

Lieut. Desmond L. Arthur was granted his Aviator's Certificate No. 233 on June 18th, 1912, by the Royal Aero Club.

Report.—Representatives of the Accidents Committee visited the scene of the accident near Montrose and took evidence from the eye-witnesses. They also made a careful examination of the wrecked aircraft.

The Committee sat on Monday, June 2nd, 1913, and Tuesday, June 10th, 1913, and received the report of the Club's representatives. Major F. H. Sykes, Commandant of the Military Wing of the Royal Flying Corps, Major C. J. Burke, O.C. No. 2 Squadron, Montrose, and Major R. Brooke-Popham, O.C. No. 3 Squadron, Larkhill, attended and gave evidence on various points raised by the Committee. Mr. Mervyn O'Gorman, the Superintendent of the Royal Aircraft Factory, also attended before the Committee, with Mr. F. Green and Mr. Peters two officials of the Factory.

From the consideration of the evidence, the Committee regards the following facts as clearly established:—

(1) That the aircraft was built at the Royal Aircraft Factory in June, 1912, and rebuilt there with new wings in August, 1912, and since that date had been flown fairly regularly by Officers of the Royal Flying Corps.

(2) The examination of the wrecked aircraft clearly indicated that the top right-hand wing tip had been broken at some time or another and repaired in three places. The main rear spar had been broken in one place about 11 inches from the tip, and the member forming the extreme edge had been repaired in two places, one on either side of the rear main spar.

(3) The joint between the new and the old piece of the main spar had been made in a most improper and unsafe manner. The taper splice in the wood work, about 7½ inches long, was very roughly made and badly fitted, there being places in which the glue was ¼ inch thick. The splice was subsequently bound with whipcord, which was not treated with cobbler's wax or varnished to prevent it becoming loose. The new portion of the spar was not varnished, but left in its natural state.

(4) After the repair had been made, new fabric was put over that portion of the wing affected by the breakage. The new fabric was

of different material from that of the rest of the wing. The representatives of the Royal Flying Corps and the Royal Aircraft Factory reported that their records contained no entry of this repair having been made to the wing of this aircraft since it was rebuilt.

(5) Pieces of the wing and struts were picked up about a mile away from the spot where the aircraft struck the ground, and in the direction from which the aircraft was seen to come, and in such positions that they must have fallen from the aircraft whilst still in the air.

(6) There was practically no wind at the time of the accident.

(7) Lieut. Arthur was properly strapped into the machine before starting the flight. The belt was found broken but not unfastened.

Opinion.—The Committee is of opinion that the primary cause of the accident was the failure of the faulty joint in the repair to the rear main spar. This joint, subjected as it necessarily was to vibration when flying, and probably at the last only held together by the wrapping of cord, the glue having failed previously, eventually gave way. The failure of the joint caused the collapse of the wing tip, which broke a transverse rib which was acting as a strut. The loss of this strut caused the wing to collapse progressively from this point towards the fuselage.

The Committee is further of opinion that the repair referred to above was so badly done that it could not possibly be regarded as the work of a conscientious and competent workman.

The Committee was furnished with copies of the various instructions and orders for flying, as well as the standing orders in connection with the use of aircraft. These orders are most complete and comprehensive.

Recommendation.—This accident points to the necessity for expert superintendence of every repair, however slight, of the structure, and independent inspection of such repair when completed, full details being recorded in the history sheet of the aircraft. After any important repair to the structure has been made, it should be so marked that both the workman by whom it was done, and the examiner who subsequently passed it fit for service, can be identified.

REPORT No. 13.

REPORT ON THE FATAL ACCIDENT TO MR. GEOFFREY ENGLAND WHEN FLYING AT LARK HILL, SALISBURY PLAIN, ON WEDNESDAY, MARCH 5TH, 1913.

Brief Description of the Accident.—Mr. Geoffrey England, flying a Bristol Monoplane fitted with an 80 h.p. Gnome engine, started from the Company's sheds at Lark Hill, on Wednesday, March 5th, 1913, at 12.8 p.m., with the intention of remaining in the air for upwards of an hour, this being a test for the Roumanian Government for which the aircraft was destined. At 12.40 p.m., having completed a circular flight at a height of at least 3,000 feet, he was observed to be descending as if intending to return to the starting place. At a height of about 600 feet the left wing of the aircraft broke, a considerable portion of the tip became detached in the air, and the aircraft dived to the ground. The aviator, who was not thrown out of his seat, was killed.

Mr. Geoffrey England was granted an Aviator's Certificate No. 301 on September 17th, 1912, by the Royal Aero Club.

Report.—The Committee visited the scene of the accident on Friday, March 7th, 1913, and spent a considerable time in examining the wreckage "in situ," and afterwards sat in Committee at Amesbury and took evidence of eye-witnesses. The representatives of the British and Colonial Aeroplane Co. attended and gave evidence on various points raised by the Committee. Further meetings of the Committee were held on Wednesday, March 12th, 1913, Monday, April 7th, 1913, and Monday, June 16th, 1913.

From the consideration of the evidence the Committee regards the following facts as clearly established:—

(1) The aircraft was built in February, 1913, and had been flown three times previously.

(2) The wind at the time of the accident was higher than when the pilot started his flight, and was blowing at a rate of not less than 30 m.p.h.

(3) The aircraft at the time of the accident was turning to the right. It was descending at a steep angle, but apparently normally, and its direction of flight was towards the sheds. The engine was firing intermittently, being switched on and off by the pilot.

(4) When about 600 feet from the ground a portion of the structure of the left wing gave way, and about 6 feet in length of the left wing tip became detached in the air from the steel spars and fell about 100 yards away from the rest of the aircraft.

(5) The pilot decided to descend earlier than he originally intended. The reason why he did so is not known.

Opinion.—The Committee is of opinion that this accident was caused by the failure of the left wing, due to the fracture of the ribs, but whether the original failure was confined to the wing tip alone is not precisely clear. In any case, the failure was due to want of sufficient strength in the structure to withstand the extra stresses, produced either by a violent gust of wind or by sudden warping, when the aircraft was planing downwards at a high speed.

Since the date of the investigation the Committee has been in communication with the British and Colonial Aeroplane Company, the makers of the aircraft, with reference to some tests which the Committee would like to carry out on the wing of a complete machine. The Company has expressed its willingness to carry out tests, but the detail of the tests has not yet been decided upon. The Committee feels that this report should not be delayed any longer on this account and is therefore issuing it. The result of tests when carried out will be issued in a supplementary report.

166, Piccadilly, W. HAROLD E. PERRIN, Secretary.

The Ae. C.F. Grand Prix Balloon Race.

ALL of the twenty balloons which started from St. Cloud, near Paris, on Sunday afternoon in the Grand Prix Race of the Aero Club of France, took a N.W. direction, and five of them landed in England, while a sixth, that containing MM. Dubonnet and Jourdan, dropped in the sea about twenty miles south of Ventnor, in the Isle of Wight. Victory went to M. Alfred Leblanc, in the balloon, "Ile de France," who was originally one of the reserves, and was only able to compete through one of the others failing to start. He landed at Marschapel, close by Hull, having covered 670 kiloms. in 24 hrs. 30 mins. His companion was Mdle. Julienne Marechal. Second place went to "La Louise," piloted by M. L. Pierron, who was unaccompanied, and who landed at Utterby, near Louth, after covering 650

kiloms. The next three in order were the "Mowglie," with M. Bourgeois and Mme. de Prelido on board, which landed at Lincoln, 642 kiloms. from Paris; the "Sagittaire," which carried M. Rumpelmayer and Mme. Goldschmidt, which descended at Ashbourne, in Derbyshire, having taken 23 hours to traverse 637 kiloms., and "La Touraine," with MM. Jules Dubois and Spire on board, which landed at Uppingham, near Leicester, its time for the 525 kiloms. being 22 hrs. 15 mins.

Marquis De Dion in the Air.

ON his Maurice Farman biplane, which it may be recalled has a De Dion engine, the Marquis de Larenty-Tholozan on the 10th inst. at Buc took the Marquis De Dion for a long trip, and afterwards the Marquis De Dion also enjoyed a ride over the neighbourhood.