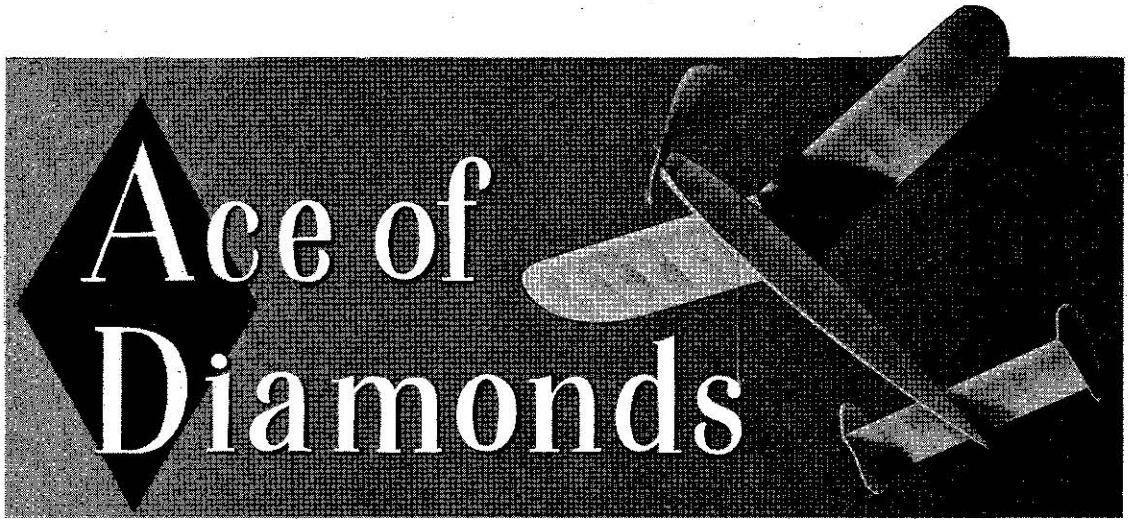

Ace of Diamonds

THE aim in designing the "Ace of Diamonds" was to produce a rubber-driven lightweight that was different in appearance, without, if possible, any loss in performance. The results have been very satisfactory, the model being capable of making a vertical climb—if such a method of ascension be your choice. It is not an ultra-lightweight and is, in fact, pretty tough.

The "Ace" is very versatile and the prototype has also been fitted with a Jetex 200 unit by way of variation. This change is easily effected by the removal of the rubber motor and the substitution of a glider nose-block for the propeller assembly. The Jetex unit is mounted forward over the mainplane, the centre section of which is protected by a piece of asbestos paper. This Jetex version flies very well indeed and holds the Ampleforth College M.A.C. record for this type with a flight of 5 min. 52 sec. o.o.s. The rubber-driven version also holds a club record in the rubber category, clocking 9 min. 30 sec. before going o.o.s. vertically overhead.

The construction of the "Ace of Diamonds" is so simple that building instructions are hardly necessary. The fuselage is made in the usual way on the plan and the only point requiring special mention is that the positions of the 3/32 in. square spacers should be noted, most of the spacers being $\frac{1}{16}$ in. square. The wing platform is braced with 20-s.w.g. piano wire shaped as shown on the plan.

As with any duration model, particular attention should be given to the propeller. This is carved from a balsa block 6 in. × 2 in. × $1\frac{1}{2}$ in., and should be left fairly thick until trimming tests have been carried out. If the model tends to be nose heavy the propeller can then be sanded to a thinner section to obtain the correct balance. Make sure that there is no vibration in the whole propeller assembly—this is very important. Trim for right-hand glide and climb.

List of materials required :—

4 lengths 3/32 in. × 3/32 in. × 36 in.
3 ,, $\frac{1}{16}$ in. × $\frac{1}{16}$ in. × 36 in.
1 ,, $\frac{1}{2}$ in. × $\frac{1}{8}$ in. × 36 in.
1 ,, $\frac{1}{2}$ in. × $\frac{3}{8}$ in. × 36 in.
1 ,, $\frac{1}{16}$ in. × 3 in. × 18 in.
(All the above hard balsa)
Block (medium soft) balsa 6 in. × 2 in. × $1\frac{1}{2}$ in.
Small piece 1 mm. ply.
20-s.w.g. piano wire.