



THE FOCKE-WULF "ENTE": Note the pilot's cockpit, the cabin door, and the petrol tanks in the wing. Standing by the machine are Herr Focke and the firm's chief test pilot, Herr Edzard.

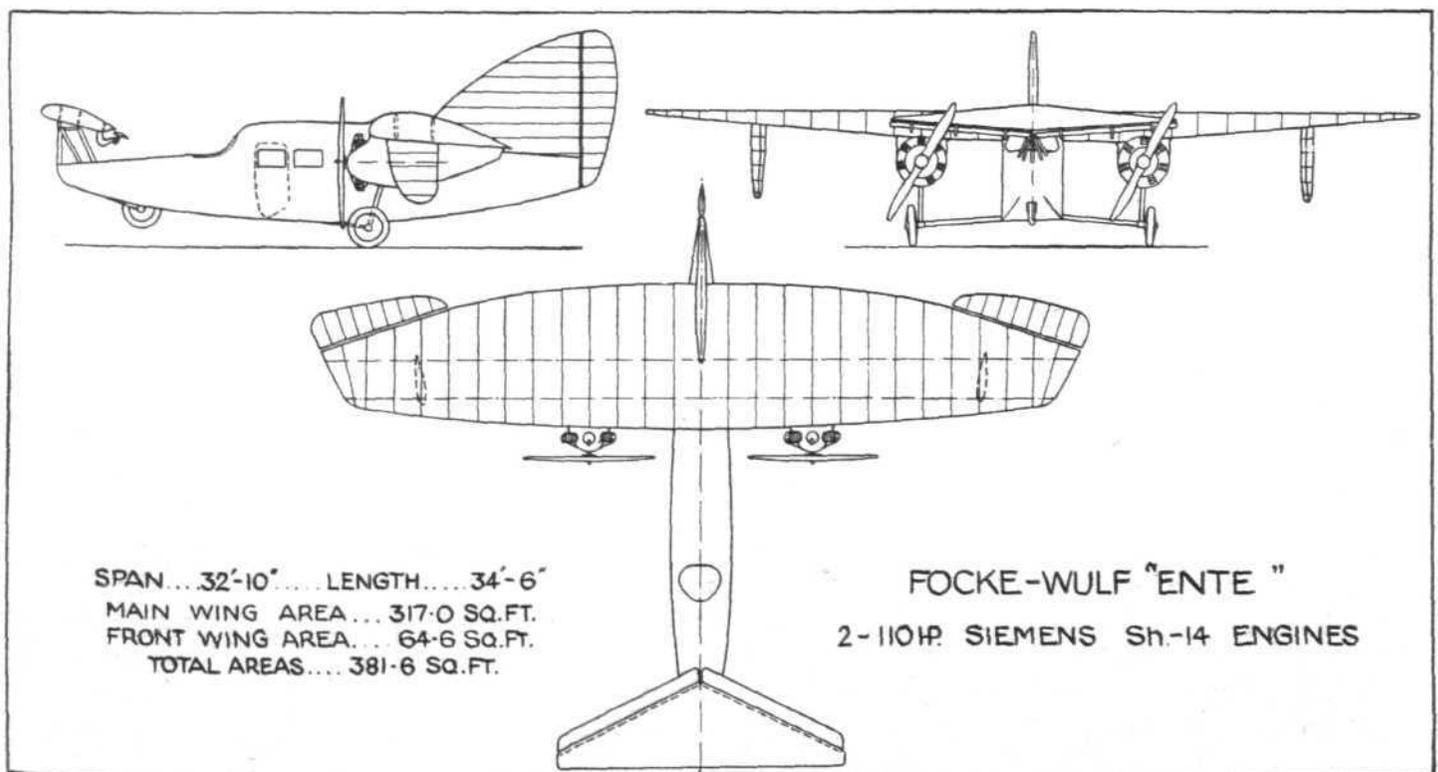
something of a sensation. The internationally well-known scientists of this institute, funds of which are anything but abundant, must have seen a very promising future for this type of plane, or they would not have dared to invest considerable sums in its development. In fact, the plans met with the whole-hearted support, not only of this institute, but also of several technical colleges; for instance, at Goettingen, where the responsible men allowed the wind tunnel to be used for months on end, to the exclusion of all other important work, for investigations on the new canard plane. Also at Aachen (Aix-la-Chapelle) leading scientists offered and gave their full assistance.

This lengthy introduction, I feel, is justified, for there are exceedingly few aircraft engineers anywhere that have ever given the possibilities of the "canard" plane any thought. Before describing the new plane, which has put up a most creditable performance, it may, therefore, be

worth while just to mention the points in favour of the "canard" type plane.

There are several main advantages inherent in the "canard" wing arrangement as compared with the usual wing arrangement now generally adopted. First of all, the "canard," plane cannot, under any circumstances, turn on its nose when landing, for the centre of gravity lies far away from the front end. This means greatly enhanced safety and fool-proofness, especially as it also admits of making full use of the wheel brakes when landing and thus cutting short considerably the landing run. Secondly, and much more important, is the fact that it is impossible to stall a "canard," plane, for the front wing of this has a considerably higher angle of incidence than the main wing. This means that the small front wing will reach the burbling point correspondingly sooner than the main wing. As then, however, the front part of the machine immediately ceases to rise, owing to the front wing ceasing to support it, the rear wing can never reach the burbling point. Thus one grave cause of accidents is entirely eliminated, especially if, as is the case with the present Focke-Wulf "Ente,"* a type of main wing is used that anyhow positively precludes any possibility of a spin developing, as has been definitely and conclusively proven. Thirdly, in the event of the machine hitting an obstacle on the ground, the passengers are comparatively safe from injury as the long fore-part of the machine protects them. This is all the more the case if, as in the present Focke-Wulf "Ente," two engines are employed, which are located right and left of the fuselage under the main wing, for if these drop out of their mountings in a crash, they cannot crush the passengers. A peculiar advantage attaching to bi-motored "canard" planes is that some of the power lost by the formation of air eddies behind the front wing can be regained by letting the propellers in front of the main wing turn in the opposite

* "Ente" is the German word for duck or, in French, "Canard."—Ed.



THE FOCKE-WULF "ENTE": General Arrangement Drawings. Note the peculiar plan form of the front plane.