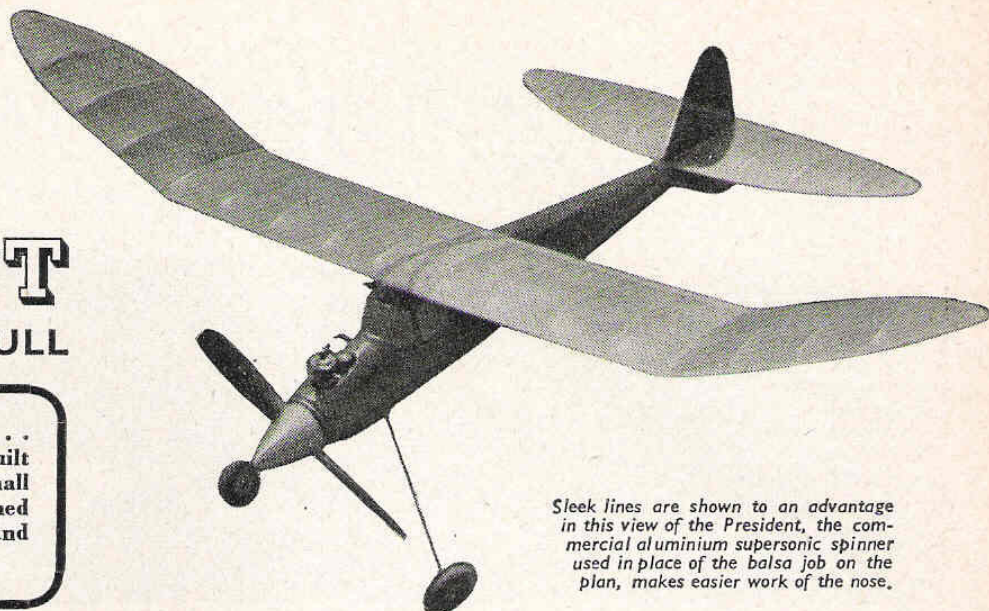


A 34" SPAN FREE-FLIGHT POWER MODEL

THE PRESIDENT

BY ALBERT E. HATFULL

Age 23 . . . Engineering Draughtsman . . .
Single . . . a modeller since 1936 . . . has built
all types of model aircraft . . . keen on small
diesel and rubber models . . . designed
Keilkraft's Flying scale range, Senator and
the famous Junior 60.



Sleek lines are shown to an advantage in this view of the President, the commercial aluminium supersonic spinner used in place of the balsa job on the plan, makes easier work of the nose.

IN keeping with the present trend toward power models for the small diesels and gloplug engines, Mr. Hatfull's handy-size cabin monoplane, combines the stable layout with clean lines.

Elliptical flying surfaces and streamlined fuselage give The President contest model appearance. However, the construction is as simple as could be desired, the good lines being obtained without any structural complications.

Although the original model was powered with a .87 Amco diesel, other suitable motors would be the Mills .75, E.D. Bee. Allbon Arrow and Frog 100. Slight modifications to the engine bearers and housing would be necessary according to the motor used, and it should be remembered that, in the case of the Frog 100, the mounting is radial.

There would be some variation in the performance of the model in relation to the motor used, and the differences in motor weights would have to be taken into consideration in relation to the C.G. position.

BUILDING INSTRUCTIONS.

Fuselage. Lay the two side members of the crutch on the plan and hold in place with pins on either side of the wood. Glue these two pieces together at the rear. Cut the front crosspiece to shape shown, and glue this and all the other cross-pieces in place. Bend undercarriage wire to shape, bind the wire in place on former 5. Remove crutch from plan and glue formers 5, 8, 9, 10, 11, 12, 13 and 14 squarely in their correct positions. Glue wing platform in position shown, add former 7 and glue small balsa block to it. Glue pieces R3 and R4 together on plan, and add to body when dry; R4 pushes into notch in former 14. Add 3/32 in. square support for R3 and 4 as shown. Cut motor bearers to shape, mark position

of former 3 on them with pencil, and push them through holes provided in formers 5 and 8; glue them well in place. Add former 3 in place where previously marked, glue front former 1 in place, note how crutch ends locate in notches in former 1. Tap small pins through former 1 into motor bearers. Drill holes in bearers and push bolts in place. Add bottom stringer and four other lower stringers, join short pieces to these at former 14 to carry to rear edge of R3 as shown. Install timer and fuse wire link at this point, if used. Add top stringers, stop first down at former 12, and the second pair down at 13. Glue former 6 in place. Glue wing dowels into corners shown, add gussets. Make and glue cabin window frames and windscreen in place. Glue pieces "Z" in place, thread timer link wire through hole in left hand piece "Z". Fill in underside of nose as instructed. Build cowl in place on fuselage; take care it doesn't stick there. Cover sheeting on cowl with small piece of muslin. Sandpaper body smooth all over and remove all sharp corners. Drill holes in underside of nose sheeting to drain away spilt fuel.

Wing. Centre Section—Pin spar and trailing edge in place, cement ribs vertically in their correct positions, and raise the spar into notches in ribs. Glue leading edge into notches in ribs, add gussets. **Tips**—pin spar and trailing edge and tip piece W6 or W7 to plan, glue ribs in place, and raise spar into notches. Tilt end ribs as shown. Add leading edge and tip pieces W5 or W8 and gussets. Glue tips to centre section and leave to dry with tips propped up to 3 ins. dihedral. Cover centre section where shown with 1/32 in. sheet. Enlarge slots behind spar and add dihedral braces where shown. Sand leading and trailing edges to typical section.

Tail. Build tail in similar manner to wing, use two pieces of 3/32 in. square curved round as shown for the leading edge. Build fin, sand streamlined, and glue on top of tailplane as indicated.

Dope or fuel proof the fuselage interior between F1 and F5, and also the inside of the cowl. Mount the motor and fit the ply disc behind the airscrew, then add balsa sheet discs to build up the spinner as shown in the side elevation. Fill between the ply disc and front portion of the spinner with scrap 1/8 in. x 1/8 in. balsa.

Cover in the usual way avoiding wrinkles; cover body with long narrow strips of tissue; cover wing with 3 pieces on top and 3 below; tail with 2 pieces on top and 1 below, and fin 1 piece each side. Spray with water to shrink. When dry, dope fuselage 1 coat of clear dope and 1 coat of colour dope, 1 coat of fuel proofer. Wings, tail and fin, 2 coats of clear dope.

Trimming for flight. With wing and tail held firmly in place with rubber bands add plasticine to nose or tail of fuselage until model balances level on the fingertips at 1/2 in. behind the wing spar. Test glide over long grass. If glide is steep insert 1/16 in. under rear of tailplane, if the model stalls remove weight from tail or insert 1/16 in. under the front of tailplane until a long flat glide is obtained.

