THE HENSCHEL Hs.126

A ¾ inch to the foot FLYING SCALE MODEL

Designed by **D. J. MILLER**

Whilst the "flying" type airscrew and the wire coils attached to the landing legs reveal these photographs as those of the model, the general composition of both of them is excellent.

are made in the same way as the elevators. The slots fitted are optional. I found them very much worth including, and made them after Colonel Bowden published his experiences with them. They are fitted on the German machine. If desired, the ribs may be cut out without being cut away and ⅛ in. strips of 1/64 in. sheet with the grain crossing may be cemented to make I-section ribs. This is advisable if a very good finish is desired.

Undercarriage.

The drawings show how this is made. I do not know if it is original in any way, but must stress that for a 'plane which may weigh up to 10 oz. 14 s.w.g. is necessary, and that the wire must be firmly anchored. In that form it is effective and requires no other external support, so preserving scale characteristics and saving many severe fractures in landing heavily. A pair of substantial vulcanite wheels were fitted.

Propeller and Motor.

A 13 in. propeller is fitted, but may be varied. The pitch is 16 in. The motor consisted of eight loops of ¼ in. by 1/30 in., each 66 in. long, tensioned and doubled over to fit between propeller hook and peg in the rear. This was for a heavily finished model, and the power was ample—possibly a little too much for full turns, owing to the rather high centre of resistance. With 500 turns the model will r.o.g., fly in a wide left circle, climbing steadily. A pawl and ratchet type of free-wheel was fitted, but this arrangement, with other minor details, can be left to the model maker.

Assembly of Wings—Balancing.

After model has been covered and all details completed except fitting of N struts and wings, this last operation must be performed in such a manner that the C.G. is about ⅛ in. in front of the C.P. position marked on the wing in the side elevation diagram. It should be very little out and it will be noticed that N struts can be moved in the slots cut for them; also they can be varied in position beneath the centre section of the wing. Care must be taken to get the incidence as near correct as possible—a little too little is preferable to too much, as otherwise head resistance high above the thrust line will, of course, result.

After this, any variation in weight caused by repairs, dope, motors or propellers must be counterpoised by weights put in the nose or tail. Decide, therefore, first whether you intend to get either maximum detailed finish, with plenty of dope, or absolute minimum weight for flying. If the latter, then a 2½ oz. motor will give about the best results—twelve strands of 30—33 inches tensioned to take up slack.

General.

On the original I fitted the slow flying flaps, but have glued them up again as they introduced too many unknowns and would get displaced often on landing. The ailerons will help you take care of the torque, which is heavy when the model is heavy; but the model is *very* sensitive to slight alterations. Don't move only one—use both. If you are after full power flights you will, of course, need to introduce a slight degree of down-thrust and side-thrust. The elevator is set at about one degree negative incidence: when you have the right setting for flight, fix it with a spot of cement on each side. I found the elevators required to be very slightly down. Everything turns on weight and flying speed, so when you fly—choose a calm day, and, if possible, a flat, smooth ground. Begin with enough turns to get her off the ground a foot or so, and watch what happens, gradually increasing the turns as you improve the trim. With a 10 oz. machine and a 16 in. pitch propeller, 700—800 r.p.m. on the propeller should give you flying speed and a duration of power flight of 40—50 seconds.