

CANDY Mk. II

BY F. B. THOMAS

CONTROL line models are coming well into the public eye nowadays, and Candy II was produced specially to meet the demand for an elementary control-line model which would yet have a performance that would satisfy the modeller with some experience.

With a span of 38 ins., Candy is the best size for combining docility of control with manoeuvrability and a fair turn of speed. She is not over sensitive to the elevator movement, a common fault amongst this type of model, but handles nicely and accurately on the line. The model is fully equipped down to the take-off release gadget, an ingenious little mechanism which allows the lone hand to fly his models without help.

Building Instructions.

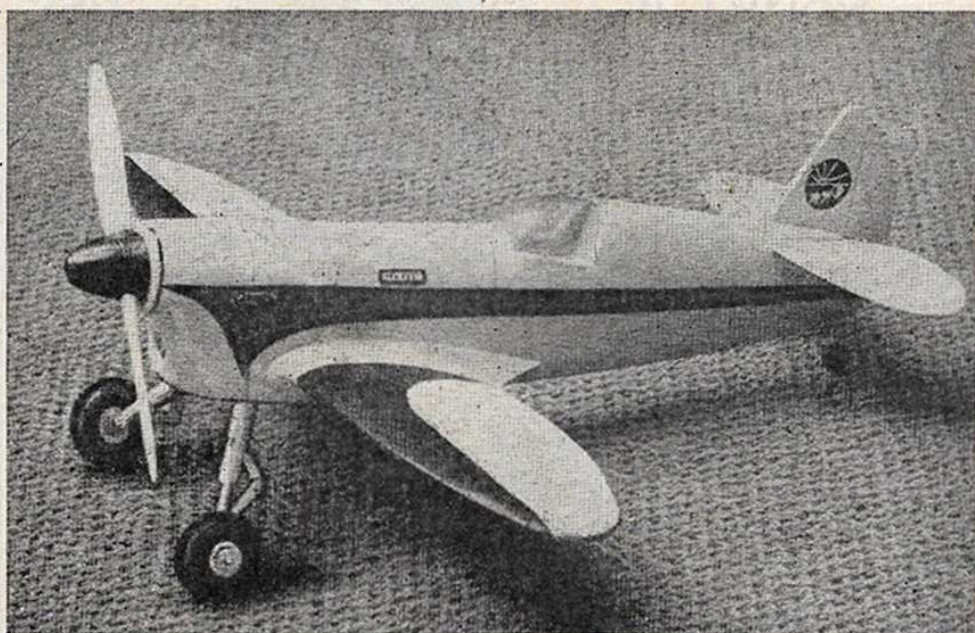
Wing. Assemble the complete wing flat on building board. Cover with 1/16 in. sheet as far back as the main spar, then cut the wing in the centre, at spars, trailing edge and leading edge. Drill and file slots for 3-ply dihedral centre section and cement up incorporating dihedral. Cover with silk or nylon before installing.

Fuselage. The longerons are of 1/4 in. square hard balsa. Vertical and transverse pieces 1/4 in. square soft balsa. Assemble each side on the plan, then to cement 3/16 in. sheet front balsa bulkhead (Former C), leaving longerons projecting 3/16 in. forward of this. Fit the undercarriage to plywood bulkhead (Former B), and then cement to front of fuselage. Be sure all bulkheads are at right angles to fuselage or you will upset the thrust line. After-drying, drill as shown through Formers "B" and "C" and 1/4 in. square member behind. Cement in lengths of 3/32 in. diameter birch dowel rod to anchor undercarriage bulkhead firmly to fuselage. When fuselage is complete remove upright members (1), (2) and (3) from both sides of fuselage by cutting through cement joints, and mark for correct replacement later. Cement wing in position, raising bottom main spar 3/16ths to give about plus 2 degrees incidence. Reinforce attachments at mainplane to longerons and also leading edge with plastic wood, and build up with plastic wood behind 3/16 in. balsa bulkhead (Former C) where it joins the 1/4 in. square upright and transverse members. Put plenty of cement on before the plastic wood. Re-cement uprights (1), (2) and (3) and cement well to centre two ribs.

Cowling. The general principles are shown on the drawing, but must be made to suit engine used. When fitting engine to bearers leave 3/4 in. space between induction pipe and bulkhead to allow choking with finger.

Lower portion of cowling is cemented to bearers and engine bulkhead. The top is detachable.

Control Plate. Attach this to the transverse fuselage member at (2) with 16 s.w.g. spring steel wire, bound and cemented to top and bottom transverse members. A centralising spring should be connected to control plate and bound to upright (2)



Engine Cut-out and Tail Release Plate. This is made of 1/8 in. ply. Adjust it so that the tail wire releases *before* engine cut-out or switch is operated. The return spring must be fairly strong to resist any pull on slack line in flight due to wind.

Shot Locker in Tail. Made from 1/8 in. sheet balsa. If using a diesel motor, fill up with lead shot until C.G. is as on plan. If using a petrol motor move battery box as required before cementing in place. After building shot locker cover with silk and dope for strength.

Covering of Fuselage. Single 1/8 in. sheet balsa sides and bottom. Cover bottom first, cut sides to fit, then cement. They must lie half way up the upper longerons (see section of Fuselage). When covering in fuselage top, cement to top centre 1/4 in. square member first. Lack of compound curves in the fuselage makes the sheet covering easy.

Fuselage Lid. If using diesel engine this need not be detachable.

Wing Fillets. Before applying plastic wood, smear surface liberally with cement. After moulding, leave five minutes and then rub over gently with cement on finger; this gives smooth finish and prevents retraction of edges of plastic wood when dry.

Painting. When completed, give three coats of clear dope to fuselage and one coat to silk-covered tail surfaces. Sand between each coat. Finish with two coats of cellulose lacquer.

Airscrew. 10 to 12 ins., depending on motor used. A normal free flight airscrew is satisfactory for preliminary flying, but later on a coarser pitch prop. (say 8 ins.) to obtain more speed.

Spinner. Cut out the block to overall dimensions of spinner shown. Cement a 1/4 in. diameter birch dowel in centre of block. To the free end of the dowel secure a twist drill chuck, then place the brace in a vice in order to leave hands free to turn drill, and hold the sandpaper block which is pressed against the balsa block so that when the twist drill is turned the sandpaper block will turn the block to the required shape. Whilst turning the centre of the spinner may be hollowed out with a sharp chisel or knife.