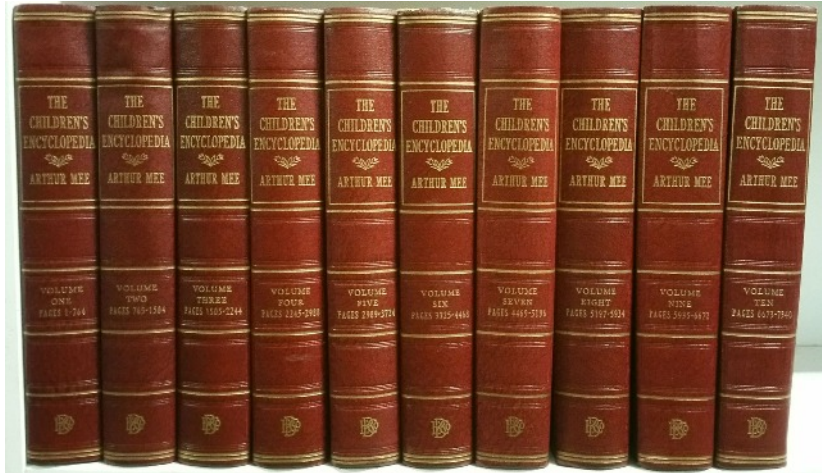


de Havilland Aeronautical Technical School Association

PICTURE STORY OF AN AEROPLANE

The Children's Encyclopædia was originated by Arthur Mee and published by the Educational Book Company, a subsidiary of Northcliffe's Amalgamated Press, London. It was published from 1908 to 1964. It was divided typically into sections such as:

- Familiar Things
- Wonder
- Nature
- The Child's Own Life
- The Earth
- All Countries
- Great Lives
- Golden Deed
- Bible Stories,
- Famous Books
- Stories
- Poetry
- School Lessons
- Things To Make and Things To Do



In one issue of the late 1930s one of the 'Familiar Things' was a series of photographs taken "in the works of the de Havilland Aircraft Co." The photographs were reproduced by courtesy of Flight, Flying and others, so possibly over a period of time.

Page 6337 shows Puss Moth wing manufacture, with fuselages in the background.

Page 6338 upper picture shows Leopard Moth wing covering. The lower picture caption refers to the Puss Moth, but the wing shown appears to be more that of the centre section of a low wing monoplane, single engine, with a one-piece wing, so unlikely to be at DH's.

Page 6339 shows Leopard Moth fuselage manufacture and Comet engine frame fabrication, which would have been in mid 1934, or 1935 if one of the fourth or fifth machines.

Page 6340 shows a Tiger Moth and Fox Moth VT-AEB. The Fox Moth was registered in June 1933 to the Government of Bengal and was operated by Indian National Airways, based at Dum Dum Airport Calcutta.

Page 6341 illustrates Gipsy engine manufacture.

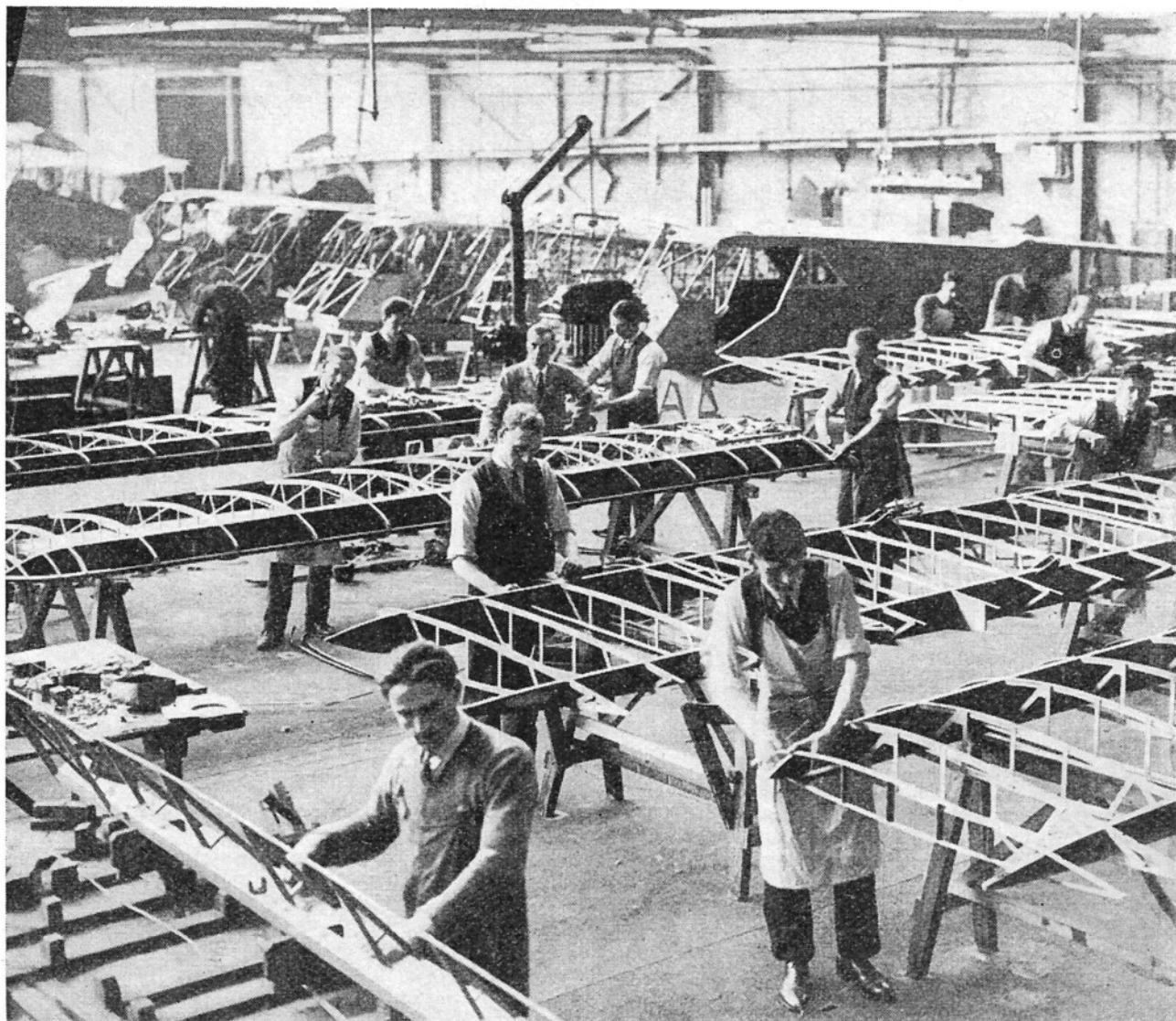
Page 6342 shows the engine being installed in a Puss Moth.

The Puss Moth first flew in 1929 and production ceased around 1933. The Leopard Moth first flew in 1933. The collection of images thus seems to cover the 1933-1935 period. It is considered that they were all taken at Stag Lane, although it is possible that the Comet photo was at Hatfield, apart from the mystery lower photo on page 6338.

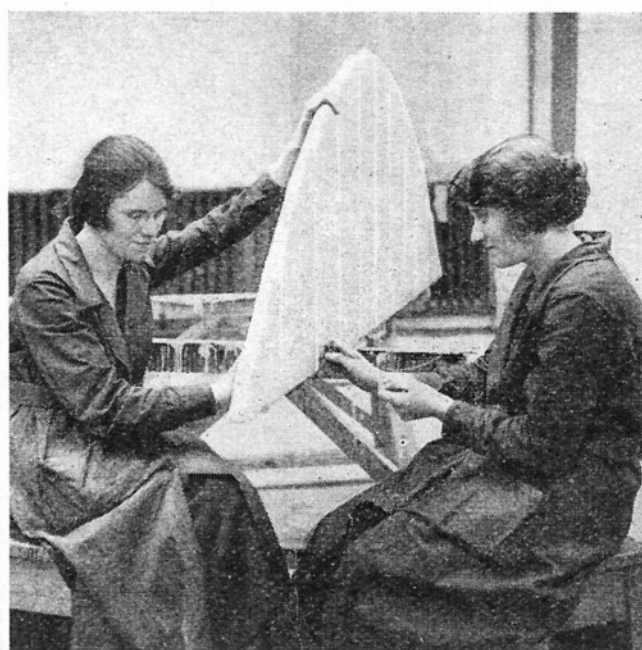
Thanks go to Ted Lawrence for providing copies of the pages and to Stuart McKay, Secretary of the de Havilland Moth Club, for his informed comments.

Compiled by Roger de Mercado, June 2020

PICTURE-STORY OF AN AEROPLANE

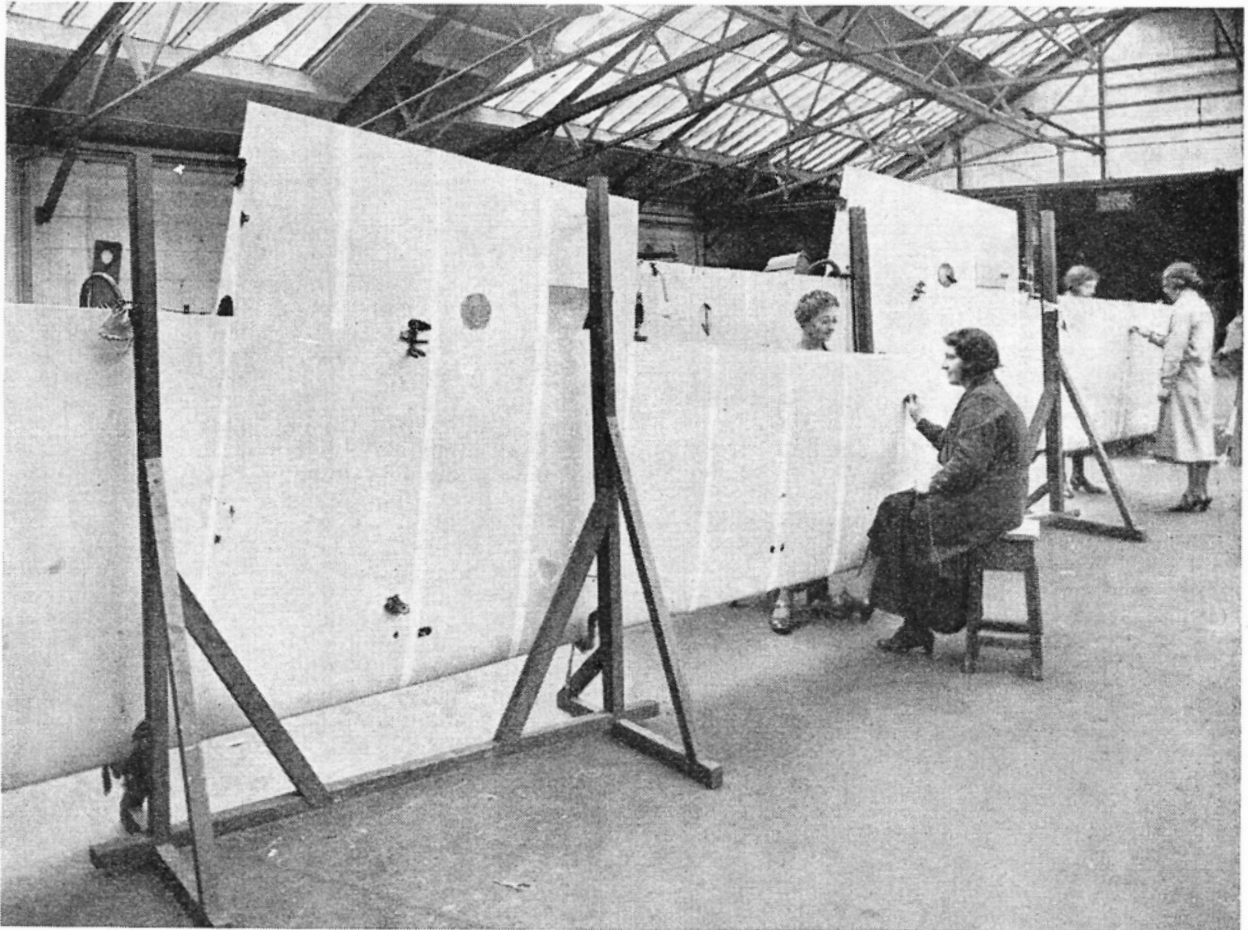


From the birth of an idea in the designer's mind to the factory is a long stage in the production of an aeroplane. Here we are to see some of the work that follows in the factory itself. This picture shows how the wings of Puss Moth monoplanes are built up, the system of construction ensuring lightness of weight with immense strength.

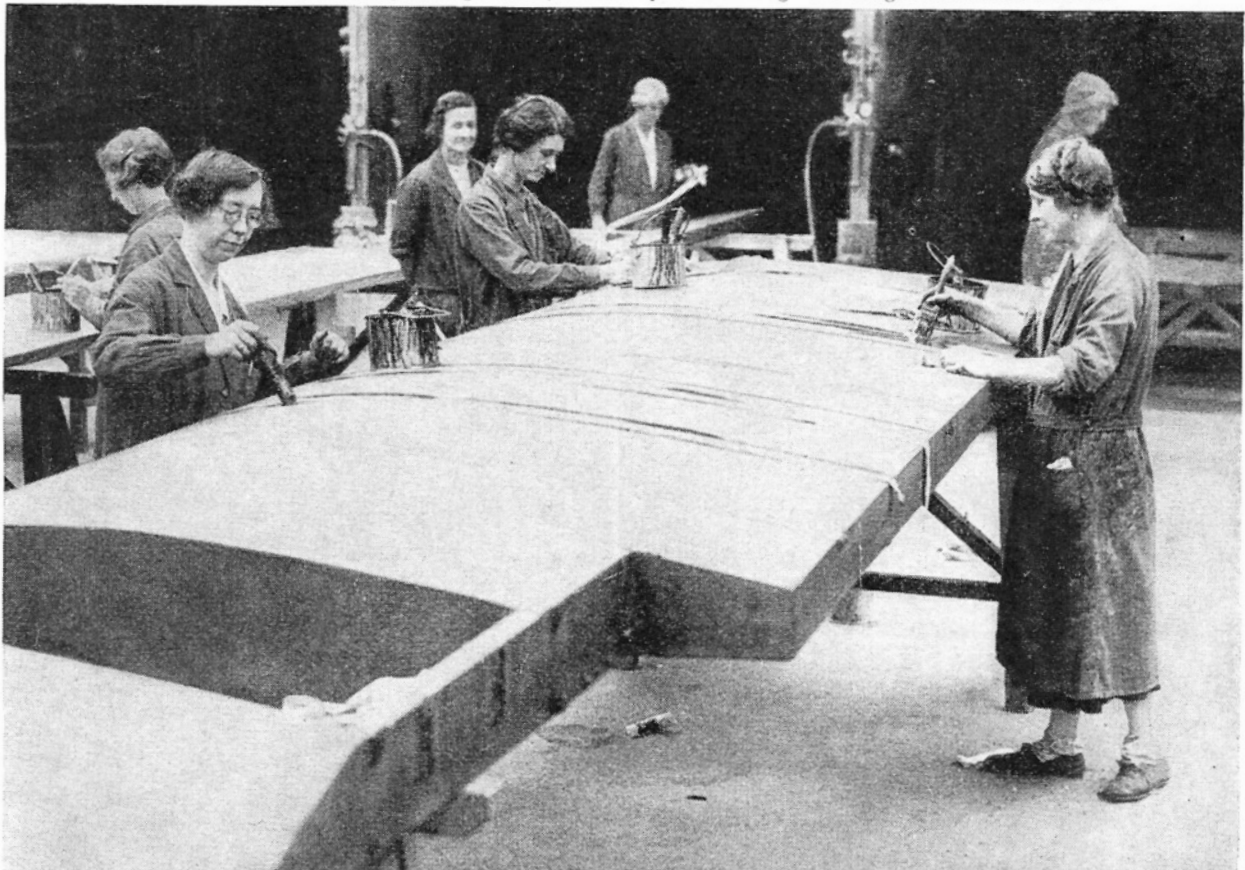


Many thousands of yards of the finest Irish linen are used for the coverings of wings and other surfaces in a big aeroplane factory in the course of a year. On the left fabric is being prepared for wings, and on the right a tail plane is being covered.

COVERING AND DOPING THE WINGS

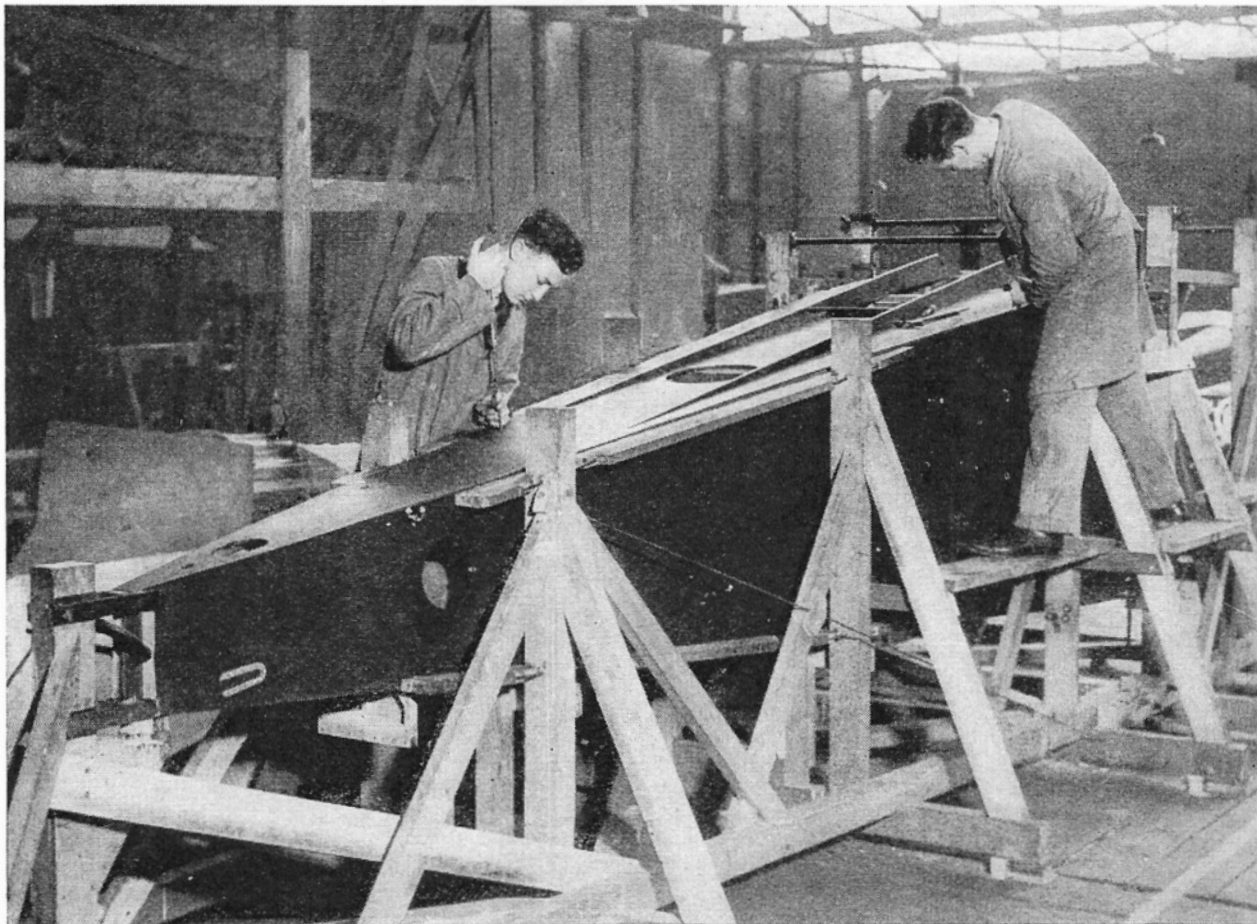


The linen for the wings having been cut and joined according to pattern, the next stage is to stretch it over the wooden framework. Here we see expert craftswomen securely fastening the wing-coverings of Leopard Moth machines. The fabric is held to the ribs by strong thread, which is passed through the wings on six-inch needles.

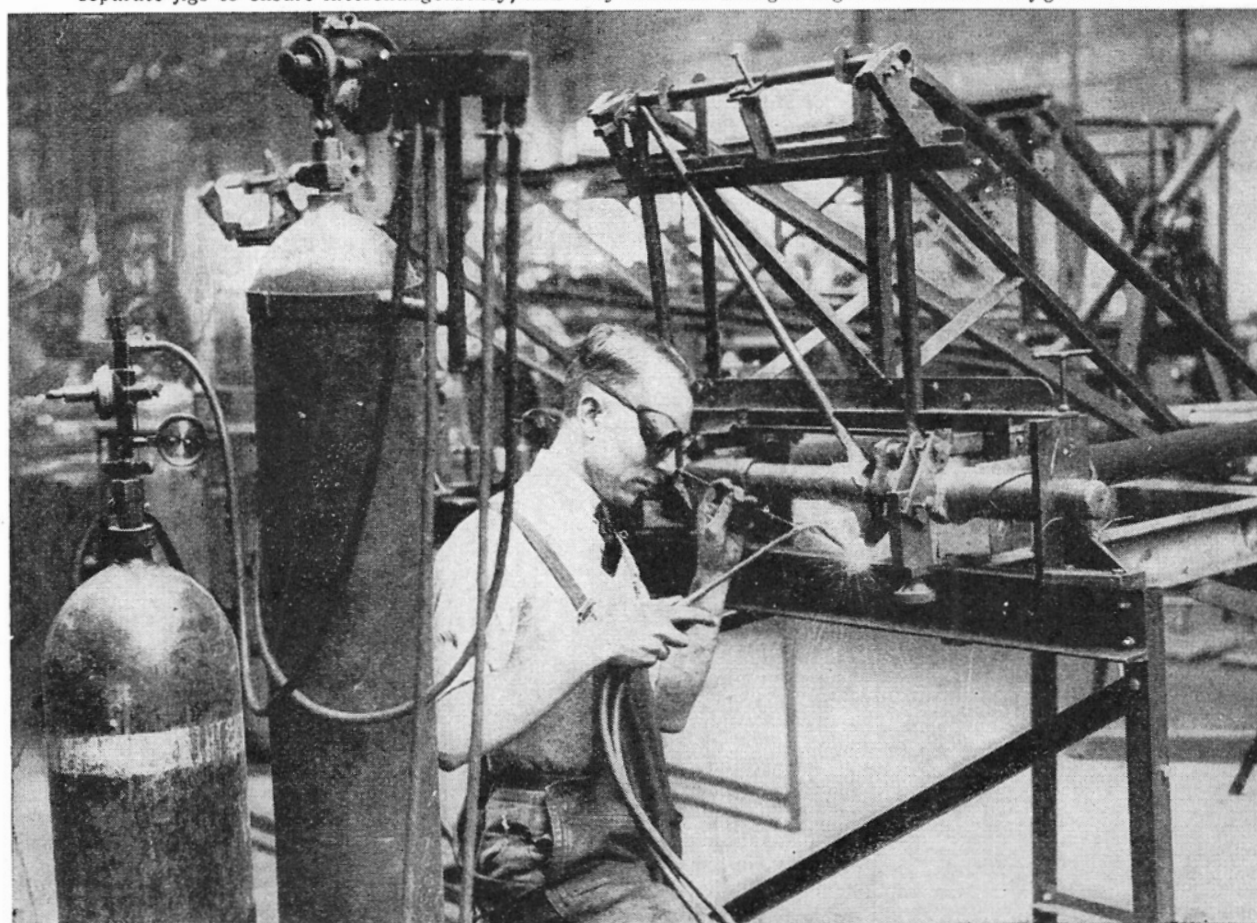


To make the fabric perfectly weatherproof the surfaces are treated with dope, a cellulose substance, which also tends to tighten up and toughen the coverings. An aeroplane of the size of the Puss Moth is required to have a safety factor of nine, that is, its structure must be able to withstand loads and stresses equal to nine times its own weight.

THE STEEL WELDER AND HIS BLOWER

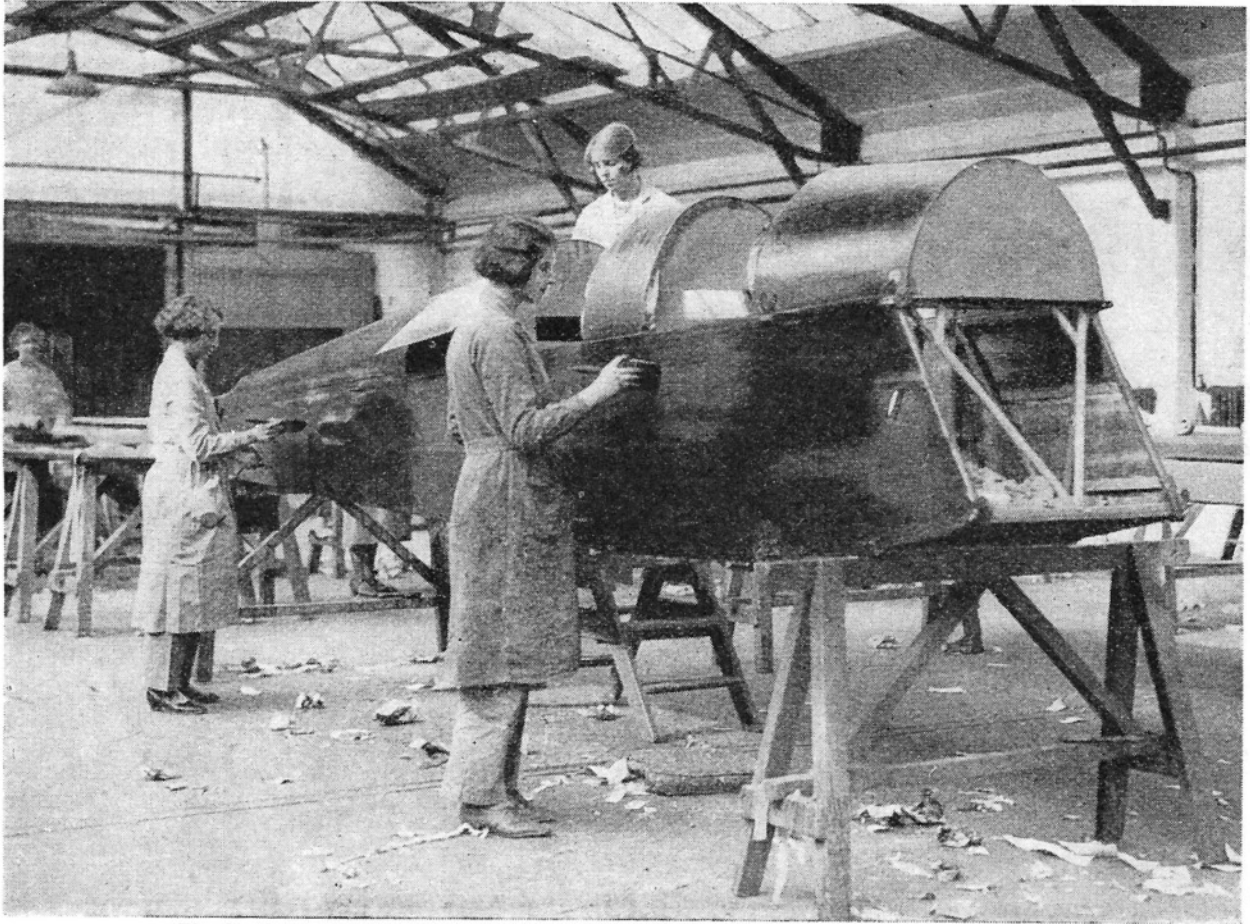


Here is the fuselage of a Leopard Moth being built up on a jig. The sides and the top and bottom are constructed on separate jigs to ensure interchangeability, and they are then brought together on another jig as seen here.

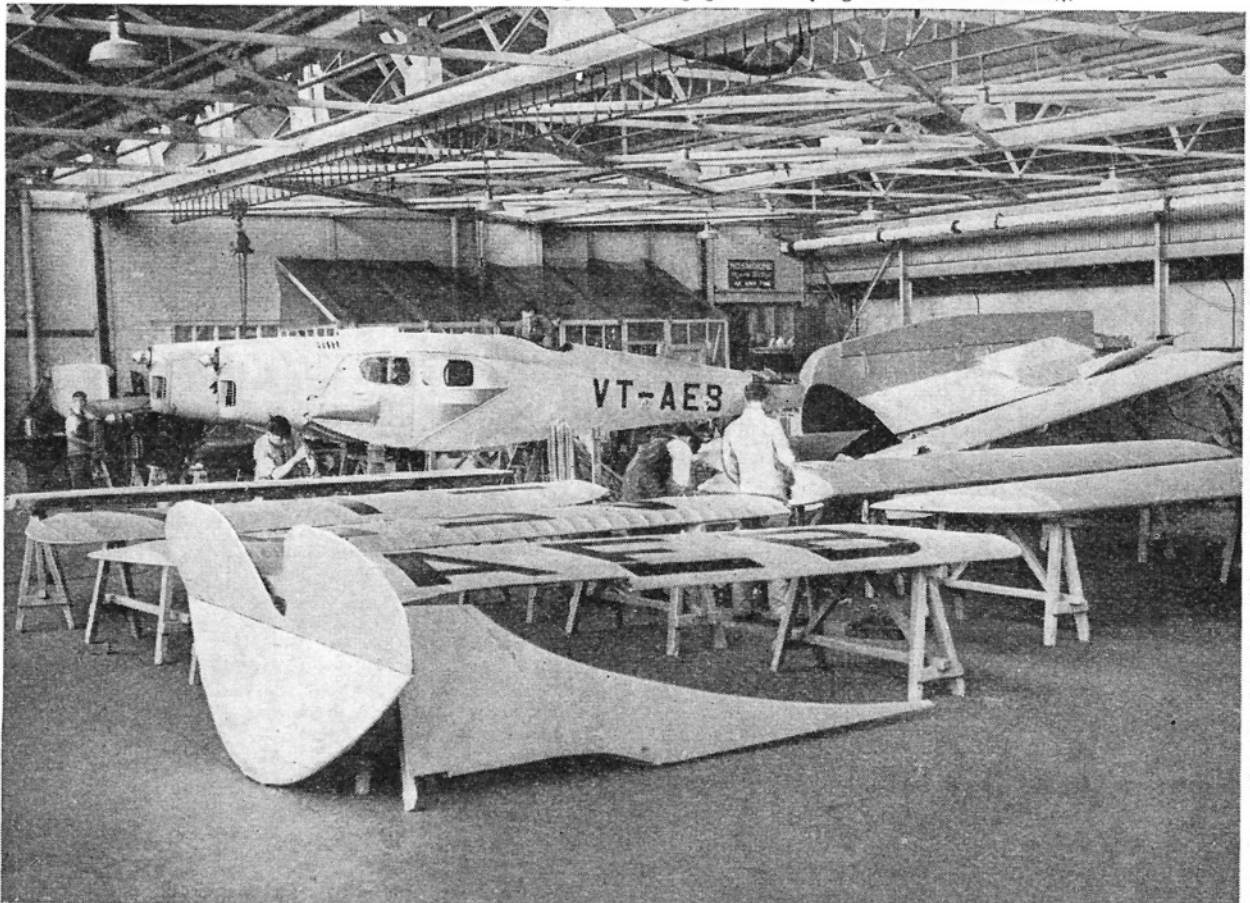


Metal enters largely into the construction of aeroplanes today, and here we see a steel welder at work with his oxy-acetylene blower on an engine frame, or cradle, for one of the famous Comet machines. Before a new type of aeroplane is built about 3000 separate drawings are made, and about another thousand for its engine.

COVERING A MACHINE'S METAL FRAMEWORK

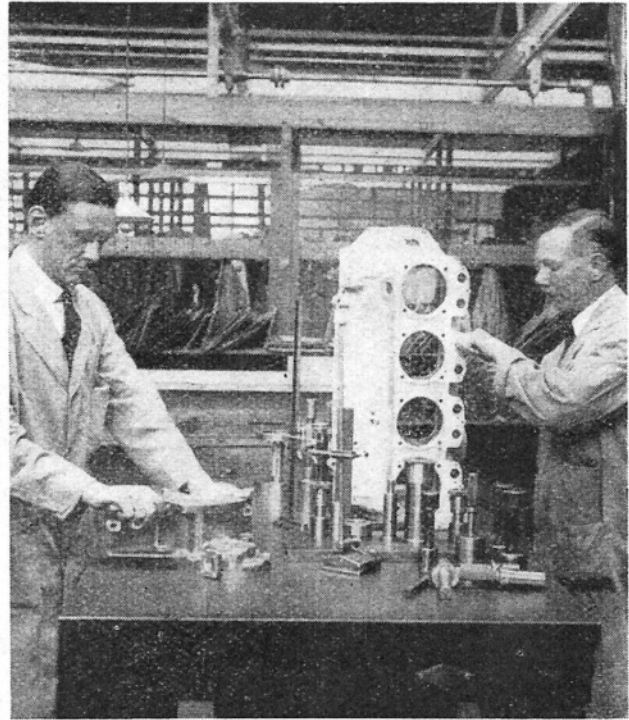
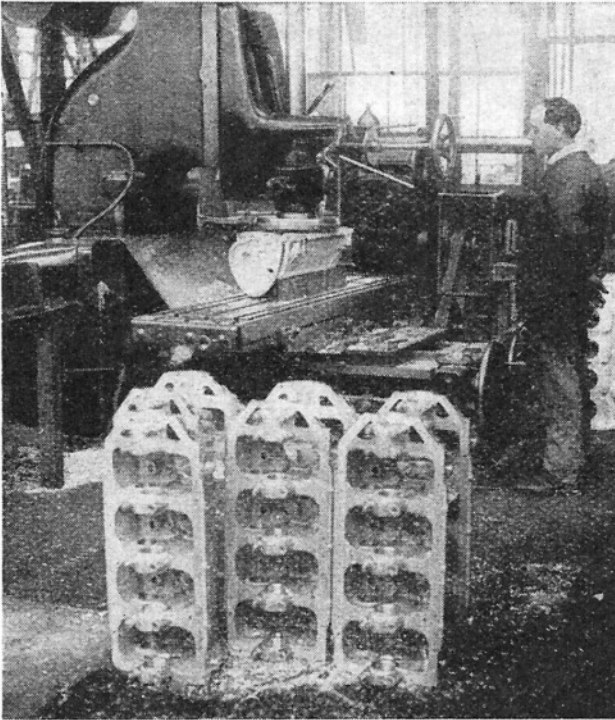


The fuselage, or body, of the Tiger Moth has a framework built up of tubular metal and it is covered with fabric. These girls are engaged in doping the fabric covering.

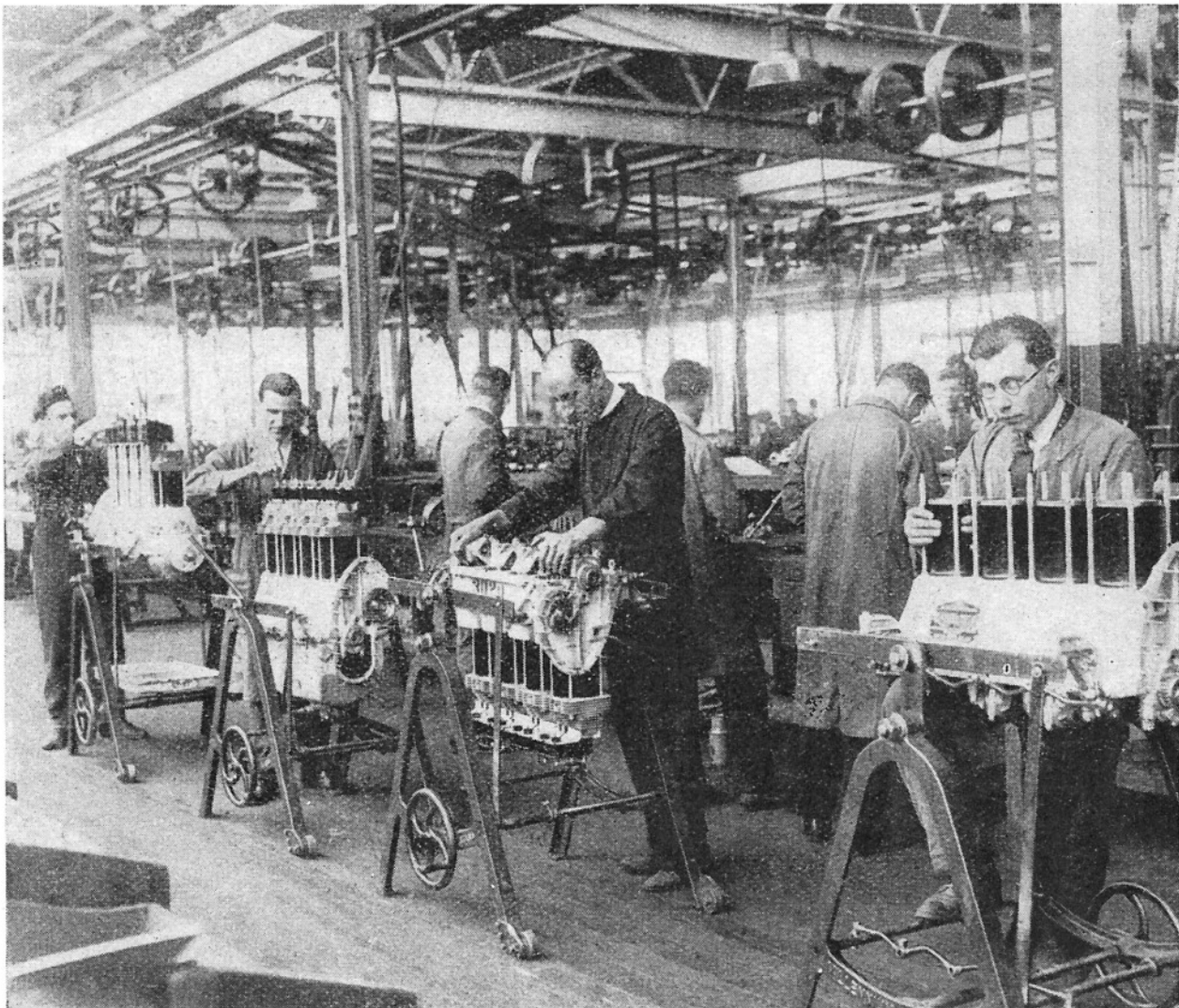


Here is a corner of the paint shop with a varied assembly of fuselages, wings, and other parts undergoing attention before being finally assembled. Some of the parts are seen to have received their registration markings. It is here that the aeroplanes are packed and shipped if they are not flown to the country to which they are destined to go.

MAKING THE ENGINES FOR LIGHT PLANES

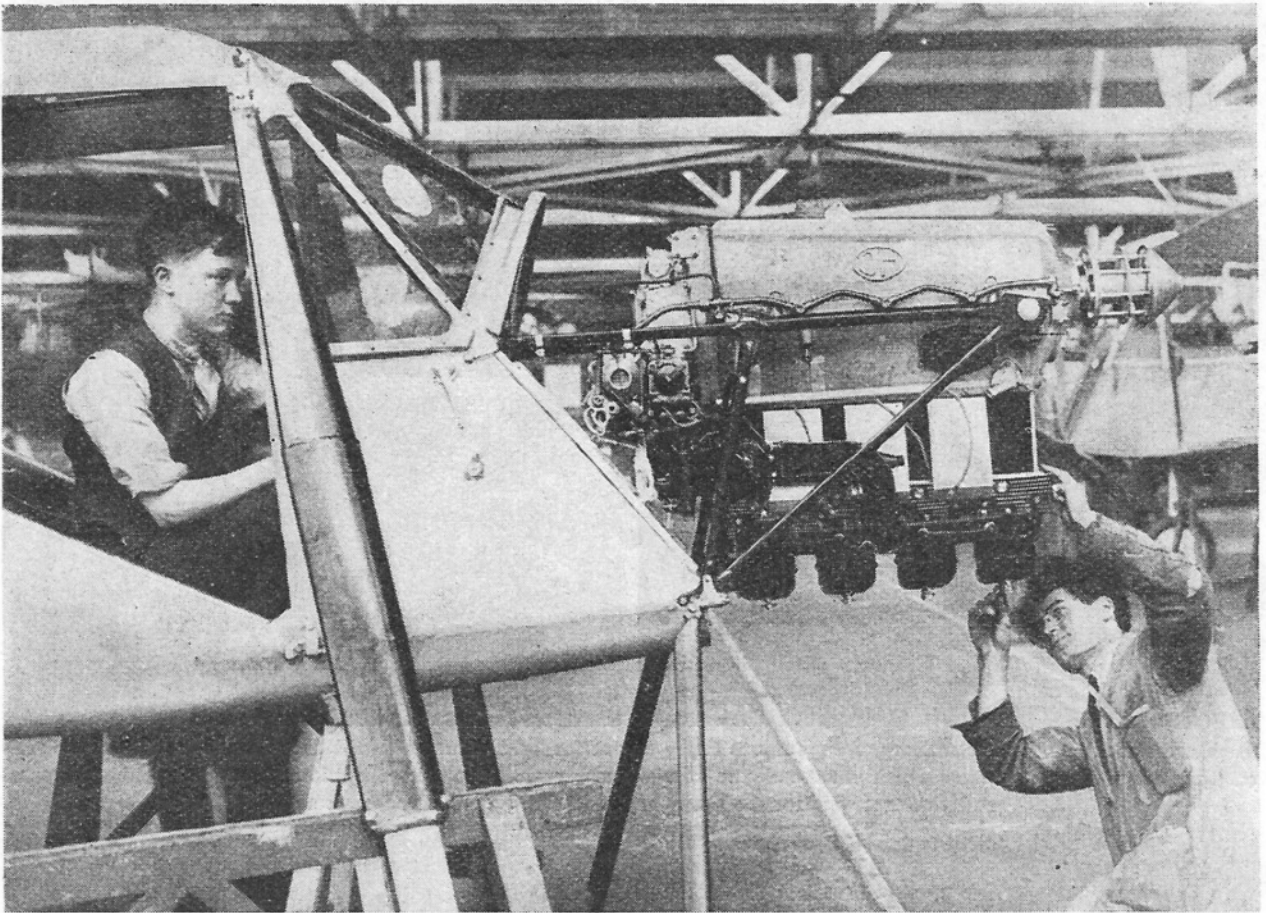


Here are some peeps at the making of the famous Gipsy engine for light planes. In the background of the picture seen on the left is the apparatus which machines the roughly-cast crankcases. In the picture on the right crankcases and timing covers for the Gipsy engine are being inspected by experts.

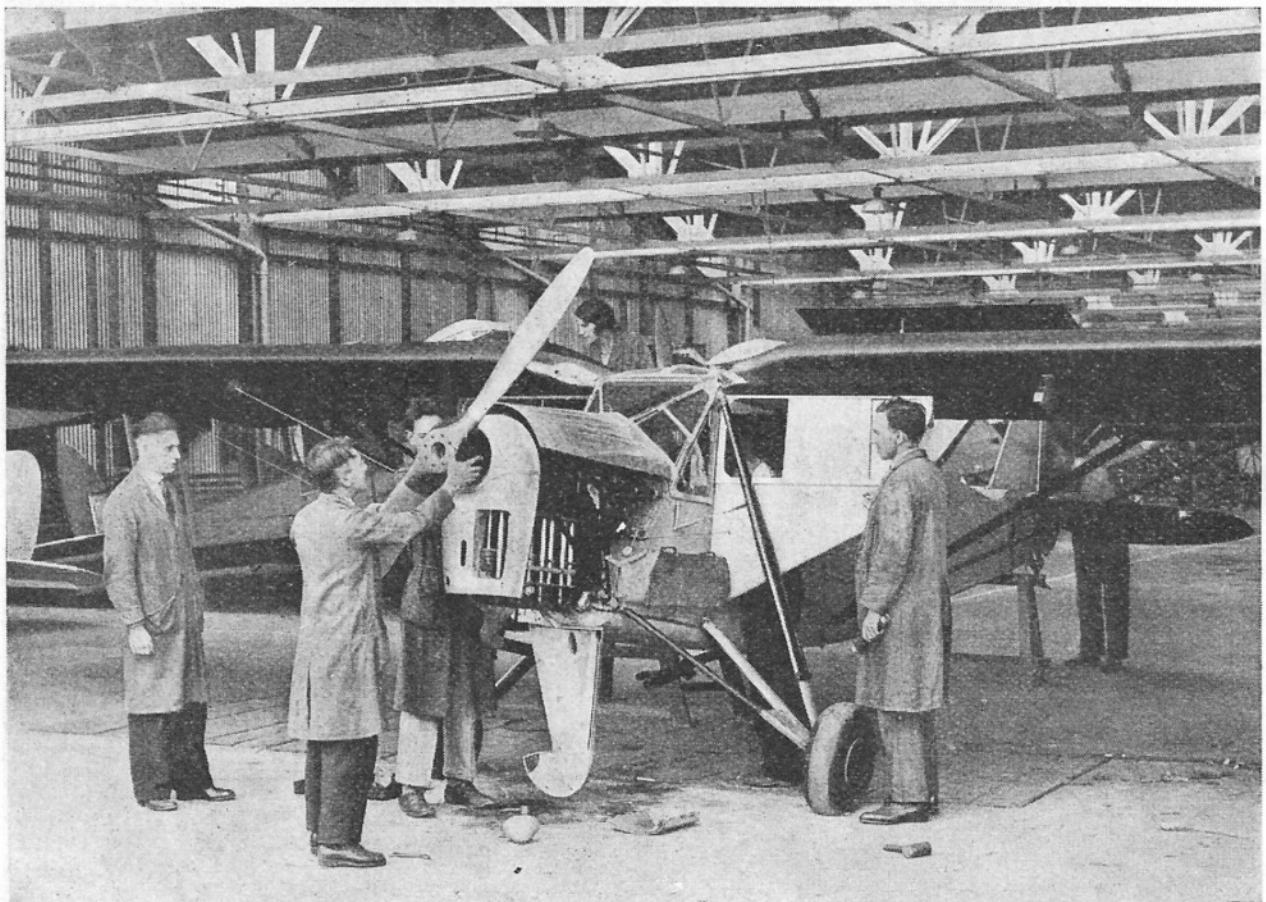


In this picture of an assembly shop the engines can be seen in various stages as they grow under the skilled hands of the engineers. The motors seen are 100 and 120 horse-power models for light planes.

FIXING THE ENGINE IN THE PLANE



The plane and its engine at last come together, and this picture gives an excellent idea of how the motor is mounted in the nose of the machine. It will be noticed that in this type the engine is inverted, the cylinders being below the crankcase.



Various necessary adjustments having been made to the engine, it is next encased in its cowling, rather like the bonnet of a motor-car, and the propeller is placed in position. The machine at last looks like an aeroplane. These photographs taken in the works of the De Havilland Aircraft Co. are reproduced by courtesy of *Flight*, *Flying*, and others.