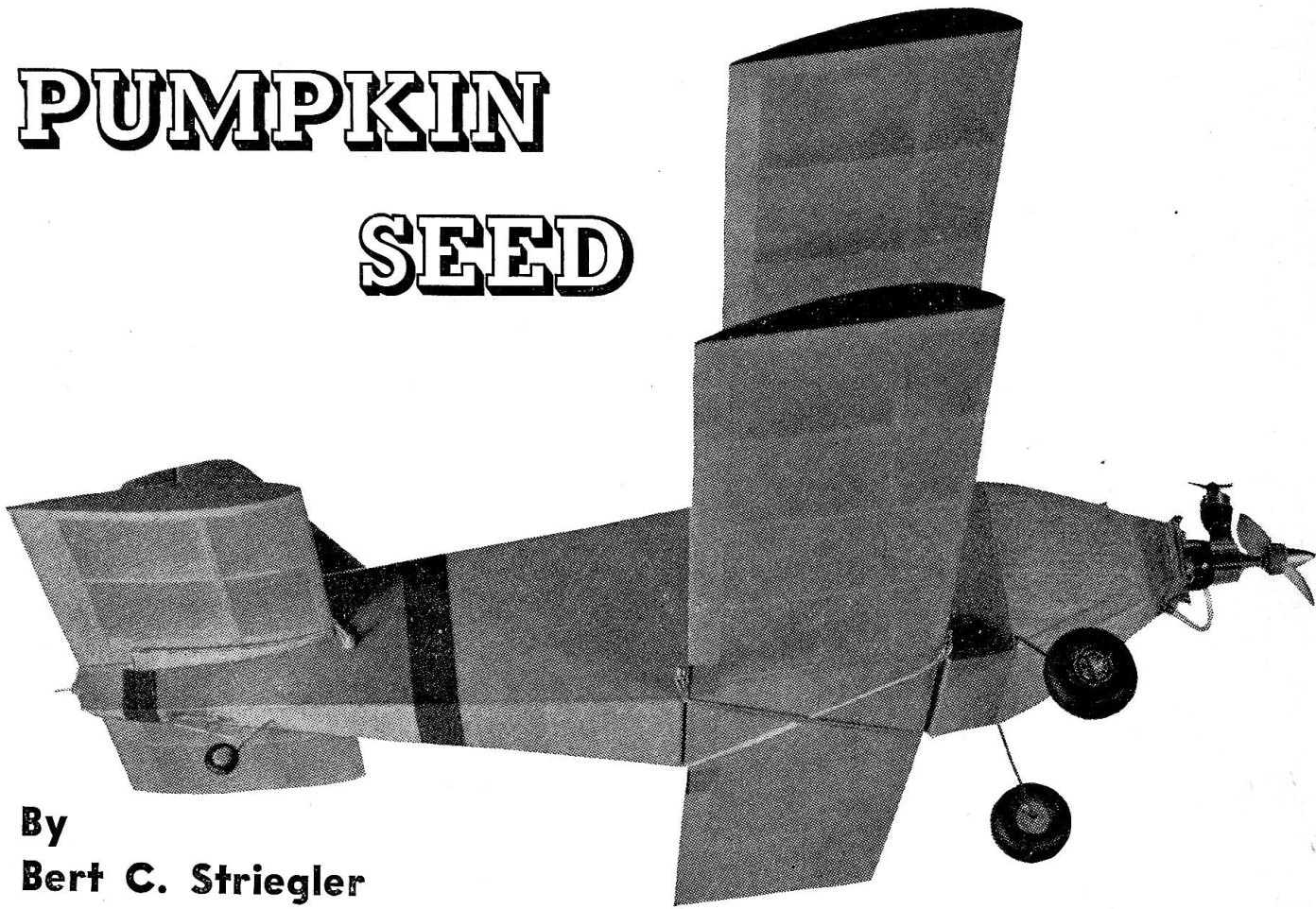


PUMPKIN SEED



By
Bert C. Striegler

A 20 inch span biplane
for lightweight receivers
and 0.3 - 0.5 c.c. engines

Build it Now!

I LIKE biplanes, but best of all, I like fat little radio controlled biplanes.

Such is the "Pumpkin Seed", designed to be compact, but still be able to accommodate a reasonable variety of single channel radio control gear. As can be seen from the plan, the fuselage will swallow most compound escapements which I, as a slow-witted pilot prefer. There is even room for a standard pen-cell battery box, an item which most models of this size will not take at all, and there is no problem pushing your fingers down into the radio compartment when you need to work on the radio gear.

Straight lines and simple structures make it ideal for quick construction. Start by making all the fuselage formers. F1 is $\frac{1}{8}$ in. ply and F1a $\frac{1}{8}$ in. balsa sheet. Cut F2 and F3 from $\frac{3}{32}$ in. ply, drilling as shown ready for the undercarriage legs and wing struts which are sewn on later with cotton or thread. Remember to cut out the centre of F3 to fit your escapement. F4 and F5 are made up from $\frac{1}{8}$ in. x $\frac{1}{4}$ in. balsa strips, while F6 and F7 are $\frac{1}{8}$ in sheet.

Next, shape the wing struts from 20 s.w.g. wire and bind them to formers 2 and 3. The torsion type undercarriage is shaped from 16 s.w.g. wire

and bound to former F2 with thread or cotton. This type of gear, as drawn, has proved very satisfactory, so don't bother to modify here.

Cut the fuselage sides from firm $\frac{1}{16}$ in. sheet. Score and crack where formers F2 and F3 are to fit by placing a straight edge on the inside face and carefully lifting the free end of the balsa side from the board. The nose brace is cut from $\frac{1}{8}$ in. sheet. Shape it carefully because this part ensures correct alignment of the nose. Now cement $\frac{1}{16}$ in. doublers to the inner faces of the fuselage sides, leaving enough slot space to insert formers F2 and F3. Now join the two fuselage sides with these two formers and the nose brace, cementing well, particularly on the inside faces where the cracks in the fuselage sides occur. Be very sure that the fuselage is square by the use of set squares. Once this is done, insert all the formers except F6.

Now install your escapement and torque rod. Temporarily fit the rubber motor and check that the escapement is working freely when in position. Cement former F6 in place by slipping it over the torque rod wire. Use a piece of tin for a bearing.

If preferred, install a battery box, but this is not

(Continued on page 132)

altogether necessary. Install and wire the radio system, securing and binding all soldered joints with thread and contact glue to prevent embarrassing fractures later.

Plank the top and bottom of the fuselage with soft $\frac{1}{16}$ in. balsa sheet, grain across the fuselage for strength. Add the $\frac{1}{4}$ in. sheet top and bottom of the nose and sand smooth. Cut the fin and rudder from $\frac{3}{32}$ in. sheet balsa, hinging the rudder with thread for free movement. Add the assembly to the top of the fuselage, not forgetting the $\frac{3}{16}$ in. balsa braces.

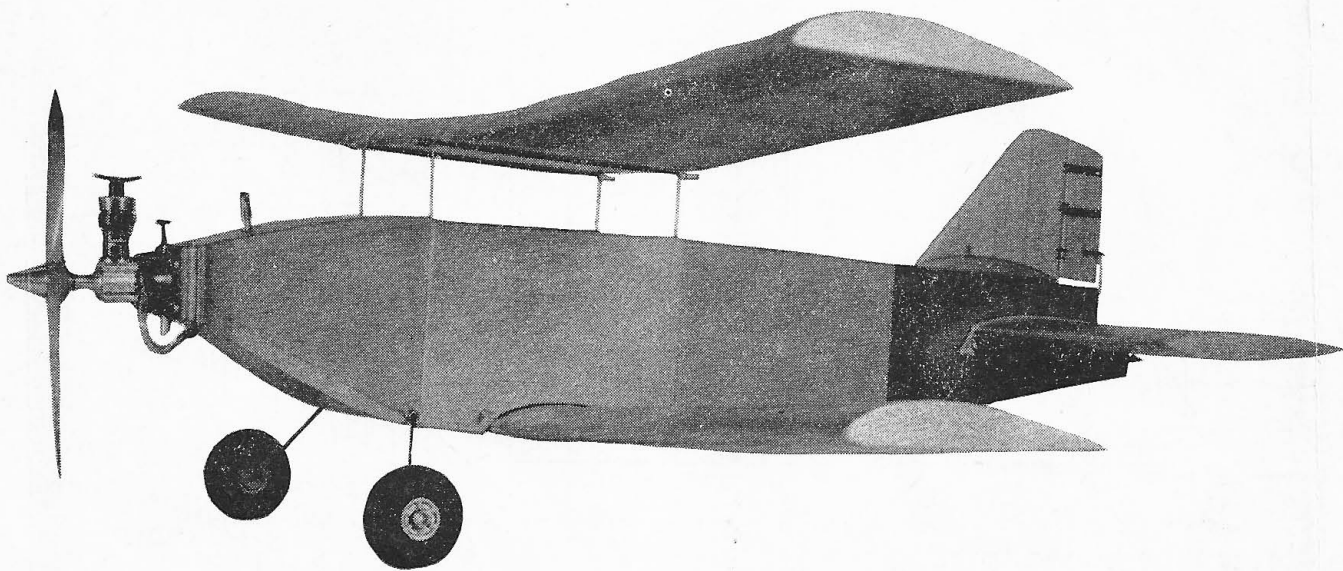
Build the wings carefully on a truly flat surface. Lay down leading and trailing edges and $\frac{1}{8}$ in. sq. lower spar, adding the top spar, $\frac{1}{16}$ in. leading edge sheet and wing tips to complete the structures. Upper and lower wings are identical.

The tailplane is quite straightforward, but it will be necessary to pack-up the leading and trailing edges, to permit the insertion of the symmetrical ribs.

Cover the entire model with lightweight tissue and clear dope, pinning down the wings and tailplane to prevent warps creeping in. Coloured tissue may be used for trim, but if you must use colour dope, then do so sparingly.

The original Pumpkin Seed weighed in at 11 ozs., which is a good guide, and it flies very nicely even though our altitude out here in Wyoming is over 5,000 ft. The rudder travels about $\frac{3}{16}$ in. in each direction and reduced travel will of course result in less rapid reaction for the slow pokes among us. Use thrust line adjustments to get a straight flight path with rudder at neutral. Have fun . . . I did!

Simple silhouette shows the wire cabane struts which give the model a light, airy appearance and afford plenty of shock resistance to the upper wing.



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