

Panther

designed and drawn by

Albert E Hatfull

The Grumman F9F "PANTHER"

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The PANTHER is a carrier operated jet fighter used by the United States Navy. First PANTHER was powered by a Rolls Royce Nene but production versions use the American Allison jet engine.

NOTE:—No wheels are supplied in this kit.

BUILDING INSTRUCTIONS.
Cover the plan with greaseproof paper.

FUSELAGE.

Pin pieces A, B, C, G and the piece of $3/16" \times 1/16"$ (cut to exact length) to the plan, apply cement to the joints. This forms the side view "outline" of the Fuselage. Notice how pieces 'A' and 'C' join at the nose to give the side profile of the nose block. Cement the half formers 1, 2, 3, 4, 5, 6 and 7 to the previously laid outline (A, B, C, etc.) directly over the positions indicated on the plan. Keep these formers perfectly upright by placing pins on either side of them until the cement sets, then remove pins. Cement piece 'F' (left) in place in the notches in half formers 5 and 6 (see Plan View of wing root). Cement piece 'H' (left) into the notches in half formers 3 and 4 and attach to piece 'F' at the rear. Cement pieces 'D' and 'E' (left) into the notches in half formers 3, 4 and 5 and at the rear to the upper and lower faces of pieces 'F' ('D' and 'E' curve in slightly to lay flush with half former 6). There should be a $1/16"$ gap between 'D' and 'E' at the front to receive a stringer, which also fits into a notch in the "air intake port" of half former 3. Cement the $1/16" \times 1/16"$ stringers into the notches in the formers after studying their arrangement and positions of joints in the Side View of the Fuselage. A few stringers are left out on the plan for clearness. Leave out the lowest stringer temporarily. Note the notch in piece 'F' where it joins former 6, this is also for a stringer. Refer to the Plan View of the wing root and cement the $1/4" \times 1/16"$ (stock) gusset into the corner formed by former 3 and piece 'H' (left). When the cement has hardened, this first (or left hand) side may be removed carefully from the plan. Cement the second (or right hand side) set of half formers to the outline directly opposite and in line with the first (or left hand) set. Add the other members in the same order as described above for the first side only, reading right for left. Cement the lowest stringer in place on each side, this stringer stops on the inside face of former 7. Cement the two halves of the balsa nose block to each side of 'A' and 'C' and carefully carve to the shapes shown with a sharp knife. Finish with fine sandpaper. Cut out piece 'A' between formers 2 and 3 and cement pattern 'Y' over the fuselage top. From the piece of $1/4" \times 3/8"$ balsa supplied cut the "Clip mount" to the exact length shown on the plan, cement the JX-1 '50' clip (supplied in each JX-1 '50' outfit and not contained herewith) to the Clip mount so that the screw holes line up with the screw centres marked as dot dash line on the plan. In this position the front of the clip should be about $3/8"$ from the rear face of former 3 when the Clip mount is in position, check this measurement before installing. Check also that the clip is central and parallel to the "Clip mount"—THIS IS IMPORTANT—if correct, screw the clip to the mount using screws supplied. Install this unit into the notches in formers 3 and 4 and the recess formed by piece 'G', cement well. Cement pattern 'Z' in place in the recesses in formers 4, 5 and 6 to form the "trough" as shown in sketch on plan. This prevents local scorching by the jet efflux.

WINGS.

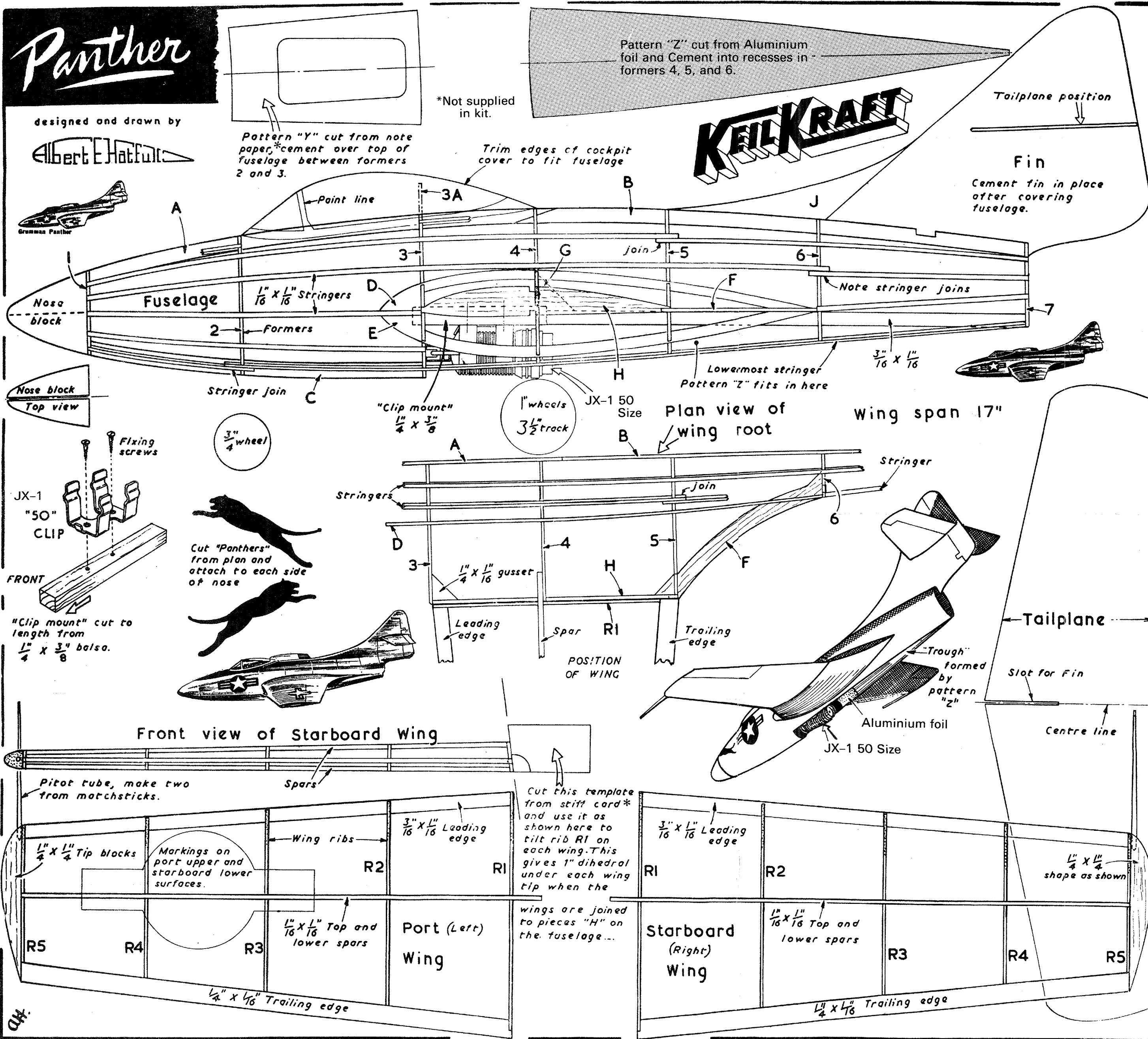
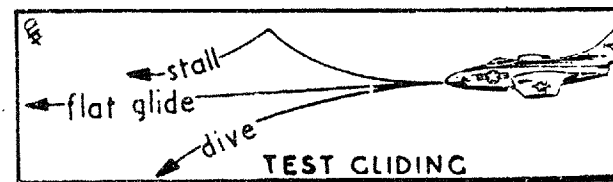
Hold the $1/16" \times 1/16"$ lower spars and the $1/4" \times 1/16"$ trailing edges in position on the plan by placing pins on each side of the wood—*not* through it. Leave the spars protruding beyond rib R1 as shown, these ends later fit into the notches provided in pieces 'H' on each side of the fuselage. Cement ribs R2, R3, R4 and R5 to the spars and trailing edges directly over the rib positions shown on the plan. Cement ribs R1 in place, but, before they are set, use the stiff card template as shown to obtain the necessary "tilt" (see the Front View of the right wing). Apply cement to the notches in the "noses" of the ribs then press the $3/16" \times 1/16"$ Leading edge into these notches. Check the tilt in ribs R1 again on each wing (using template) and if correct cement the top spar of $1/16" \times 1/16"$ into the notches in the tops of the ribs. Remove wings from plan when the cement has set. Roughly shape the tip blocks from $1/4" \times 1/4"$ balsa, cement in position on R5 and finish shape with fine sandpaper. Apply cement to rib R1 on each wing then press into place on pieces 'H' (left and right) of the fuselage. Notice how the protruding wing spars fit into notches in items 'H'. With the wing now attached to the fuselage begin tissue covering. Cover the fuselage using strips of tissue sufficient to span the gap between two (or more where possible) adjacent stringers and where convenient, running the whole length of the fuselage. Cover the wing roots above and below and if you can, cover the wings at the same time so that only one piece of tissue is used—this helps to attain a "faired in" effect of the roots to the wing. Water shrink and dope the tissue. Cement 3a in place on top of former 3. Trim the lower edges of the cockpit (using scissors) to fit over the top of the fuselage, then cement in place (over pattern 'Y').

TAILPLANE AND FIN.

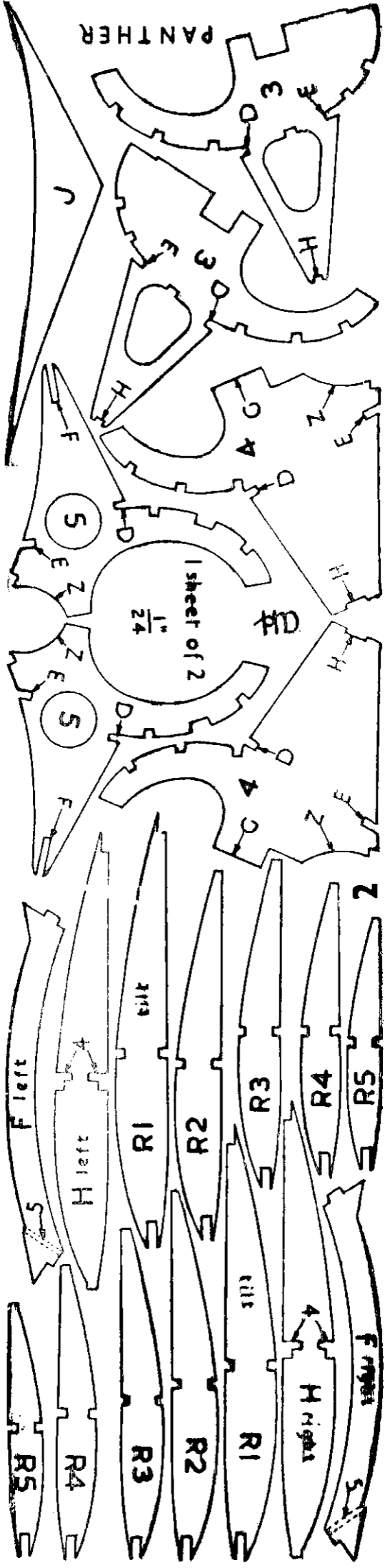
Cut the fin and fairing 'J' from the printed sheet. Using fine sandpaper sand the tailplane, fin and fairing 'J' to a smooth finish on both sides, then round off the edges of the tail and fin. Clear the tissue away from the notch in piece 'B' then cement the fin in position. Sight along the fuselage from the front and check that the fin is perfectly upright. Add fairing 'J'. Cement the tailplane into the slot in the fin, press the tailplane right in until tail and fin trailing edges are level. The position of the undercarriage is shown for those modellers who wish to build the model for "show" purposes and in this case coloured dope may be used to finish the model as desired. Colour doping is not recommended for a flying model owing to the extra weight involved, if however, the colour is used thinly it should not raise the weight enough to prevent flights of moderate duration. The model looks most authentic when finished "midnight blue" all over with white leading edges to the wings. Positions of national markings appear on the several perspective views on the plan.

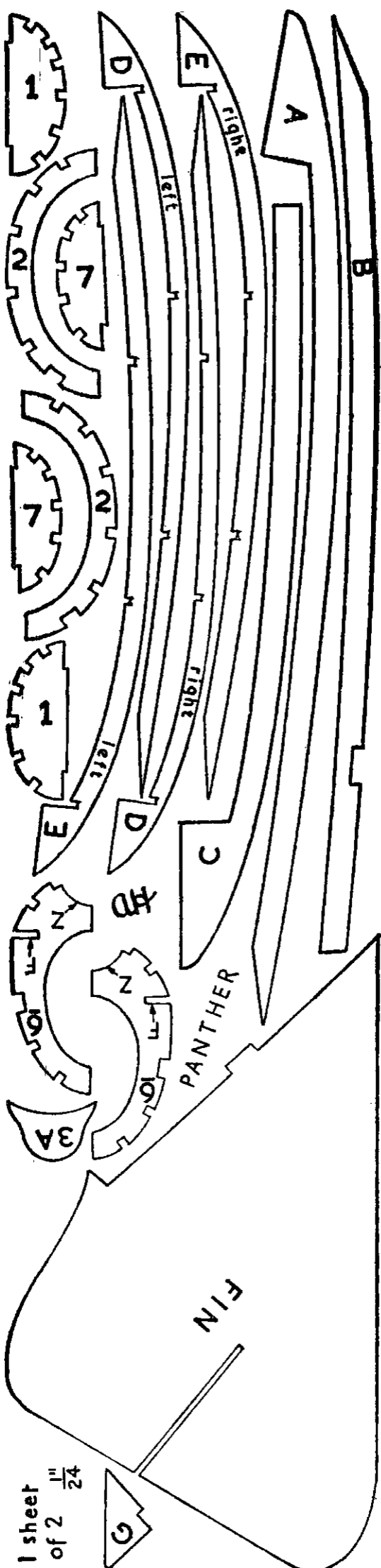
FLYING.

Test glide the model by hand launching from shoulder height on a slightly downward path directly into the wind. If the model dives (see sketch below) add a small piece of plasticine to the back of former 7. If the model "stalls" add a small piece of plasticine to the nose block. When a flat glide has been obtained jet power may be used. We advise you to read the leaflet supplied in each JX-1 outfit before loading and fitting the jet unit into your model.



PANTHER





A

B

C

D

right

left

E

right

left

E

D

PANTHER

FIN

G

1 sheet
of 2 $\frac{11}{24}$

N

N

N

N

V

V

V

V

