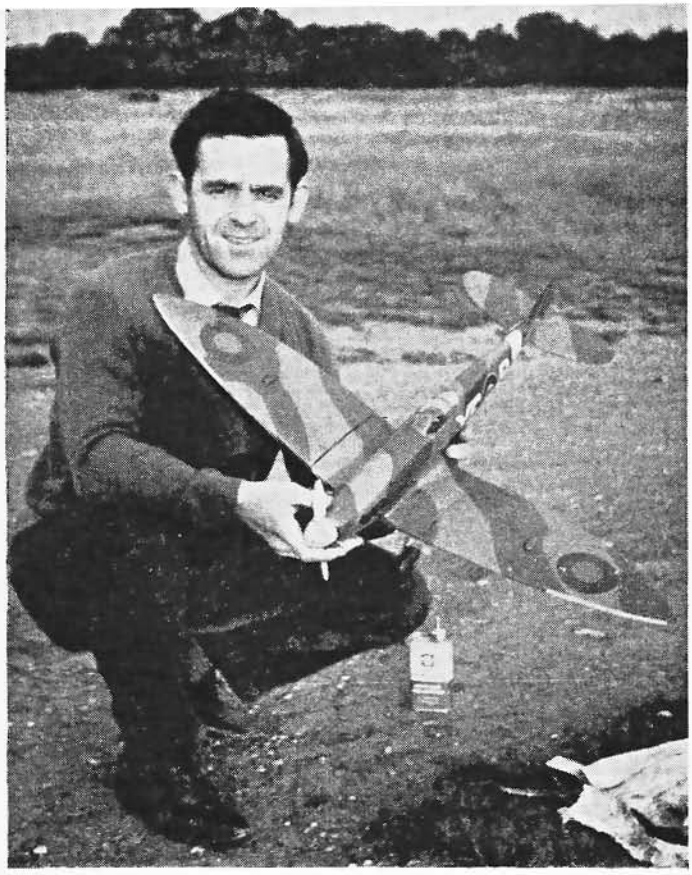


SPITFIRE VB

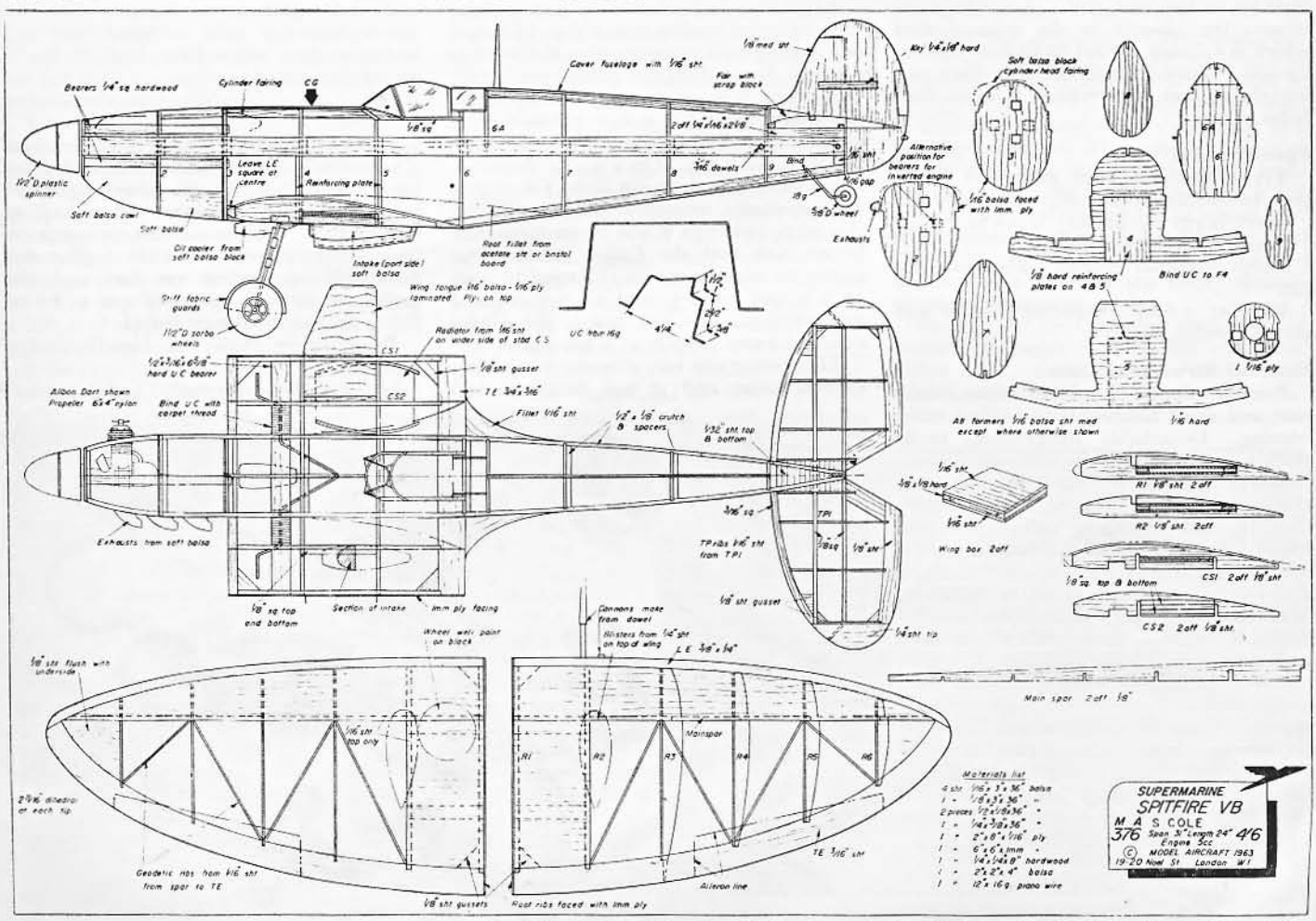
Classic lines of the immortal "Spit" will draw a crowd wherever they are seen. **Stan Cole's** little F/F model for 0.5 c.c. engines, is destined to become a familiar sight on our flying fields in 1963.

STAN COLE'S Messerschmitt M.E.109 is a deservedly popular design (M.A. plan No. 355) and is now followed up with this equally successful model of its traditional adversary—the *Spitfire*.

This tough and realistic little model is designed for *flying* and one or two liberties have been taken with the design, in order to produce a completely *practical* flying model. Despite this, the action photos opposite effectively prove that Stan Cole's creation is every inch a *Spit* and it can be tackled with confidence by anyone who has ever built a flying model.

Construction

Start the fuselage by building up the $\frac{1}{2} \times \frac{1}{8}$ in. crutch flat on the plan, next cut formers 1 to 9, laminating Nos. 2 and 3 from $\frac{1}{16}$ in. balsa and 1 mm. ply. Pay particular attention to formers 4 and 5 as these later determine the wing incidence and also provide a "jig" for the fuselage centre section. The upper and lower $\frac{1}{16}$ in. sheet fuselage keels are now added, carefully checking all formers for squareness before the cement dries. The engine bearers—spaced on the plan for the Allbon *Dart*—



FULL SIZE WORKING DRAWINGS ARE OBTAINABLE FROM YOUR LOCAL DEALER, OR BY POST FROM THE "MODEL AIRCRAFT" PLANS DEPARTMENT, 19-20, NOEL STREET, LONDON, W.1, PRICE 4s. 6d., POST FREE. THE FULL SIZE DRAWINGS CONTAIN ADDITIONAL DATA NOT SHOWN ON THE SMALL SCALE REPRODUCTION ABOVE.

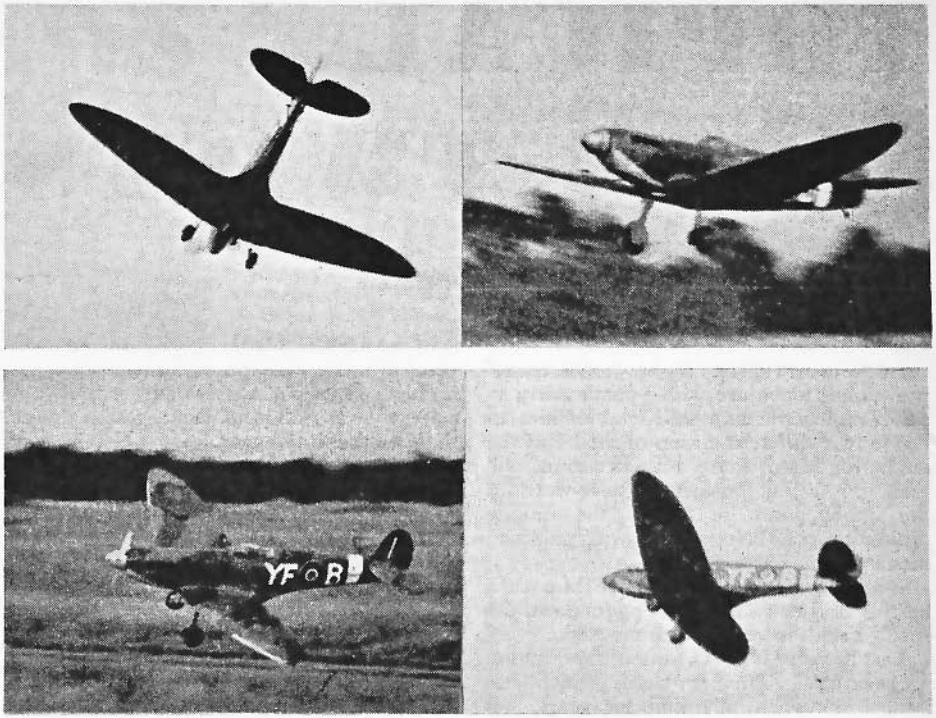
can now be fitted. The $\frac{1}{8}$ in. hard centre section ribs, C.S.1 and C.S.2 are now fitted *but not cemented* to formers 4 and 5; now, with the basic fuselage assembly lying on a flat surface, slip the laminated wing tongues (ply on top) into slots in outer root ribs C.S.1.

No difficulty should be experienced with the wing construction which is quite conventional. The completed wing panels are slid over the wing tongues, and must be propped up at the tips to $2\frac{11}{16}$ in. and held in place with suitable weights. Having thus ensured equal and accurate dihedral angles, the centre section ribs and wing tongues can now be cemented in place together with c/section L.E. and T.E., suitably scored and tilted to meet C.S.1 at the angle determined by formers 4 and 5. Next the $\frac{1}{8}$ in. sheet gussets are fitted to the C/S leading and trailing edges, and the tail wheel is bound to the fuselage spine.

Now fix the engine bolts to the bearers and lock them by soldering a piece of 16 g. wire across the slots in the screw heads. The medium hard blocks between formers 2 and 3, and 1 and 2 can now be cemented in place.

The fuselage can now be covered with soft $\frac{1}{16}$ in. sheet, this is most easily carried out in four full length panels. Two top sheets are roughly cut to profile and located on the top side of the crutch. One side is bent over and pinned and cemented to crutch and fuselage keel, when dry it is trimmed off at the fuselage keel and the process is repeated on the other side. The bottom and lower sides of the fuselage are covered in a similar manner. Preliminary sheet shapes may be determined by making stiff paper templates. The curves of the *Spitfire* fuselage can be quite easily obtained, providing a soft/med. sheet is used, slightly damped on the outside before pre-curving to the desired shape. Next add the sheeting to the top of the wing root centre section together with u/c spar, which is well cemented and bound to ribs C.S.2 followed by the u/c wire which is also securely bound with carpet thread to the u/c spar, C.S.2 and former 4.

The building of the tailplane and rudder will be quite clear from the plan but one important point is to maintain the $\frac{1}{16}$ in. gap between the rudder and the fuselage, as this prevents the former from being sheared off following a " nose on " landing. The wing root fillet is best produced with thick 1/32 in. acetate sheet and shaping will again be simplified by cutting a paper " try out " template. The



two prototype models were finished with lightweight tissue doped on the fuselage and heavyweight on the wings, tailplane and rudder, followed by one coat of clear dope all over, colour trim and roundels and one coat of fuel proofer all over (two or more coats in the engine bay).

Trimming and Flying

Both prototypes weighed 12 oz. all up and this weight should not be exceeded. With a 6 × 4 in. nylon prop. on the *Dart* and a $1\frac{1}{2}$ in. plastic spinner, the c.g. will probably be well forward and this is no disadvantage with low wing models. Commence power trimming with fairly high revs., and a good " follow through " launch. At first, the model may well fly dead straight at a slight downward angle —touching down about 10 to 12 yards from the launch position; this, I find, is a good indication that the c.g. is properly located* and the addition of a $\frac{1}{16}$ in. packing at rear of the tailplane (neg. incidence) will produce a steady climb. Only left hand circles should be flown and this is best achieved by 5 to 6 deg. of right engine thrust, plus an acetate trim tab on the outside (starboard) wing bent " up." No downthrust should be necessary and, in any case, is not recommended. Trimmed as described, the model will have a long slow climb followed by wide left hand glide circles with as much stability as a high wing sports model !

Given a suitable surface the model will r.o.g. most realistically and it does not mind being flown in windy weather. Incidentally it may be flown " off the board " on the engine. Glide testing from a hand launch gives little indication of correct trim, owing to the difficulty of exactly simulating the model's flying speed. which is quite high.

* For low wing models.