

more of an aeroplane, if you will pardon the paradox, than the latest Mach 2 jet. It has wings, big ones; struts, wires, plenty of them; and squadron insignia and pilots' personal crests. My favourite model is an Ansaldo S.V.A., an exact reproduction—serial numbers, insignia, etc.—of the plane my father flew. It flies beautifully and is for me a living souvenir.

I have tried to explain why I like C/L scale models. I will now go on to explain how I build them. As I

right place, so you must try to make them as unobtrusive as possible and hide them under removable hatches. Most important, if you want your model to fly properly, is the cooling of the motor; you must arrange the inside of the cowling in such a way that the air, entering through the front, is free to escape, after having passed round the cylinder head, without creating unnecessary turbulence. One can fit baffles round the engine and let the air escape through a removable hatch in the top cowling.

Build your fuselage exactly as it was built in the original; then you can be sure that all structural problems, strength, warps, etc., are already solved for you.

Wings are a delicate part of construction and a vital one, too. I find that the original airfoil of most first world war biplanes is quite good for a model. Actually, all my biplanes have this kind of airfoil and when the engine cuts out they stay in the air for three or four laps. They glide well and have a very low



These two photos are of the $\frac{1}{8}$ th scale Hawker Horsley powered by the author's favourite Anderson Spitfire petrol engine.

have said before, one must carefully choose the aeroplane which is to be reproduced in scale. First of all, see that the motor and the controls can be concealed within the cowling; then see that the wing area and, even more, the tail area have good proportions. But technical reproduction is not merely a mechanical transformation of something big to something small. It is creative; it is something that you see slowly take shape under your hands. It is an art, and you must approach it with an artistic state of mind and eye.

When you have chosen the aeroplane you are going to build, you must obtain as much information as you possibly can. The Imperial War Museum and most aeronautical firms are extremely obliging and on several occasions I have had drawings, pictures and details sent to me. So first of all, original drawings and plenty of pictures. Then you can start your own drawings.

The scale proportion is immaterial, but my personal point of view is that 1 in. = 1 ft. is the minimum if you want your motor hidden. Actually I prefer $1\frac{1}{2}$ in. = 1 ft. up to 2 in. = 1 ft. scale, but that depends also on the motor you are going to use. Here I prefer a good old 10 c.c. spark ignition engine. Heavy, I agree, but it is clean (i.e. the fuel does not attack the finish), has plenty of power and is easily throttle controlled. The exhaust stacks of your motor rarely come out exactly in the

In a biplane, where the pivot should be as near as possible to the central point between the wings, the bell crank can be fixed well away from the visible cockpit space, that is to say, beneath the instrument panel. The elevator push rod should be as unobtrusive as possible, running under the cockpit floor. If the full-size plane has the elevator controlled by wires outside the fuselage, have your control working in the same way. It is not too difficult to transform the horizontal movement of the bell crank in to a vertical one operating the elevator wires. In my models of this type, the wires are connected to the pivoting arm by two turnbuckles allowing an equal tension to be obtained on both.

stalling speed as a result. Balance in a C/L model is not critical but a little excess weight in the nose for the first few trial flights, is always a good safety precaution.

Struts are quite difficult but here again the best way to join them to the wings is to follow the original construction. I build the struts from aluminium tube, flattened and drilled at both ends to fit the wing attachment which is usually bolted to the spars. The struts are covered in balsa wood and cut to shape. The balsa wood can be stained and varnished to look like mahogany, birch or any other wood. (See Figs. 1, 2, 3 and 4.)

Bracing with wire must be approached with great care. In



Fitted with a Taplin Twin 7 c.c. diesel engine, this Fokker DVII won the 1959 Nats!