

THE NEW HAWKER "TOMTIT" TRAINING MACHINE

Armstrong-Siddeley "Mongoose" Engine

DESIGNED for a competition held by the Air Ministry for a training machine for use in the Royal Air Force, the new Hawker low-power biplane which we illustrate this week is of interest in that it incorporates a number of features and equipment not usually found on such low-powered aircraft. In addition, the machine is of all-metal construction throughout, except for the fabric covering.

A normal biplane in aerodynamic design, the Hawker machine is characterised by a very pronounced stagger, the chief object of which is to provide good view from both cockpits, as well as to make it possible for the occupant of the front seat to make effective use of his parachute. The forward placing of the top plane and the cut-out in its trailing edge leave the space free above the front cockpit. To make up for the heavy stagger, the wings are given a slight sweep-back.

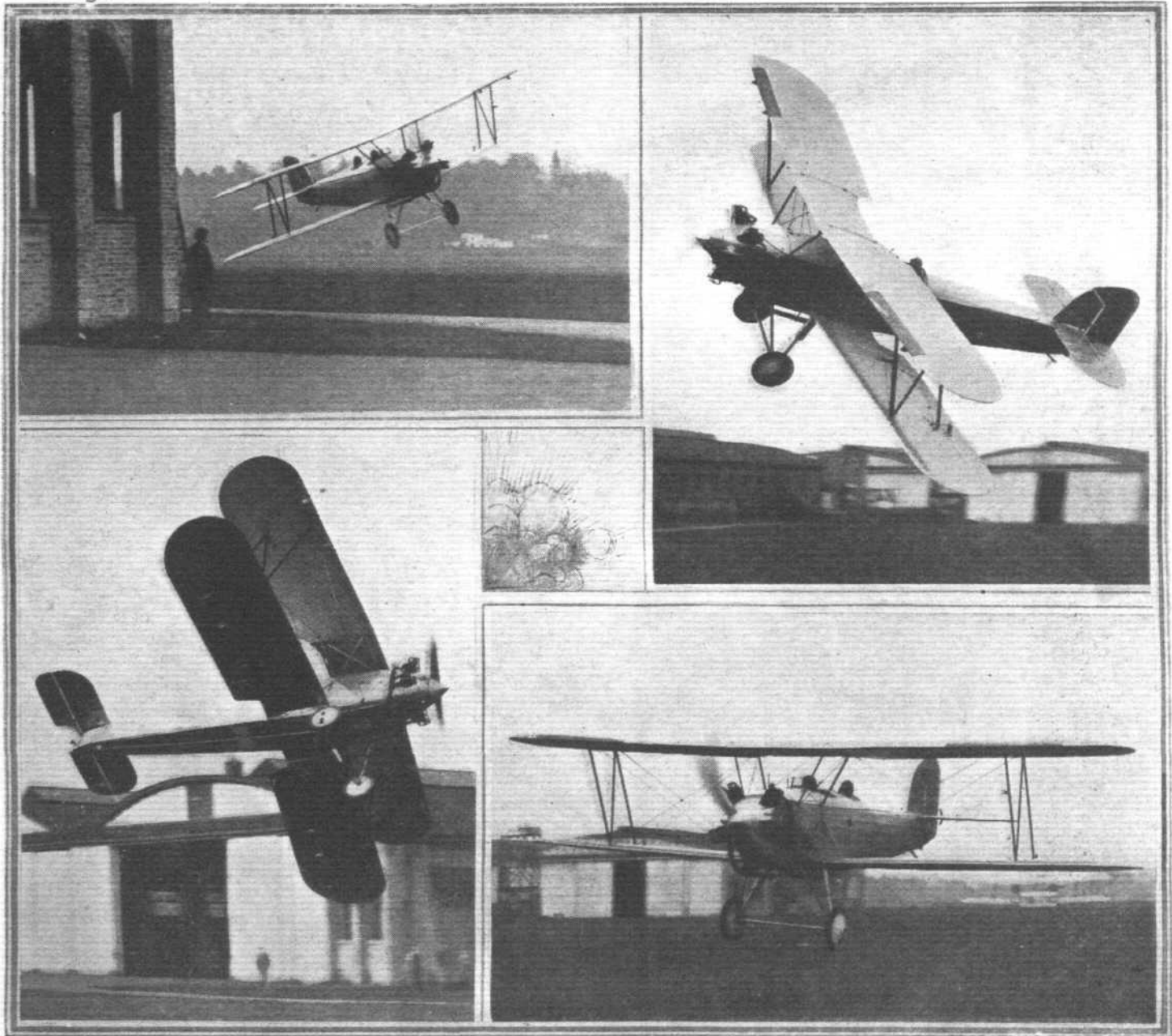
A complete set of instruments is fitted in each cockpit, so that both instructor and pupil is well equipped, and include Reid turn indicators of special type so as to make the machine suitable for teaching pupils to fly in darkness or cloud. A special hood is also provided which shuts out all view

from the cockpit, the object being to teach a pupil to fly by instruments entirely. Handley Page automatic slots are fitted, and it is reported that the machine cannot be made to spin when these are in operation. (The first test flights were made with the slots locked in the closed position.)

The Hawker training machine has a steel tube fuselage, the longerons being of the typical Hawker type in which flats are formed on the round tubes at the points of the strut attachments in order to allow simple plate fittings to be used.

The wings have steel tube spars of a type evolved by the Hawker company, formed from a large-diameter circular-section tube, the section of which has been changed into one that may be described as resembling a double figure-eight.

The engine fitted in the Hawker training machine is an Armstrong-Siddeley "Mongoose" of 120 h.p. This, as our readers will probably know, is a 5-cylinder radial air-cooled engine, with cylinders and pistons similar to those of the "Jaguar" and "Lynx" engines. The petrol feed is by gravity from a tank in the deck fairing ahead of the front cockpit.



["FLIGHT" Photographs]

THE HAWKER "TOMTIT" IN FLIGHT: Mr. Bulman shows various aspects of the new training machine