

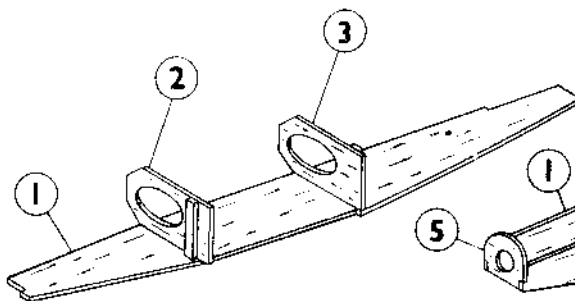
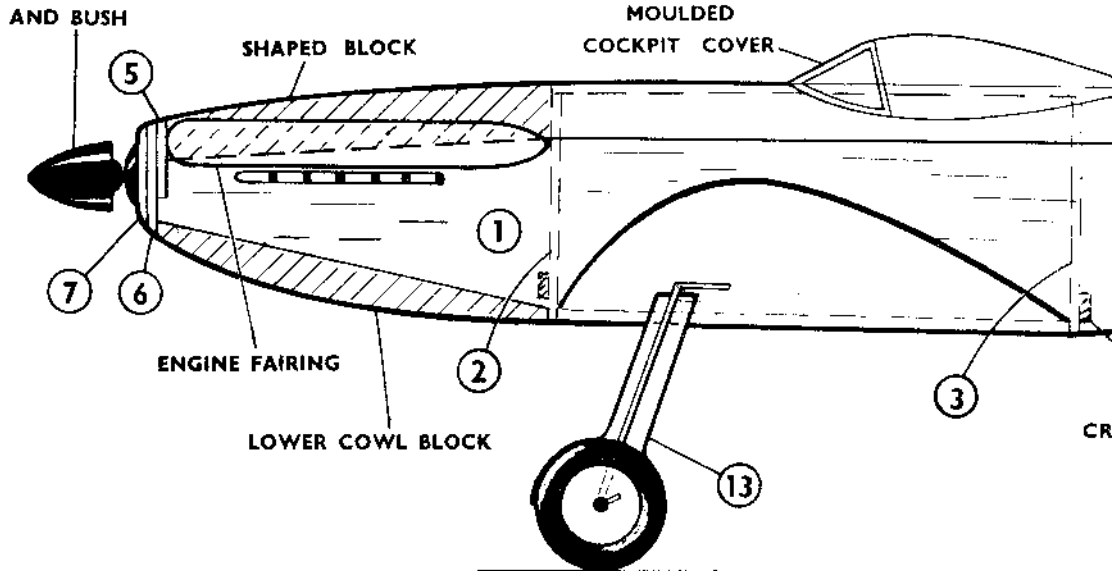
# FROG



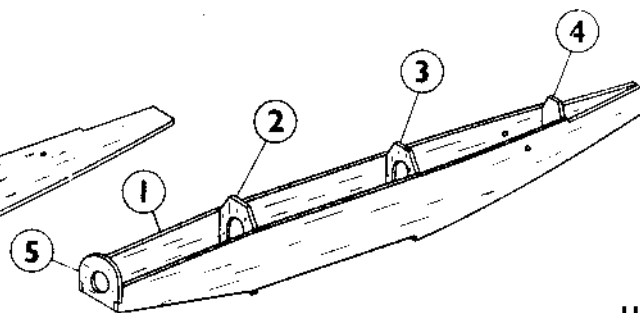
# "SPITFI

PLASTIC AIRSCREW

SIDE VIEW (Full



**Fig. 1** CEMENT BULKHEADS  
2 & 3 IN PLACE FIRST



**Fig. 2** FUSELAGE SIDES  
ASSEMBLED TOGETHER

ENGI

UNDERSI  
COWL BI

### INTRODUCTION.

The Frog Junior Fighter Series comprises a range of models which are based on the designs of jet and piston engine fighters in service with the R.A.F., U.S.A.A.F., and Royal Navy.

In common with other Frog models, they embody very simple construction methods having all the parts cut to shape, which only require cementing together.

To ensure a satisfactory job, study the plan and check the parts with it before commencing. Assemble the model step by step as shown.

Cement and "dope" are not included in this kit, but they can be bought at any model shop. Use quick-drying balsacement (glue) such as Frog Universal. You will also need a balsa knife or razor blade and a few pins.

If you enjoy building this model, remember there are many others in this series equally attractive.

### BUILDING INSTI

#### FUSELAGE AND TAIL ASSEMBLY.

Carefully remove all the parts from balsa knife or a piece of razor-blade 1 clean edge. Start by cementing pieces scrap to bulkheads 2 and 3, and cement of the side panels 1, as shown in fig. these on the side panels by checking th above. Make sure they are upright, a cement the other side in place as in fig. assemble the other bulkhead 4, and cement the rear ends of the fuselage tog

Remove the tailplane 8, from the sandpaper the edges to obtain a smooth

0 50 mm 100

# FIRE"

## JUNIOR FIGHTER SERIES

(Full size)

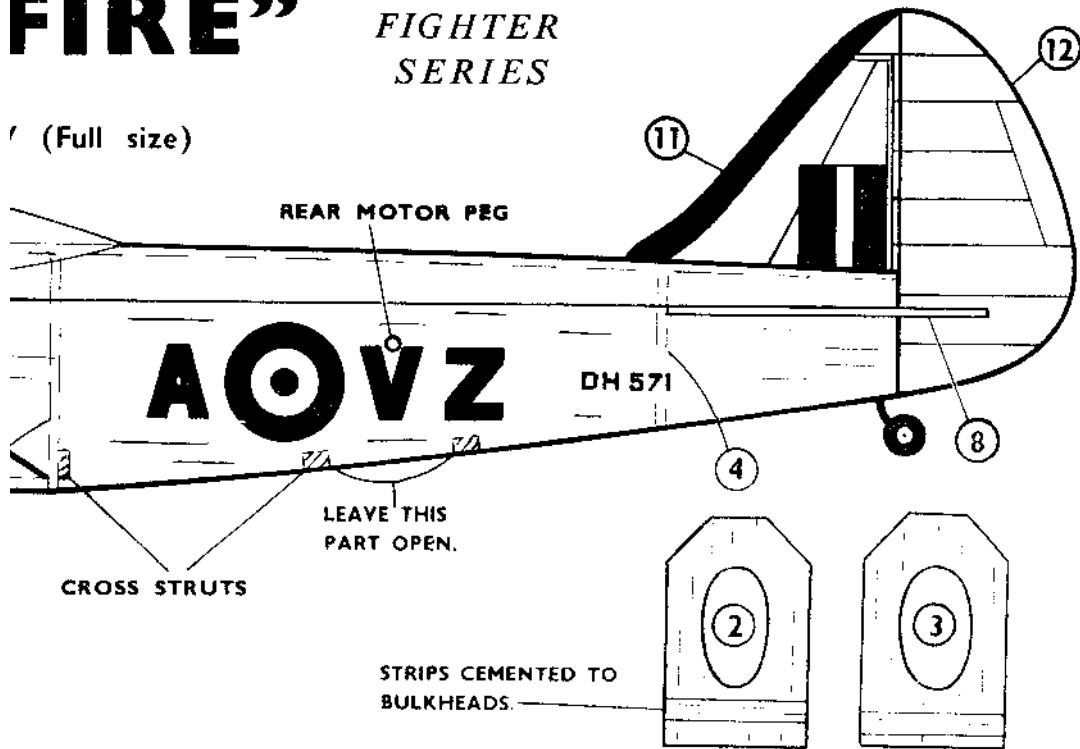


Fig. 3

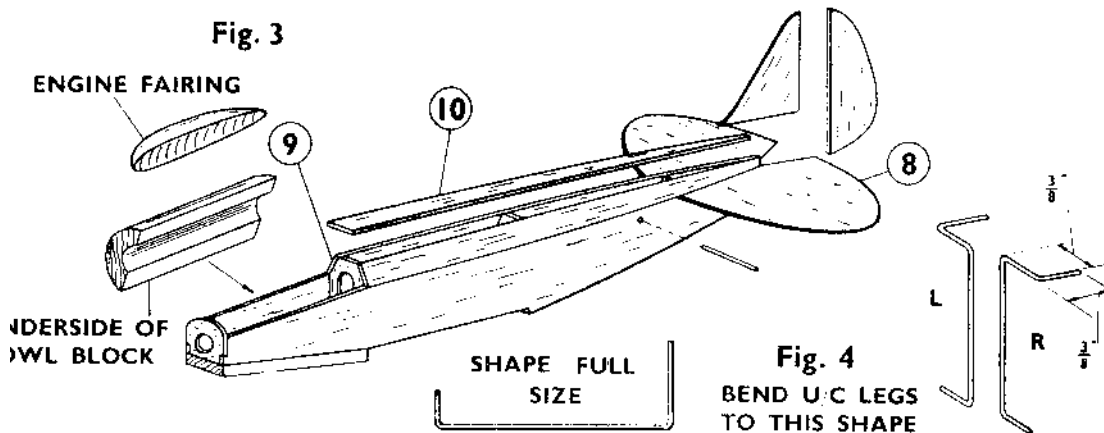


Fig. 4

BEND U/C LEGS  
TO THIS SHAPE

## INSTRUCTIONS

### MATERIALS.

Starts from the balsa sheet using a sharp knife to separate them with a sharp blade. Cut pieces of balsa strip cut from the sheet and cement these bulkheads to one another as shown in fig. 1. Mark the position of the motor peg by marking them against the side view of the fuselage, and allow to dry. Then assemble as in fig. 2. When these are set, cement the motor peg 4, and the front piece 5, and cement together.

Remove the fin parts 11 and 12 from the balsa sheet and lightly sandpaper the edges.

Cement it in place as shown in fig. 3, ensuring that it is square with the fuselage.

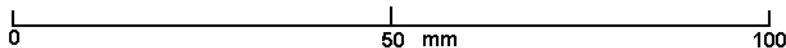
Bevel the edges of the two outer strips 9 and cement these in position. Then cement the centre strip 10 along the top of the fuselage, with the narrow part at the rear.

Cement the nose-rings 6 and 7 to the front of the fuselage together with the shaped upper cowl block. The underside of this should be cut away to allow more freedom for the rubber motor.

Trim the ends of the lower cowl block and cement it in place.

Shape the front cowl blocks with a sharp knife and smooth down the fuselage with sandpaper to obtain a good finish.

Remove the fin parts 11 and 12 from the balsa sheet and lightly sandpaper the edges; cement in position on the fuselage, ensuring that they are square with the tailplane.



**INSTRUCTIONS (contd.).**

**UNDERCARRIAGE.**

Bend the two undercarriage legs from the wire supplied, over the full size shape shown in fig. 4, making a L. and R. hand. Follow the measurements given for bending the top ends. They should be fitted after the wing is in place.

**WING.**

Remove the cut-out wing from the balsa sheet and lightly sandpaper the edges smooth.

Crease lines are made at the centre as shown in fig. 5, to help bend the wing to the required angle.

Place the wing on a flat board or table, and holding the centre down with a small weight, raise each end  $\frac{3}{4}$  in. with a matchbox or similar article as shown in fig. 5.

Apply cement along the crease lines and allow to dry. Remove the wing from the board and fix it to the fuselage between bulkheads 2 and 3, making quite sure that it is level with the tailplane and free from warps.

Cut the engine fairings from the  $\frac{1}{2}$  in. square balsa strip supplied, sandpaper to shape as shown on drawing and fix in position on fuselage.

Trim the surplus material from the cockpit cover and cement it in place on the fuselage, holding it in position until it has set.

Well cement the undercarriage legs to the underside of the wings, together with the fairings 13, which fit into the slots cut in the wing, as shown in fig. 6. Small tabs of paper can be cemented over the wires to secure them. Fit the wheels in place and bend over the ends of the wires or glue small paper washers to the axles to hold them on. Make the tailwheel from the centre of a nose bulkhead or a piece of scrap balsa.

Cut the head from a pin, bend it to make the tailwheel leg and push the pin into the tailwheel. Then assemble as shown in side view drawing.

Cover the bottom of the fuselage with thin note paper or a strip of paper cut from the plan.

**DECORATING.**

The balsa wood parts being ready-printed, very little painting is necessary and should be restricted to a black anti-glare strip on the top of the fuselage, forward of the cockpit. Use Cellulose Lacquer, and apply it quickly and evenly with a soft brush. Do not put it on heavily, or the model will not fly well.

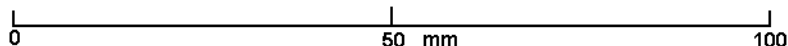
**MOTOR.**

This is an elastic band 6 in. long. Lubricate it with Frog Rubber Lubricant, or Castor Oil, and insert it with the help of a length of wire or thread. Bend a hook at one end of the wire and insert it into the front end of the fuselage. Hook the band on to it through the opening at the rear, and insert the rear motor pin (cane) through the holes in the fuselage and through the loop of elastic. Pull the band out through the front, and hook it on to the Airscrew shaft (complete with airscrew). The model is now complete and ready for flying. A drop of thin oil on the airscrew shaft will improve the running.

**FLYING.**

This model can be flown indoors or out, but it should only be used out-doors on a calm day, owing to its size.

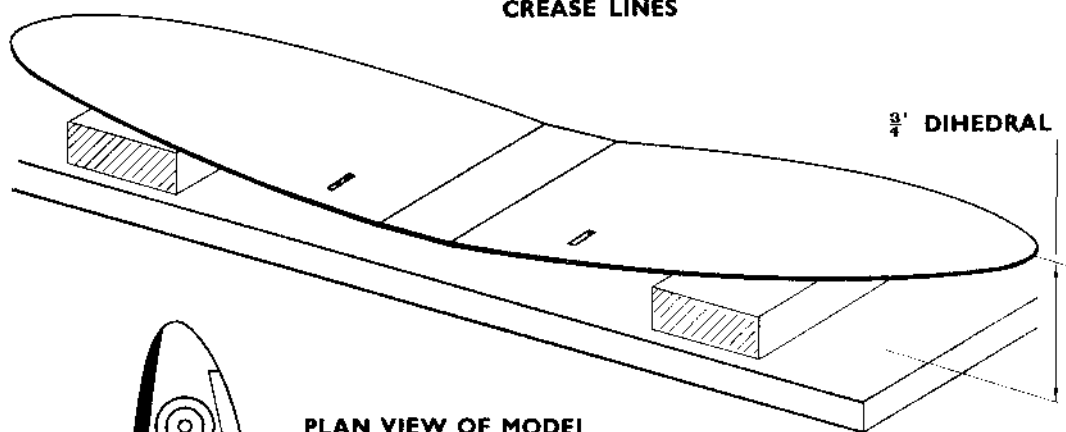
A slight difference in balance may be shown with each individual model, owing to the varied density and weight of balsa wood.



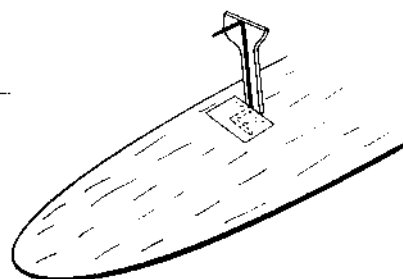
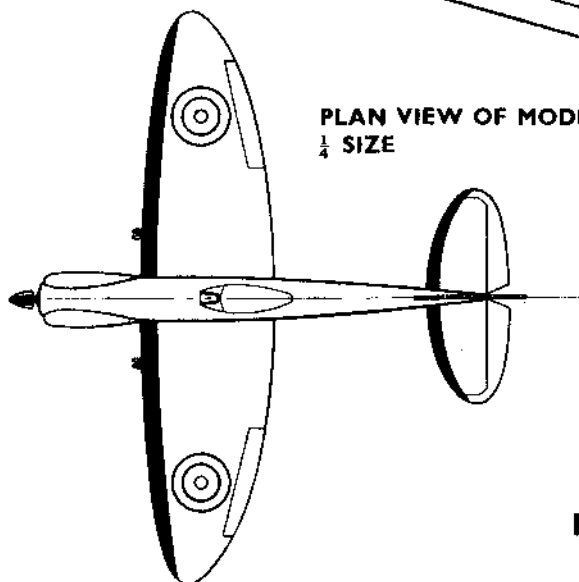
# "IRE"

## CAT. No. 604FK.

**Fig. 5** RAISE WING TIPS AND CEMENT ALONG CREASE LINES



**PLAN VIEW OF MODEL**  
 $\frac{1}{4}$  SIZE



**Fig. 6** UNDERSIDE VIEW OF WING  
SHOWING U/C FIXING

Test-glide the model first to check the balance. Hand-launch it in a slight downward direction. If it dives to the ground, add a small weight such as a small nail or pin to the rear end of the fuselage. If the model climbs steeply and stalls, add a small weight to the nose of the fuselage. A small nail or drawing pin can be pushed into the cowl block for this.

When the glide seems satisfactory, put a few turns on the motor and launch the model into wind (if any). The turn can be adjusted by bending the fin, or by twisting the wing slightly.

Increase the turns on the motor gradually, up to a maximum of approximately 300; if the motor is not lubricated, the turns must be limited to approximately 150.

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