

unobstructed view of the ground below and of the country all round. From the beginner's point of view, there is a feature of the Valkyrie to which we would particularly call attention, and that is the use of those very long skids, which form such a prominent feature in the general appearance of the machine. Since the various accidents to skilful pilots that have been due solely to the necessity of landing on bad ground, we have strongly advocated the employment of adequate skids on modern machines, and the Valkyrie appears to us to be an excellent example of such a type, although it does not happen to possess the disappearing wheel combination that we should so much like to see in general use. Incidentally, it may be remarked that the skids of the Valkyrie play a very important part in the construction of the machine, for they facilitate the forward bracing of the main planes, and thus serve to guard against the danger of bending spars that was pointed out by R. J. Macfie in a recent issue of FLIGHT.

A special feature in connection with the power plant of the Valkyrie is the provision of a small plunger pump on the Green engine for delivering petrol from the main-tank beneath the motor to a small gravity tank overhead. This system avoids pressure-feed,

and maintains a constant head, for if the delivery of the pump exceeds the consumption of fuel the surplus overflows the reservoir into the main tank. The pump is driven by an eccentric on the transverse magneto-shaft, and has a $\frac{3}{8}$ in. bore by $\frac{1}{4}$ in. stroke.

In conclusion, it may perhaps be of interest to summarise a few of the detail weights and dimensions:—

Weights.—Main planes, 50 lbs.; front planes, 23 lbs.; chassis frame, 105 lbs.; wheels, 50 lbs.; engine, 155 lbs.; magneto, 10 lbs.; dual ignition, 15 lbs.; propeller, 22 lbs.

Dimensions.—Propeller, diameter, 7 ft. 3 in.; pitch, 4 ft. 1½ in.; angle of incidence of the main planes with the propeller shaft, 9°; maximum camber, 5 in., situated one-third of chord from leading edge; main fore and aft booms of chassis frame, 14 in. square section. Skid-members are of the same size, but strengthened by extra pieces, which double the depth in the vicinity of the axle; main plane spars, 2 in. by 1 in. (front), 1½ in. by 1 in. (rear).

Materials.—Honduras mahogany is used almost exclusively throughout the machine. The surfacing of the planes is made with unproofed Egyptian cotton fabric. The back edge of the plane is stretched by a cord.

BRITISH FLIGHT EXHIBITIONS.

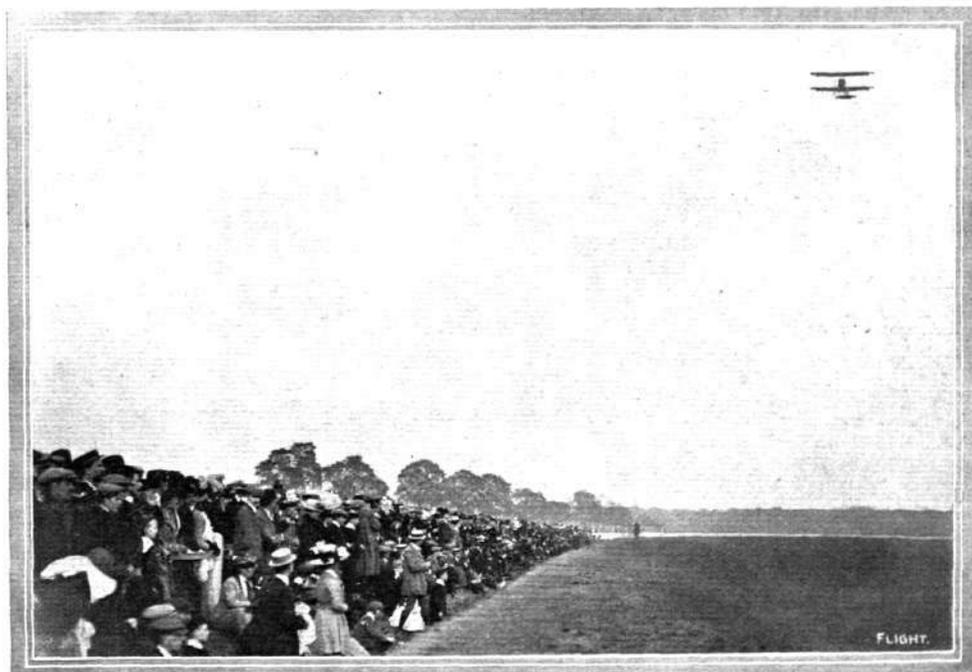
Doncaster Week.

THANKS to the indefatigable Ladougne, the promoters of the Doncaster Meeting at least had the satisfaction that some flying had been seen each day last week. True, it was not so much as had been hoped for, but that was solely due to the weather. On Wednesday afternoon the conditions were very good, and Ladougne brought out his Goupy machine, on which, to the delight of the 5,000 spectators, he made a trip of seven minutes' duration. Ten minutes later he was up for a similar flight, and then Mamet brought out his Bleriot. He got away all right, but had not gone far when engine trouble developed, compelling a sudden landing. A stiff breeze then suspended operations for an hour, at the end of which time de Lesseps took a turn. After a preliminary round of the course he set off for the town and circled over the parish church, while he attained an altitude of 2,400 ft. During the evening he made two similar trips, Ladougne and Mamet also being out again. At six o'clock Ladougne essayed to win the £20 for the first aviator to fly ten laps. This task, which represented a distance of about fifteen miles, was completed in twenty minutes, but the aviator kept

going for another seven minutes, covering two more laps, winding up by cutting figure eights in mid-air.

The number of machines on the ground was added to by the Farman biplanes of Mdlle. Dutrieu and Bruneau de Laboric, but the gusty wind during the afternoon and evening prevented any extended flights. Ladougne was the first in the air, and he started off to try and win the ten-lap prize, but after nine circuits, he being so fatigued by the work of keeping his machine steady, decided to land. Mamet rose a few minutes afterwards and made six rounds at a height ranging up to 1,000 ft. De Lesseps then made a thrilling flight, while later Laboric flew half the length of the course, and Beau, on Mdlle. Dutrieu's machine, made one circuit, but as weather conditions then were very risky, operations were suspended for the day.

Early on the morning of Friday, Mdlle. Dutrieu ventured a short flight, carrying her mechanic as a passenger. Later on in the morning the wind gradually increased in strength, and by five o'clock in the afternoon the management announced there would be no flying. Ladougne, nevertheless, brought his machine out, and



DOWN THE STRAIGHT AT DONCASTER MEETING.—Ladougne giving an exhibition flight on his Goupy.