

**Mike Green's
British Nationals
winner—a current
fashion lightweight
for maximum open
power contest
performance**

HEATWAVE

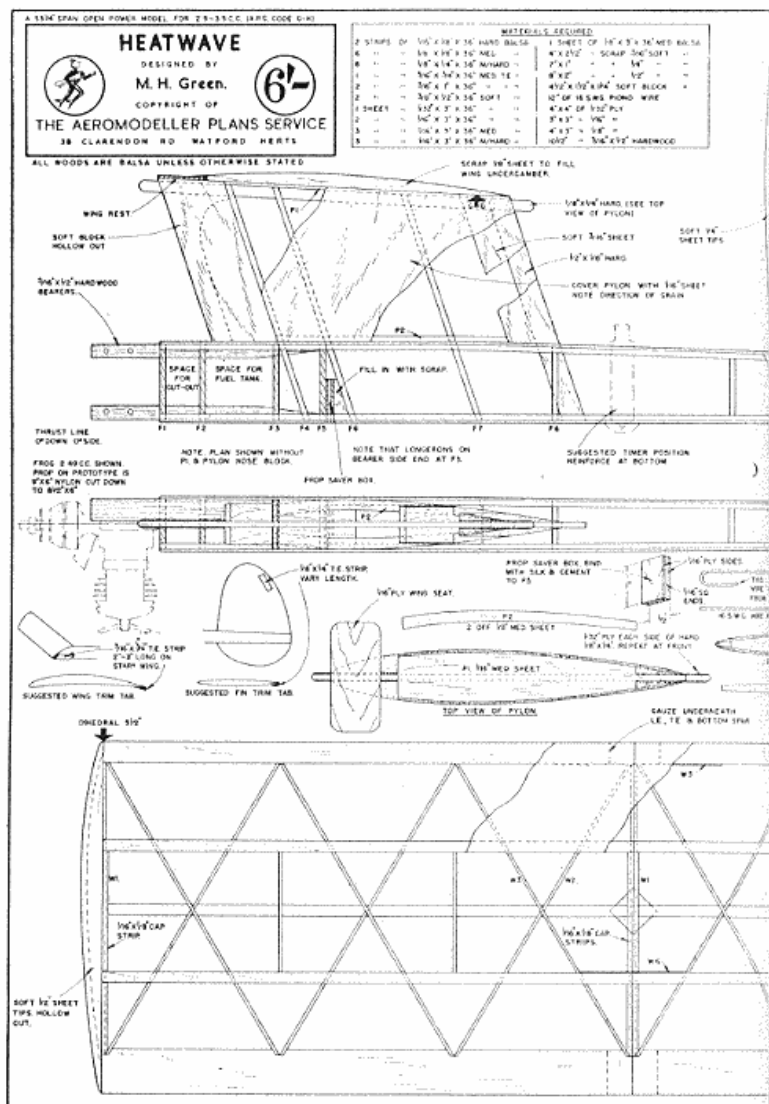
*Designer and his Frog
2.49, 56-in. prototype*

OPEN POWER duration models are gradually showing a set pattern of evolution with long fuselage, shallow pylon and rear fin. Mike Green's Heatwave is the latest of a series of such designs and as the 1957 Nationals winner has established a firm reputation for high climb rate. Construction is easy, so why not start yours now for the new season?

Use good quality medium/hard $\frac{1}{16}$ th sheet for the fuselage sides, cement $\frac{1}{8}$ sq. longerons and spacers in place. Cut out formers of ply and $\frac{1}{8}$ sheet. Then shape and drill engine bearers and temporarily bolt to engine. Cement formers to starboard side and glue or cement in bearers very accurately. The longerons will have to be trimmed to take the bearers. The precise position of F.1 and F.2 will depend on the individual tank and cut-out system chosen. Various holes for the fuel tubing, etc., must also be made before finally glueing. Fix tank and tubing. Then fit the port side and cement the top and bottom spacers. Make box of $\frac{1}{8}$ th ply for prop saver and cement to F.5. Add sheet to top and bottom—grain direction is optional and proceed with the pylon. The fin can be built and fitted, sheet covering preventing any possibility of warps.

The wing is built in three parts—centre section and tips. Pin down LE and TE. The latter is packed up $\frac{1}{8}$ in. at the front, and is suitably notched. Insert ribs—care will obviously have to be taken with the diagonals. Ribs at the dihedral break should be suitably angled. Now notch the ribs and add top spars. Lift from board and fit the lower spar. Shape LE and sheet with soft $\frac{1}{16}$ th. Add small upper surface riblets. Shape TE and then join outer panels at correct angle. Fit soft balsa tips. Sheet the centre section and sandpaper off to prepare for covering Tail is of similar construction.

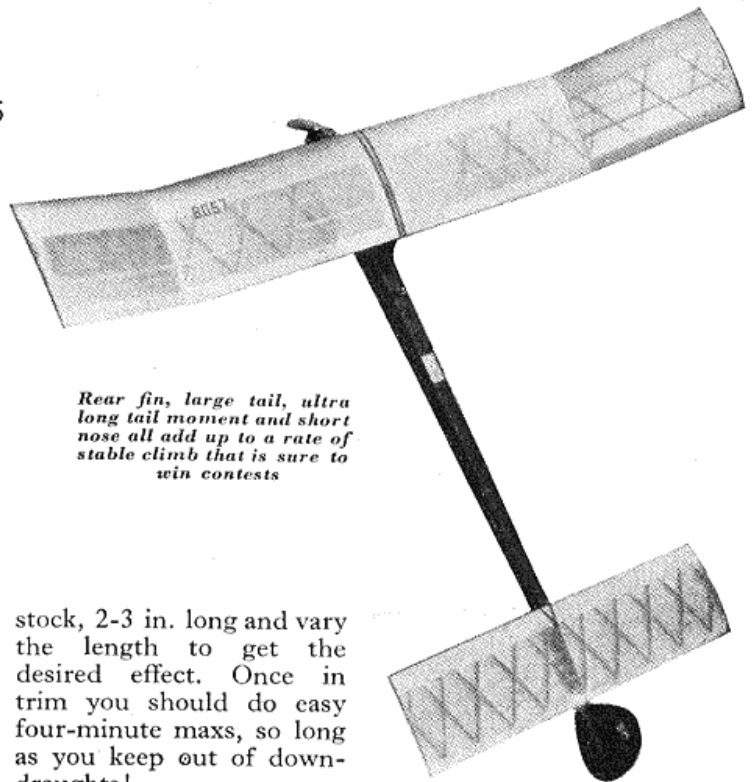
Jap tissue was used on the original to keep the weight down. On the wing use two or three coats of



dope, according to strength (50-50 "Glider" dope and thinners, for example). Finally 50-50 Banana oil and dope really thinned out for gloss. The tail has the same treatment and the fuselage lightweight Modelspan covering.

Trimming

The flight pattern is a fairly wide right climb and right glide. No down or side thrust has been found necessary with this series. Hand launch to check glide. If anything, there should be a barely-perceptible right turn. Then proceed with short motor runs under low power (5 sec.). Some left rudder may be needed. The glide can be sorted out at this stage. The turn is achieved by tilting the rail and will work out finally to about 1-1½ in. up on the right side. Do not put the tilt in all at once because it does affect the power turn slightly. Gradually increase the power, using the rudder to adjust the turn in the climb. Keep the right wing up either by using wash-in or, which is more convenient on the flying field, use a small flap of 3/16th trailing edge



Rear fin, large tail, ultra long tail moment and short nose all add up to a rate of stable climb that is sure to win contests

stock, 2-3 in. long and vary the length to get the desired effect. Once in trim you should do easy four-minute maxs, so long as you keep out of down-draughts!

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