



**Winner of the 1955
BOWDEN TROPHY**
—a 32 inch wing span
amphibian for .5 c.c.
designed by . . .
RON SWINDEN

DUCKFOOT

IN THE NORTH country, the term "Duckfoot" usually infers something short in the leg, and a glance at the photo above will show how well such a name befits this pert amphibian from Darlington. Winner of the 1955 Bowden Trophy contest, where points are awarded for precision in flight (take off and landing included), are added to those given for appearance and originality of design, "Duckfoot" is an ideal sports flier for any small diesel.

Note the plan states: .46 to .5 c.c. This of course, includes the E.D. Baby, Frog 50, Allbon Dart and Elfin .5, which is the entire range of popular "half-cc." diesels available today.

Happy on land or water (the undercarriage can be de-plugged, swung and re-fitted in the vertical position for R.O.W.), this little 32-inch span high wing and high tail flier is extremely easy to build and fly, so we can fully recommend it to both experienced and beginners in aeromodeling.

Construction

Cut formers F. 3 and F. 6 from $\frac{1}{8}$ in. sheet and $\frac{1}{16}$ in. ply laminated, and the lower fuselage sides from $\frac{1}{8}$ in. sheet. Join sides to formers then add the engine bearers. Now fit the remaining formers between the sides. Slide the forward keel into slots in formers, then cut the rear keel from $\frac{3}{8}$ in. by $\frac{1}{8}$ in. and slide through formers F. 4, F. 5 and join to forekeel. Join fuselage sides to the keel at rear of model and sand the keel to the "V" shape of the formers. Add $\frac{1}{8}$ in. sheet hull from formers F. 1 to F. 4 with grain across the hull, from former 5 to the tail, grain can be lengthwise. Mark off the position of the sponson leading edge mainspar and rear spar on fuselage sides, then cut slots and cement all three into position. Add ribs and laminated tips, then sheet the lower surface, grain to run from leading to trailing edge. The sheet projects behind rear spar. Pass neoprene tube through the ribs, fasten to mainspar and insert brass tube in each end to hold the undercarriage wire. Do not drill the support wire holes until later. Sheet the top side of sponson. With grain from root to tip.

Make $\frac{1}{8}$ in. by $\frac{3}{8}$ in. fin outline on plan, and fit into formers 10 and 11, and onto keel, then add gussets and ribs. Fix the tailplane platform in position, fill in with $\frac{1}{8}$ in. sheet to form top fin rib. Sheet top of fuselage with $\frac{1}{8}$ in. sheet from formers F. 1 to F. 2 and F. 6 to F. 10. Sand top and lower

side sheeting to former side. Add $\frac{1}{8}$ in. top side sheet. Sheet up the pylon over formers F. 3, F. 6 and cut the cabin out later. Sand off all overlapping edges. Cement $\frac{1}{8}$ in. square between formers 10 and 11. Laminate and join noseblock. Add block to rear of the pylon and sand to streamline section. Line with $\frac{1}{8}$ in. sheet, grain across the fuselage, in the cabin cut out, join block to former F. 3, sanded to half circular shape. It is a good idea to put your name and address on the cockpit lining. Now cement celluloid window in place. The $\frac{1}{8}$ in. sheet wing platform is best added when the wing has been built. Bend one end of undercarriage 16 s.w.g. wire. Slide through tube and bend opposite end leaving $\frac{1}{4}$ in. side clearance. Mark off and drill front wire support *only*. Insert brass and neoprene tubes. Make up the front wires, place in tubes and bind and solder to main legs. To mark off rear holes pull out support wires and turn U/C through 180°. Drill holes and add tubes. No timer is fitted on the motor, the standard tank is turned through 90° for side winder operation. Build the wing flat on plan without the centre rib, mainspar, leading and trailing edge are cut in the centre, one tip is raised 3 in. and the centre rib added with $\frac{1}{8}$ in. ply dihedral braces and $\frac{1}{8}$ in. balsa gussets. Remove from plan, sheet centre section with $\frac{1}{8}$ in. sheet top and bottom over leading edge and trailing edge. The tail is perfectly straightforward.

The whole model is given one coat of clear dope and it is then covered with lightweight Modelspan doped on. Fuselage and fin are given two thin coats of coloured dope and the wings two coats of clear dope. Then the whole model is fuel-proofed. Lastly, cement the upper fin on top of the tailplane. No extra balance weight or packing was needed for the prototype on land or water and the best prop was found to be a 6 by 4 narrow blade plastic.

Skating off the local pond, Duckfoot tucks its u/c up and proves its versatility



DUCK FOOT

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ALL WOODS ARE BALSA UNLESS OTHERWISE STATED

