

MECCANO

AEROPLANE CONSTRUCTOR OUTFIT No. 00

The aeroplane is rapidly taking its place as a regular means of high speed transport, and the time is not far distant when we shall use it as readily as to-day we employ the train, the steamship and the motor car. In future we shall cross the oceans in giant flying boats that will traverse well-marked routes. Overland routes will be even more numerous than those across the seas, and these will be thronged with aeroplanes carrying both passengers and goods at speeds far exceeding those of to-day.

Now is the time for every boy to learn how aeroplanes are designed and constructed and to recognise at a glance the different types. The best way of doing this is for a boy to build aeroplanes for himself, and the Meccano Aeroplane Constructor Outfit No. 00 has been specially designed for this purpose. The parts contained in it enable aeroplane construction to be carried out on sound engineering lines and it is splendid fun to build up with them models of different types of aircraft in actual use.

INSTRUCTIONS

How to build Model Aeroplanes with the Meccano Aeroplane Constructor Outfit No. 00

To build up a model, first take the Fuselage section 1 (see Fig. A) and secure the Propeller Shaft Bearing 2 in place by means of Bolts 3 and 4 fitted with Nuts. The model shown is a Biplane and the Bolts 3 and 4 hold also the rear pair of Short Wing Struts 5 and 6 in position. Before going further, the front pair of Bolts holding the lower Wing in position must be secured in place by means of Nuts. Next place the Rubber Band around the groove in the pulley on the Propeller Shaft 8 and screw a Nut on to the screwed end of the Shaft. Pass the screwed end of the Propeller Shaft through the hole in the bent-up portion of the Undercarriage 7 and thread a second Nut on to the end of the Shaft 8. Lower the Undercarriage 7 into position and at the same time slip the plain end of the Propeller Shaft 8 through the hole in the Propeller Shaft Bearing 2.

Now secure the Undercarriage rigidly in position by screwing the Bolts 9 and 10 into the threaded holes in the Undercarriage. Two Bolts are also passed through the Fuselage near the nose and screwed into threaded holes in the Undercarriage.

Pass one end of the Wheel Axle 11 through one of the Vee Struts of the Undercarriage 7. Draw the

Rubber Band through the circular opening in the undercarriage 7, and pass the Band over the Axle 11 and round the pulley 12 that is fixed to the Axle. Be sure to arrange the Band so that the Propeller Shaft rotates in a clockwise

direction when the model is pushed forward along the ground. Next push the end of the Axle 11 through the remaining Vee Strut and screw a Nut on to each end of the Axle. Finally screw the Landing Wheels into position against the Nuts and lock them together by turning each Wheel and Nut in opposite directions by means of a Spanner and the fingers.

The Propeller is locked in position on the Propeller Shaft by means of two Nuts. The first Nut is screwed on to the projecting end of the Shaft and the Propeller is then slipped in place. The second Nut is now screwed on to the Shaft and tightened on to the Propeller securing it rigidly.

To assemble the Tail Unit (see Fig. B), push the Tail Plane 13 into the slot in the Rudder 14. Place the projecting end of the Rudder into the centre slot in the top of the fuselage 1, and gently prise the edges 15 of the Tail Plane into the slots at each side of the Fuselage. Next push the Tail Skid 16 in between the sides of the fuselage and the lug of the Rudder and secure by means of two Bolts fitted with two Nuts. A short length of cord is passed through the holes in the Tail Plane and Rudder to brace the complete Unit. The cord is tied at each end to the Tail Skid to keep it in place.

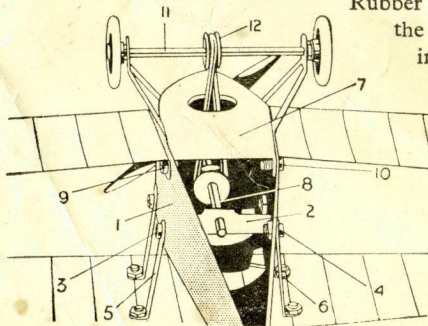


Fig. A

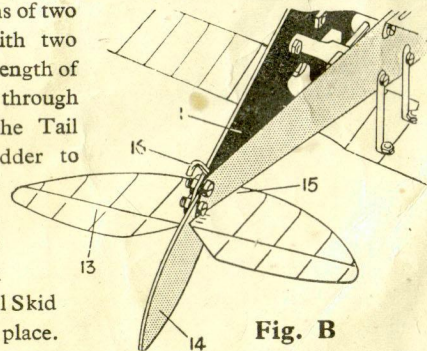


Fig. B

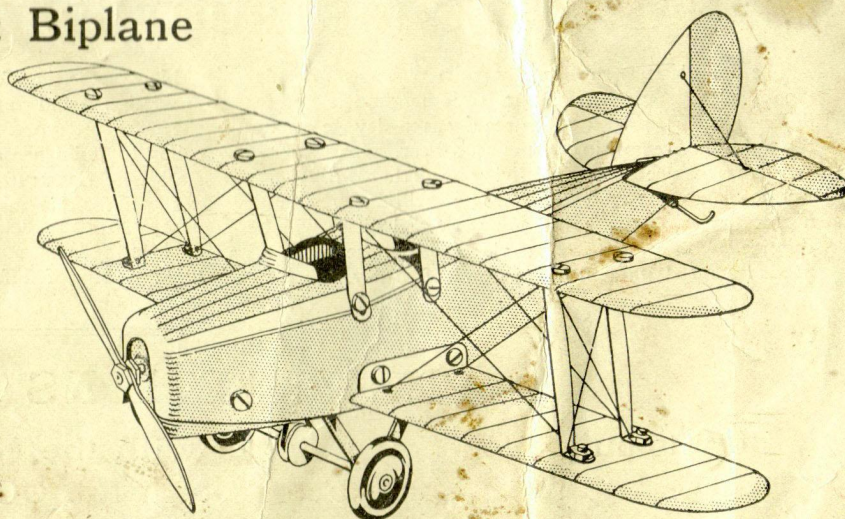
MECCANO

AEROPLANE CONSTRUCTOR OUTFIT No. 00

Model No. 1 Light Biplane

Aeroplanes are of two main types, monoplanes, having only one plane, and biplanes, having two planes. Biplanes are particularly suitable for training and private flying as they are usually easier to fly than monoplanes. One of the most widely known aircraft of this type is the British de Havilland "Gipsy Moth," while another well-known machine is the Avro "Avian."

Model No. 1 is a biplane model of the light type.

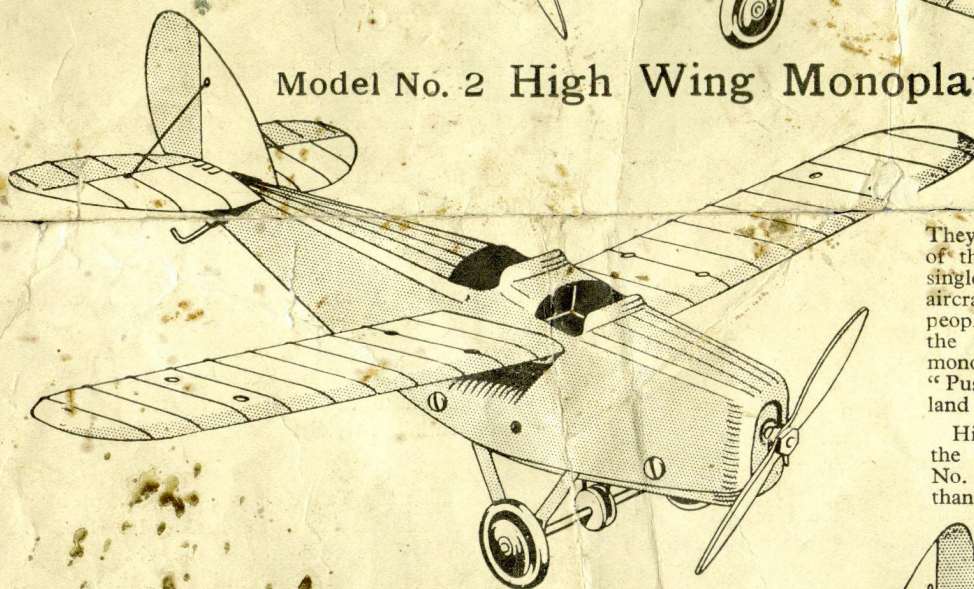


Model No. 2 High Wing Monoplane

High wing monoplanes are probably the most popular monoplane aircraft.

They are used in all parts of the world, and range from single-seater machines to huge aircraft seating as many as 30 people. Typical examples are the British Desoutter cabin monoplane, the de Havilland "Puss Moth," and the Westland "Wessex."

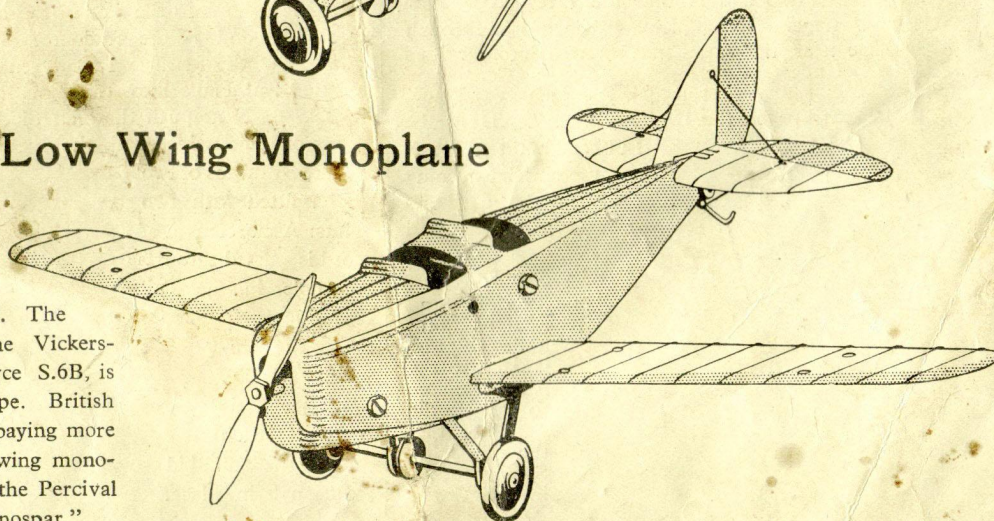
High wing monoplanes of the type shown by model No. 2 are usually more stable than low wing types.



Model No. 3 Low Wing Monoplane

Low wing monoplanes, as shown by model

No. 3, are particularly suitable for speed work. The Schneider seaplane, the Vickers-Supermarine Rolls-Royce S.6B, is a machine of this type. British manufacturers are now paying more attention to the low wing monoplane. Examples are the Percival "Gull" and the "Monospar."



Full instructions for building the models illustrated above are given on the reverse side of this leaflet.