

area of fin, 56 sq. ft. (5.2 m.<sup>2</sup>); area of main rudder, 49 sq. ft. (4.55 m.<sup>2</sup>); area of servo rudder, 7.6 sq. ft. (0.706 m.<sup>2</sup>). Weight of machine empty, 12,600 lb. (5,730 kg.); weight fully loaded, 20,200 lb. (9,185 kg.); weight available for load, 7,600 lb. (3,455 kg.). The available load may be composed as follows: A crew of three, with baggage, food and water, 768 lb. (319 kg.), and 320 gallons of petrol and 30 gallons of oil, 2,730 lb. (1,241 kg.). Wireless, electrical equipment, instruments, fire extinguishers, cooking and marine equipment account for a weight of 562 lb. (255 kg.), leaving a pay load of 3,540 lb. (1,610 kg.), which is equivalent to 15 passengers with baggage, food and water (at 236 lb. per head). The fuel and oil capacity given does not represent the maximum, as the tanks have been designed to hold 480 gallons of petrol and 45 gallons of oil, so that by sacrificing a certain amount of pay load the range can be correspondingly increased. With the quantities mentioned, the range is 5½ hours, or 500 miles (805 km.), and with full tanks and a smaller pay load the duration is 8.2 hours, and the range 740 miles (1,190 km.). The wing loading is 11.05 lb./sq. ft. (54 kg./m.<sup>2</sup>), and the power loading (at full power) 12.8 lb./h.p. (5.83 kg./h.p.).



### ROYAL AERO CLUB

A MEETING of the Committee of the Royal Aero Club and the Management Committee of the Society of British Aircraft Constructors was held on February 15, 1928, to consider the question of handicapping formula.

**King's Cup.**—It was decided that the handicapping should not be on formula but on known performances.

**Aerial Derby.**—It was decided to hold the Aerial Derby this year on a course round London. Also an Aerial Derby Handicap on formula. The S.B.A.C. put forward a formula which it was agreed to submit to an independent authority for his report.

Offices: THE ROYAL AERO CLUB,  
3, CLIFFORD STREET, LONDON, W. 1.  
H. E. PERRIN, Secretary.



### Seamen Saved by Aeroplane

THANKS to the aeroplane, 30 of the 39 members of the crew of the Dutch Government vessel *Zee-meeuw*, were rescued when she capsized in a storm off Surabaya, Java. The up-turned boat was sighted by an aeroplane.

### Spanish Prime Minister's Flight

THE Marques de Estella, the Spanish Prime Minister, flew from Madrid to Seville by air line, on February 9, to inspect the work on a coming exhibition.

### Slotted Wing in Sweden

MR. HANDLEY PAGE lectured before the Swedish Institute of Engineering at Stockholm, on February 8. He described the development of the slotted wing. A machine fitted with slotted wings is at present being tested in Sweden.

### New French Submarines

THE new French submarines of the Redoubtable class carry a 3.9-in. anti-aircraft gun and one three-pounder anti-aircraft gun, each.

### Aircraft to the Rescue

AEROPLANES have been used to carry supplies and mails during the recent floods in South Australia which followed a prolonged drought.

### Model of S.5 at South Kensington

A MODEL of the Supermarine-Napier S.5 seaplane, which won the Schneider Trophy last year, has been presented to the Science Museum at South Kensington. It has been made to a scale of ¾-in. to a foot.

### Aerodrome at Brighton

BRIGHTON has a scheme for constructing an aerodrome at Mile Oak, where the Corporation has 1,000 acres. Alderman Carden said at an informal gathering of members of the council on February 16 that it was quite certain there would be enormous developments in flying, and that people ought to be able to fly from Brighton to the Continent.

### The Orissa Aerial Survey

ON January 16 last the Air Survey Co., Ltd. completed their coastal survey of Orissa (India) and the expedition returned the following day to Calcutta. The survey, which started on January 11, occupied actually five days, one day being devoted to changing the airscrew, etc. During the five days an area of 300 sq. miles along the coast of Orissa, from

### Performance

Although the official performance tests of the "Calcutta" have not yet been carried out, it may be of interest to give the *estimated* performances. The top speed at sea level is 120 m.p.h. (193 km./h.), and the cruising speed 100 m.p.h. (161 km./h.). The landing speed is 57.5 m.p.h. (93 km./h.). Rate of climb at ground level is 800 ft./min. (244 m./min.). The service ceiling is 10,000 ft. (3,050 m.). The "Wing

Power" is  $\frac{1575}{1825} 0.863$  h.p. per sq. ft. = 9.26 h.p./m.<sup>2</sup>. As

the top speed is 193 km./h., the Everling "High-speed Figure" (metric) is 14, which is an extremely good value for a three-engined flying-boat. The Everling "Distance Figure" at top speed is 4.2, which is also a high value for a machine of this type. As this refers to the top speed, it is not, of course, an optimum value, but as we have no information relating to the power at which the machine cruises most economically, it is not possible to give the maximum value of the "Distance Figure." That it is well above the average seems more than probable.

Chilka Lake to the Dhemtra River was surveyed, and maps are being prepared on a scale of 3 in. to the mile. The primary object of the survey was to assist the Flood Committee to locate the cause, and find a cure, for the incessant floods in this district. The photographs taken show up very clearly a mass of banks lying outside the mouths of the main rivers which no doubt cause considerable obstruction to the flow of water during rainy weather from the plains inland. The expedition comprised S. H. G. Trower (pilot), E. W. Bishop (survey engineer), G. R. Thorne (photographer), R. W. L. Andrews, and J. Durward. The Air Survey Co. are now carrying out an extensive survey in the Mahal district, which will cover about 1,600 sq. miles.

### Capt. Malcolm Campbell's Speed Record

THE early endeavours to fly by the Wright brothers were hopeless until motor-car developments solved the problem with the internal-combustion engine. Now aviation engine development has its revenge by enabling automobilism to put up the amazing speed record of 207 m.p.h. by Capt. Malcolm Campbell, on his Napier-Campbell racing car at Daytona Beach, Florida, on February 19. Not only was the engine a Napier racing aero engine, but the body design was determined after a series of wind tunnel tests on models carried out by Mr. R. K. Pierson, Chief Aircraft Designer of Messrs. Vickers-Armstrongs, Ltd. Detachable fins were fitted at the tail to give great directional stability, and these did prevent serious consequences when the car skidded during the record run. Messrs. Barker's, Ltd., the well-known coach builders, built the body. Messrs. Vickers-Armstrongs, Ltd., manufactured the frame, axles, gears, steel forgings in the gear box, crankshaft and connecting rod drop forgings of Vickers steel, and the Fairey Aviation Company designed and constructed the surface radiators fitted between the wheels and body on either side. Special tyres were supplied by Messrs. Dunlops', and amongst the other components were B.T.H. magnetos, Claudel-Hobson carburettors, K.L.G. plugs, Hoffman bearings, Smith's instruments, Ferodo brake and clutch linings, and Triplex glass. Pratt's Ethyl petrol was the fuel used, and Wakefield Castrol oil the lubricant.

### The Royal Air Force Memorial Fund

THE usual meeting of the Grants Sub-committee of the Fund was held at Iddesleigh House on February 16. Lieut.-Comdr. H. E. Perrin was in the chair, and the other member of the Committee present was Mrs. L. M. K. Pratt-Barlow, O.B.E. The Committee considered in all 10 cases, and made grants to the amount of £82 17s. 4d. The next meeting was fixed for March 8 at 2.30 p.m.

### Royal Air Force Flying Accidents

THE Air Ministry regrets to announce that as the result of an accident near Emsworth, Hants, to a Gamecock machine of No. 43 (Fighter) Squadron, Tangmere, on February 8, Pilot Officer Peter John Basil Chalmers the pilot and sole occupant of the aircraft, was killed.

As the result of a collision in the air at Capel near Folkestone between two Grebe machines of No. 25 (Fighter) Squadron, Hawkinge, on February 17, 1928, Pilot Officer Eric James Watson, the pilot of one of the aircraft, was injured and died later of his injuries. The pilot of the other machine made a safe descent by parachute.