

Al Backstrom from Texas designed this intriguing little model – a must for tailless fans

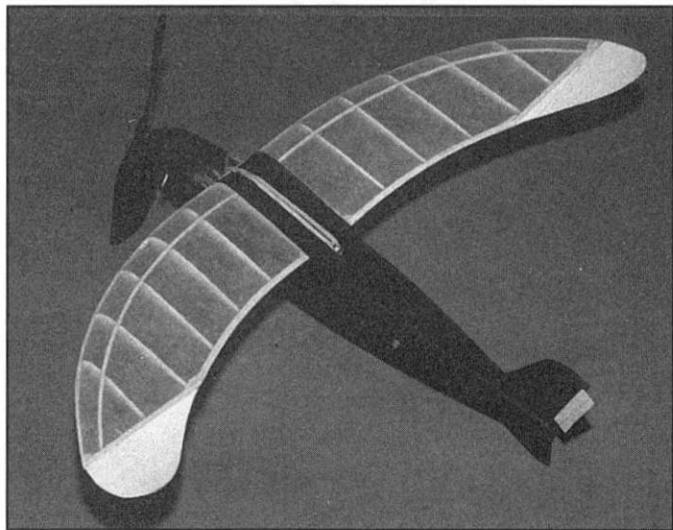
The Zanon seed

The only type of fixed wing flying device I have been able to find in nature is the Zanon seed. It is truly a fascinating thing to watch fly as one can be dropped in any attitude and it will recover and start flying at a leisurely pace and with a good glide ratio for such a small size. The surface is very flexible and the trailing edge area seems to flutter in the breeze in a manner similar to a flag waving. The Zanon



The Zanon seed was the inspiration for Al's very attractive little model, called Persey. We're afraid he did not tell us who the young lady is.

HERE'S 'PERSEY'!



seed was the inspiration for Etrich's experiments with tailless airplanes that were later to evolve into the Taube configuration of the pre and early WW 1 era.

The configuration of the wing of Persey is a higher aspect ratio derivation of the Zanon seed. I first built this type of model shortly after I returned to modelling several years ago. Due to my inexperience in trimming at the time I never was able to get one to fly satisfactorily. Being the type who does not give up easily I do not throw many things away. This led to fuselages of different type being tried, the last being the one shown in the drawings. This did not fly properly when first built and so it was placed in a box for future reference.

I ran across it later and after looking it over I corrected the warps, moved the rear motor peg forward and installed a new prop. With these changes the model has flown beautifully ever since. It seems to be one of the rare types

that flies better as it ages. The model was designed to roughly meet the FAC Embryo Endurance class. This was the reason my model has pants and dummy exhaust stacks. It takes a contest director who is not hung up on the details of the rules to accept it so I now just consider it a sport model.

Now that Al has made this model perform so well it will be interesting to see if anyone tries a bigger, or even a powered version...

Construction

Construction of the model is conventional stick and tissue procedure so the discussion is limited to the curved wing. The first thing is that all of the curves for the leading edge, spar, and TE are the same. I cut this shape from a scrap piece of 1/2" plywood and formed eight pieces of 1/16" sq. at one time. They can be done in smaller quantities if it is convenient. Use hard balsa for the LE and spar with lighter material for the TE. All wing ribs are the same shape except for the two outer ones which are trimmed as shown from the same cross section. For this type of rib I cut out oversize ribs and pin them together as a stack. They can be sanded to a common shape and spar notches added while stacked. The only way I could cover the wing without many wrinkles was to do it with silkspan (modelspan). This does produce a satisfactory covering.

The wing may be glued on or attached with rubber bands. I used rubber bands and recommend them. Use a 6" diameter plastic prop with a loop of 3/32" FAI tan rubber about 16" long for power. Double this loop for test gliding.

Flying

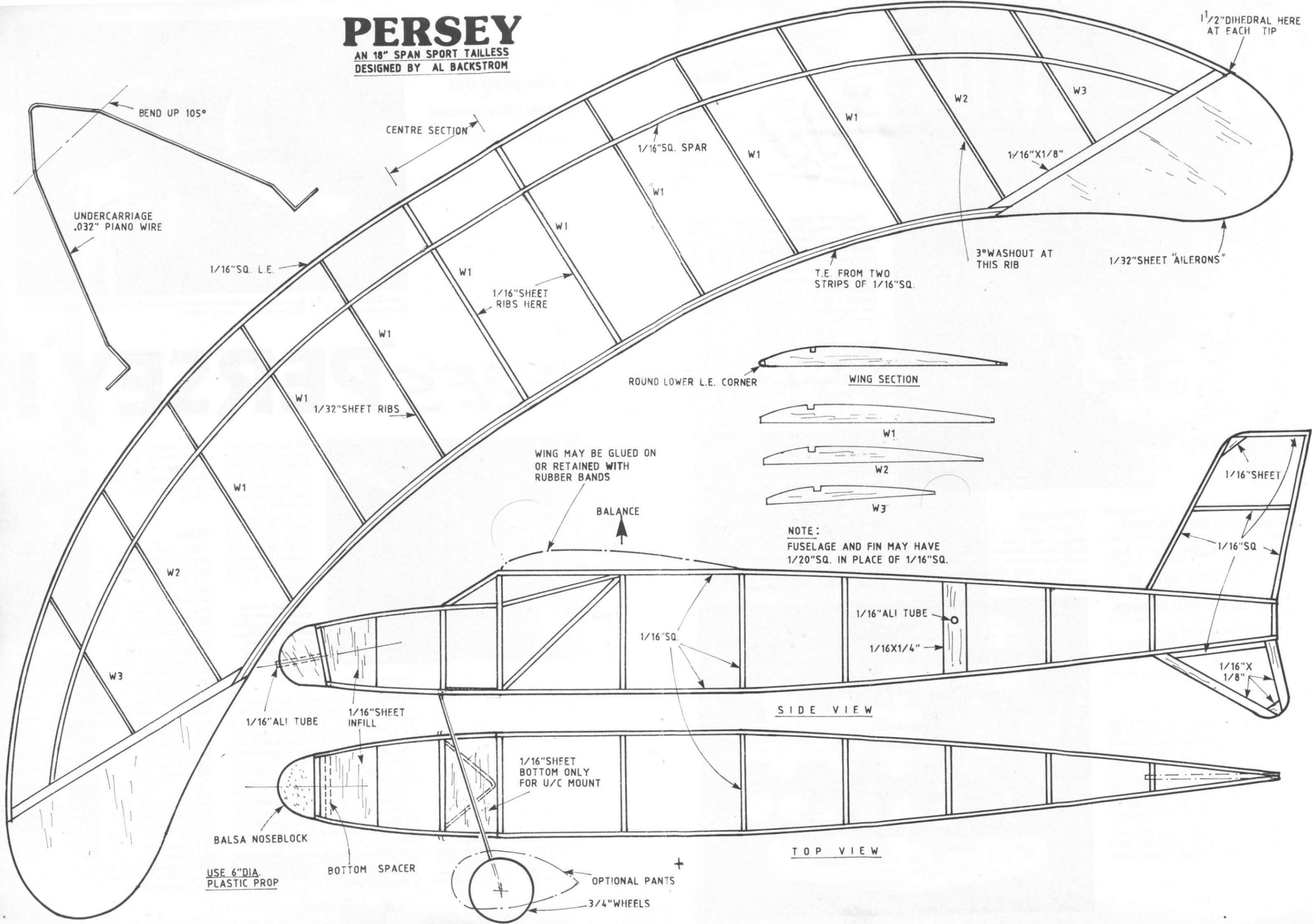
Before test gliding make sure the wing has about three degrees of washout at the inboard end of the sheet balsa surfaces. The sheet trim tabs (for lack of a better name) should have a definite curve up at the trailing edge. Add weight if necessary to get the model to balance as shown on the drawing. Start test gliding over grass if possible. If the model dives add more up curvature to the tabs. If it stalls add weight to the nose.

When an acceptable glide is achieved change the rubber to a single loop and wind on about two hundred turns. The model should have an extended glide at this power. If this is the case add about 100 more turns and fly again. Keep adding turns slowly, checking trim under power. Correct stalls with down thrust and dives by removing some of the down thrust. A small card tab can be added to the vertical fin for turn adjustment if needed. As the power is increased adjust the turn at low power or glide with the fin or tab and correct problems at high power with side thrust changes.

If you consider that an adjustment in the glide or low power range is needed use the wing trim tabs, this will effect the power trim. Other than setting glide or low power range do not change the wing trim tabs. When you have flown the model enough to be familiar with its characteristics you can change the wing trim tabs moving one up and the other down the same amount to obtain different bank angles. This can also be done to reduce the bank angle if the model tends to spiral in.

PERSEY

AN 18" SPAN SPORT TAILLESS
DESIGNED BY AL BACKSTROM



BEND UP 105°

UNDERCARRIAGE
.032" PIANO WIRE

1/16" SQ. L.E.

CENTRE SECTION

1/16" SQ. SPAR

W2

W3

1/16" X 1/8"

1/2" DIHEDRAL HERE
AT EACH TIP

3° WASHOUT AT
THIS RIB

1/32" SHEET "AILERONS"

T.E. FROM TWO
STRIPS OF 1/16" SQ.

1/16" SHEET
RIBS HERE

ROUND LOWER L.E. CORNER

WING SECTION

W1

W2

W3

WING MAY BE GLUED ON
OR RETAINED WITH
RUBBER BANDS

BALANCE

NOTE:

FUSELAGE AND FIN MAY HAVE
1/20" SQ. IN PLACE OF 1/16" SQ.

1/16" SHEET

1/16" SQ

1/16" X
1/8"

W2

W1

1/32" SHEET RIBS

W1

W1

W1

W1

W1

W3

1/16" ALI TUBE

1/16" SHEET
INFILL

1/16" SQ.

1/16" ALI TUBE

1/16" X 1/4"

SIDE VIEW

BALSA NOSEBLOCK

1/16" SHEET
BOTTOM ONLY
FOR U/C MOUNT

TOP VIEW

USE 6" DIA.
PLASTIC PROP

BOTTOM SPACER

OPTIONAL PANTS

3/4" WHEELS