

inclined towards the sky. As a result of this manœuvre the machine rolls up on to an even keel, and still maintaining its balance, finally rises bodily into the air when a sufficient speed has been attained.

Experimenters in flight find, like the uninitiated when they first try to ride bicycles, that keeping the machine going does not complete the full accomplishment of the art which they have set out to learn. Every journey must have an end, and the landing on *terra firma* is not the least exciting of an aviator's experiences. M. Pelterie has returned from his aerial trips in all sorts of positions, recumbent and otherwise, and even at the ending of one of his most satisfactory flights he and his machine had to be pulled backwards out of a lake. In such matters, M. Pelterie has been by no means alone, however, and perhaps the most keenly interesting of the various cinematograph views, which added so greatly to the entertainment of the audience on Tuesday evening, was a film depicting some of the earlier gliding flights made over water by M. Voisin. In one of these, the glider, which had been started through the agency of a motor boat, is seen to suddenly capsize and plunge beneath the surface, carrying with it the intrepid pilot, who, although immersed for some 20 seconds, was none the worse for his mishap. Who shall say, when the French do such work as this, that they have less claim than ourselves to be considered a nation of sportsmen?

Below we give the actual notes from which M. Pelterie delivered his lecture. They are, it will be seen, extremely condensed, but as they give certain figures relating to the different machines referred to, they have a definite value of their own. The arrangement is in chronological order, and the recurrence of a name, in places where no details are given, merely implies that the experimenter in question was continuing or had resumed his trials in that year.

SUMMARY OF THE FLYING MACHINES AND MODELS, TOGETHER WITH THEIR PERFORMANCES, REFERRED TO BY M. ESNAULT-PELTERIE.

First Category.—Motor fitted the Machines without Driver.

1879.

Hargrave.—Weight, 3½ lbs.

Victor Tatin.—Weight, about 4 lbs.; speed, about 17 m.p.h.

1890.

Victor Tatin.—Weight, about 72 lbs.; width, about 20 ft.; speed, 45 m.p.h.; distance, 150 to 180 ft.

1898.

Langley.—Weight, 24 lbs.; width, 9 ft.; strength, 1-h.p.; surface, about 60 sq. ft.; distance, nearly 1 mile.

Langley.—Other machine (November). Length, 14½ ft.; weight, about 30 lbs.; speed, 25 m.p.h.; distance, 1 mile.

Second Category.—Motorless Machines with Driver.

1893.

Lilienthal.—Tries to find the proportions between lift and drift by gliding off a hill 45 ft. high and 200 ft. diam. at the base. His death, August 9th, 1896.

1896.

Chanute (Herring and Avery).—Different multi-wing types, having 5, 4, 3, and 2 wings. Vertical and horizontal rudder.

Pilcher.—Traction by horse; his death, September 30th, 1899.



A Claim for Compensation.

A CURIOUS claim was heard at the Wandsworth County Court on Monday, when a labourer named Reynolds sued Messrs. Short Bros. for compensation on account of injuries received in connection with a balloon ascent. According to his evidence, he went to the Gas Light and Coke Co.'s balloon ground and was beckoned, with others, by Mr. Short, and told to hold on to the basket of a balloon which was being prepared for an ascent. The signal to "let go"

1900.
Brothers Wright.—Lying position; elevator in front; surface, 140 sq. ft.; weight, 48 lbs.; rope experiments.
Second machine.—Width, 20 ft.; length of ribs of wings, 6½ ft.; surface 243 sq. ft.; weight, 100 lbs. (with driver, 239 lbs.), about 1 lb. per sq. ft.; speed, about 17 m.p.h.; angle of inclination, 10 deg. = 18 per cent.

1901.

Capt. Ferber.—Platform, 15 ft. high; he jumped with aeroplane; surface, 135 ft.; time of fall, 2 secs. with machine; 1 sec. without it.

1902.

Brothers Wright.—Width, 29 ft.; length of ribs, 4½ ft.; surface, 238 sq. ft.; weight, about 138 lbs. (with driver 255 lbs., 1 lb. per sq. ft.); angle, about 6 deg. = 10 per cent.; distance, 567 ft.
Capt. Ferber.—Surface, 207 sq. ft.; weight, 110 lbs.

1904.

Archdeacon and Brothers Voisin.
Robert Esnault-Pelterie.—First machine, same as Brothers Wright; second machine, heavier, 187 lbs.; surface, 280 sq. ft., 1 lb. per sq. ft.; result, drift to left 0°15.
Soreau.—Water experiments.

1905.

Archdeacon and Bleriot.—Their machine driven by Gabriel Voisin drawn by the motor boat "La Rapière."

Third Category.—Motor-fitted Machines with a Driver.

Phillipps.—Formed like a Venetian blind. Weight, 138 lbs.; screw, 6 ft. diameter; distance, 66 yards.

Maxim.—Length, 90 ft.; width, 93 ft.; height, 30 ft.; surface, 4,698 sq. ft.; weight, about 2½ tons; strength, 300-h.p. (steam motor); crew 3 men, and stores for 10 hours, 2½ tons.

1897.

Ader.—Width, about 45 ft.; weight, about 1,100 lbs.; steam motor, weighing 6½ lbs. per h.p.; cost, 500,000 francs.

Langley.—Mounted by Manley; unsuccessful dip.

1903.

Capt. Ferber.—Tower, height, 56 ft.; rotary top cross beam, about 90 ft.; motor, 6-h.p., weighing 85 lbs.

Brothers Wright.—Width, 36 ft.; length of ribs of wings, 6 ft.; motor, 16-h.p.; total weight, 744 lbs.

1906.

Vuia. Santos Dumont.—Width, 33 ft.; length of ribs, 7½ ft.; surface, 484 sq. ft.; weight, 660 lbs.; motor, 50-h.p.; distance, 660 ft.

Delagrangé.—Width, 36 ft.; surface, 540 sq. ft.; motor, 50-h.p.

1907.

Bleriot.

Farman.

Esnault-Pelterie.—After having made experiments with somewhat reduced surfaces during 1906. Width, 29 ft.; surface, 73 sq. ft.; weight, 683 lbs., 4.2 lbs. per sq. ft.; speed to leave ground, 44-47 m.p.h.; thickness of wings, 2 ins.

Esnault-Pelterie.—Directing ideas as given by the author; Machines so constructed as to offer a minimum resistance to the air; number of wires reduced as much as possible.

For all these reasons my own machine is a monoplane one. The screw is in the front; the rudders are at the stern. The transverse equilibrium is maintained by twisting the wings.

The longitudinal equilibrium is maintained by means of an elastic adjustment on the stern fixing point of the wing.

Before leaving the ground the flying machine reclines on three wheels; two, one behind the other, like those of a bicycle, and a third at the end of one wing. After a man has turned the screw—starting—speed increases; twisting, equilibrium maintained on the two middle wheels—speed always increasing, it leaves the ground.

All the movements are controlled when in the air by means of a single lever worked by the left hand.

Width, 29 ft.; length, 25 ft.; surface, 150 sq. ft.; weight, 946 lbs. = 6.4 lbs. per sq. ft.

The principal part of the frame of this flying machine is made of steel; other materials are aluminium and wood, this wood being specially prepared.



was given, but he did not hear, and so he was carried up to a height of about 25 ft. above the railway arches, and then, letting go, dropped to the ground. Since then he had not been able to follow his occupation as a labourer. Dr. Da Costa stated that in his opinion the injury was a slight one. Mr. Eustace Short said that he did not beckon to the defendant, and when he gave the order to let go the applicant hung on.

The view that there was no contract of service was upheld, and judgment given for the respondents, with costs.