

# VARI VIGGEN



By STEVE GARDNER . . . One of the most unusual Peanuts to come along, Steve's Vari Viggen is an excellent flier. Guaranteed to cause heads to turn!

• If you like to build unusual models, this one will fill the bill. It is a twin-tailed, canard pusher homebuilt, designed by Burt Rutan, of the RAF (Rutan Aircraft Factory). Rutan has also designed an all-fiberglass canard pusher called the VariEze, but this aircraft wouldn't make a very good peanut, so I built the Vari Viggen, an all-wood, two-place, semi-aerobatic homebuilt.

As a peanut, the Viggen is a real winner. It has lots of wing to carry its greater-than-average weight. It is very stable with its small amount of dihedral, probably because of the keel effect of the fins and rear fuselage. The canard (stabilizer) is scale size and shape, and is more than adequate with a forward CG and lots of incidence.

The full-size aircraft is very stall-resistant; since the first thing to stall is the elevators, the wing never gets a chance to stall. This characteristic is in the model, too, so you don't

have to worry about stalls.

The model's construction is conventional, even if the shapes of the parts aren't, so you should have no trouble with it. The fuselage consists of two sides joined by formers and cross braces. Formers No. 2 and 3 are laminated from several thin strips of balsa. This is unusual for formers, but it looks better and is closer to scale than sheet balsa. The nose and motor plug are made of balsa blocks, and the engine cowls are made from Dristan bottle corners. A 5-inch Peck Polymers prop, trimmed to 4-1/2 inches, will do fine with a 12-inch loop of 1/8-inch rubber.

Only half of the wing is shown on the plan, but it is very easy to build. The tip rib is 1/8 sheet balsa, the dihedral break rib is 1/16 sheet, and all others are 1/32 sheet balsa.

The canard is also built with 1/16 and 1/32 sheet ribs. When mounting the canard, glue only the leading edge, so that it will break free,

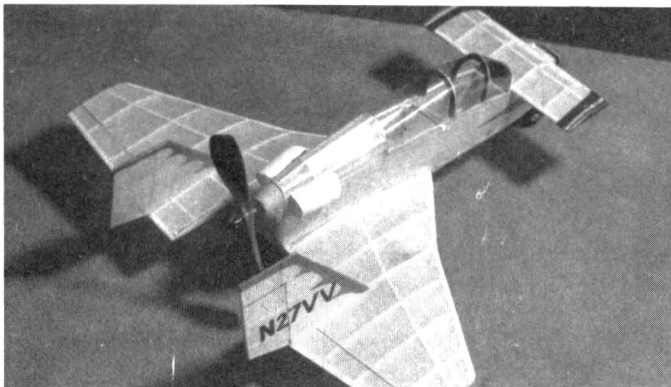
instead of destroying the nose.

Build the fins straight, and don't shrink the covering or you will get real warps. The fins are big and thin, so they can warp badly. Glue them to the wing at the dihedral ribs, and at a right angle to the outer wing panels.

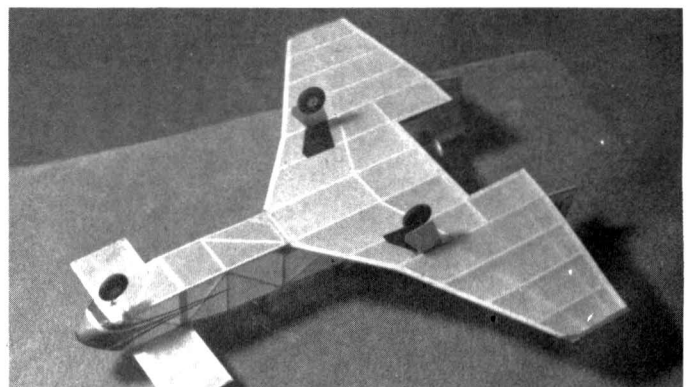
One coat of Sig Lite Coat dope finishes the model. The red and blue trim can be added now.

To fly the model, balance it well forward, and use lots of incidence in the canard. With its high thrust line, it will not need much down thrust, but some right thrust may be needed, although this isn't very effective. The model will fly best to the right, but it will fly well to the left, too. Also, a little wash-in seems to help keep the inside wing up.

You now have an interesting model to take to the next contest. Good luck with your Vari Viggen! •



Like all properly-designed canards, the model is very stall-resistant. Lots of wing area.



Bottom view gives a good idea of the amount of wing area. Stabilizer is vulnerable, is glued lightly so it can break free.