

Newcastle-on-Tyne, S. Robson; University College, Nottingham, T. A. Smith; University of Sheffield, C. C. Bissett; University College of North Wales, Bangor, R. Jones; University College, Cork, J. C. Johnson; University College, Galway, H. N. Morrison; McGill University, Montreal, O. Maass; Queen's University, Kingston, Ontario, J. R. Tuttle; University of Sydney, S. E. Pierce; University of Melbourne, N. R. Junner; University of New Zealand, P. W. Burbridge.

WE learn from *Science* that the total State grant to the University of California for the next biennium amounts to about 771,400*l.* Among the items contributing to this large sum may be mentioned:—Support and maintenance of the University, 80,000*l.*; agriculture—support and maintenance of all branches—140,000*l.*; replacement of buildings and equipment at Lick Observatory, 10,000*l.*; University extension, 10,000*l.*; Scripps Institution for Biological Research, 3000*l.*; 200 acres for experiment station in southern California, 12,000*l.*; laboratory building for experiment station in southern California, 20,000*l.*; the State University fund to be automatically appropriated during the coming two years for the support and maintenance of the University, amounting in total to 361,000*l.* From the same source we find that Yale University will receive 95,000*l.* from the estate of Dr. Francis Bacon, who died last year. Mrs. Mary Emery has contributed 25,000*l.* to the Ohio-Miami Medical College of the University of Cincinnati for the endowment of a chair of pathology; and a sum of about 16,000*l.* from the estate of Dr. Francis Brunning has also been received by the University, the income of which will be used for the endowment of a second chair.

An appeal for funds for the Home Science Department of King's College for Women has been issued. It is signed by Lord Rosebery, as Chancellor of the University of London, as well as by the Vice-Chancellor and Principal of the University. A site of 2½ acres of Blundell House grounds on Campden Hill has been secured, and private gifts to the amount of 100,000*l.* have been subscribed during the last year and a half towards endowment, building of laboratories, and hostel. The London County Council has also made a maintenance grant to the department, thereby showing appreciation of the value of the courses, and the Exchequer grant to King's College for Women was made partly in respect of the work of the Home Science Department. The University has approved the granting of a diploma in household and social science, and in view of the new status thus assured it is necessary to complete the college by providing, in addition to laboratories and the hostel, lecture rooms and teaching rooms, common rooms for staff and students, and that accommodation essential to the life of a college or institution of a university character. A library will be needed, also a refectory. For this purpose a further sum of 50,000*l.* is required. Donations may be sent to the bursar, Home Science Department, King's College for Women, 13 Kensington Square, W.

DR. F. W. MOTT gave the third Chadwick lecture at the Royal Society of Arts on Friday, June 20. Sir James Crichton Browne was in the chair. The subject of the lecture was "The Influence of Nutrition and the Influence of Education on Mental Development." Dr. Mott commenced by pointing out the close association of body and mind; he observed that the child's brain, in order to grow and develop mental powers, must have the innate capacity to grow, and a proper supply of pure oxygenated blood where-

with it can take up the necessary materials for growth and function. A pure blood-supply, he argued, could only occur in a normal healthy body in which all the organs and tissues were cooperating for the common weal; the body could only be maintained in health by adequate and proper nourishment amidst hygienic surroundings. He next referred to collective and individual responsibility in respect to the child's nurture and mental development, and proceeded to give physiological reasons why the brain required stimulus from without for development. The importance of the tactile muscular sense, which contributes to every other sense, was emphasised, and he showed how the minds of Laura Bridgeman and Helen Keller were developed to a high degree of intelligence through the finger-tips. Sleep, rest of the brain, and the storage of mental energy were next touched upon as an important factor in the development of mind. Dr. Mott then passed on to consider the improvements in some modern systems of education; the happy passing away of the old system of payment of teachers by results, the desirability of educating according to physiological principles of development of function. The object of education should be to develop the physical, intellectual, and moral characters of the individual so as to make a final efficient product to fill a place in the social organism.

SOCIETIES AND ACADEMIES.

LONDON.

Geological Society, June 11.—Dr. Aubrey Strahan, president, and afterwards Mr. W. Whitaker, in the chair.—Dr. Hans Salfeld: Certain Upper Jurassic strata of England. The localities dealt with are the Dorset coast from Kimmeridge to Abbotsbury, and the Wiltshire exposures at Swindon and Westbury. The formations concerned are the Portlandian, Kimmeridgian, and for a starting-point the Upper Oxfordian. The Upper Oxfordian=upper part of the English Corallian (+Kimmeridge Clay locally) is divided into three zones, found at Osmington, Westbury, and Swindon. The Kimmeridgian is divided into five zones, and is equal mainly to the Lower Kimmeridge Clay of English authors. The Portlandian is divided into nine zones; but the term as used includes the Portland Oolites, Portland Sands, and Upper Kimmeridge Clay of British authors. Three new genera of ammonites are named, and two new zonal species of ammonites defined.—A. Jowett: The volcanic rocks of the Forfarshire coast and their associated sediments. In Forfarshire these sediments are frequently amygdaloidal, the production of the cavities having been accompanied by the buckling and fracturing of the layers of sediment. Such effects may result from the pouring of molten rock over wet unconsolidated sediment; steam being produced within the sediment, but unable to escape owing to the presence of the overlying rock. Further evidence of the pouring of molten rock into water is furnished by the occurrence of a rude pillow-structure in some of the lavas. Several lenticular conglomerates are interbedded with the volcanic rocks, resting upon eroded surfaces of the latter. Most of the volcanic rocks are olivine-basalts, rhombic pyroxene as well as olivine sometimes being present. Some contain rhombic pyroxene to the exclusion of olivine. The fine sediments consist of a variable proportion of quartz and mica and a little felspar, together with chlorite, iron oxides, and occasional minute fragments of volcanic rock. Calcite, quartz, chalcedony, and chlorite are the commonest minerals in the amygdaloids, in both

lavas and sediments.—J. Parkinson: A group of metamorphosed sediments situated between Machakos and Lake Magadi in British East Africa.

Physical Society, June 13.—Prof. C. H. Lees, vice-president, in the chair.—G. E. Bairsto: Some experiments on tinfoil contact with dielectrics. This paper describes some experiments showing how the accuracy of the different kinds of electrical measurements that are made on condensers is influenced by the use of an imperfect tinfoil contact. While considerable errors are liable to be made in deducing the specific direct-current conductivity of a dielectric between tinfoil armatures, the same is not true for measurements of the alternating-current conductivity. The influence of the bad contact is twofold. First, it decreases the apparent capacity by inserting in series with the condenser under test a very large but still finite air condenser. This causes a decrease in the measured conductance. Secondly, because of the decrease in area of contact, it decreases the magnitude of that component of the conductivity which is independent of the frequency—i.e. the purely ohmic conductivity. It is shown experimentally, even under the worst possible circumstances, the dielectric being only lightly bound up with the interleaved tinfoil, that for telephonic frequencies the maximum difference between the observed conductivity and true conductivity is 15 per cent., and of capacity 5 per cent. With the condenser tightly bound with tape and wedges of wood inserted, the maximum difference was only 4.5 per cent. in the conductivity and 2.5 per cent. in the capacity. Finally, the influence of imperfect contact upon the accumulation of residual charge is considered.—G. D. West: A method of measuring the pressure of radiation by means of thin metal foil. The pressure of the radiation emitted by a carbon filament lamp at a distance of a few centimetres is sufficient to cause a microscopically measurable deflection of the end of a suspended strip of gold or aluminium foil, and by this means the radiation pressure can be calculated knowing the weight of the strip. The results agree to within about 10 per cent. with the energy content per cubic centimetre as measured by the initial rate of rise of temperature of a copper plate exposed to the radiation. The best results are obtained by working in an atmosphere of hydrogen, 1 cm. to 2 cm. pressure, but good results are obtained with hydrogen at atmospheric pressure. Air at 1 cm. to 2 cm. pressure also gives good results.—Dr. W. Wilson: The emission of electricity from hot bodies and the quantum theory. The paper gives a theory of the emission of electricity from hot bodies which is based on the quantum theory of energy. A formula connecting the thermionic current and the temperature of the emitting body is deduced. This formula closely resembles that of Richardson, and agrees slightly better with experimental results.

Mineralogical Society, June 17.—Dr. A. E. H. Tutton, F.R.S. president, in the chair.—W. L. Bragg: Crystal-structure as revealed by Röntgen radiation. An analysis of the diffraction patterns obtained when X-rays traverse a section of a crystal shows that in many simple crystals the diffraction is caused by a set of points arranged on a space-lattice. That is the case when the molecule contains either a single heavy atom of at least twice the atomic weight of the other constituents, or only two atoms of nearly the same atomic weight. By comparison of the patterns given by certain alkaline halides, such as KCl and KBr, a definite structure of these cubic crystals is clearly indicated, and it would appear that the atoms are arranged on a space-lattice the elementary parallelo-

piped of which is a cube, alternate atoms being along the axes, so that the atoms of one kind form a face-centred cubic space-lattice. These conclusions are confirmed by a comparison of the distances between planes parallel to the various faces of these crystals carried out by means of the X-ray reflection-spectrometer, and it appears that a single atom is associated with each point of the space-lattice which diffracts, in the case, for instance, of the alkaline halides, calcite, fluor, blende, and pyrites. If the suggested structure of the crystals is correct, a simple calculation gives the absolute wave-length in centimetres of the homogeneous components in the X-ray beam from a platinum antikathode.—H. V. Ellsworth: The crystal habit of topaz from New Brunswick, Canada. Topaz, a rare mineral in Canada, occurs in York County, New Brunswick, associated with wolframite, molybdenite, and a little fluor. On the crystals the forms 110, 120, 011, 112, are prominent, but other pyramid and prism forms are sometimes present, sixteen forms altogether being observed. Dull faces were coated with silver by Brashear's process, in which an ammoniacal solution of silver nitrate is reduced by a sugar solution.—Dr. G. T. Prior: The meteoric stone which fell at Baroti, Punjab, India, in September, 1911. The stone, which belongs to the "intermediate chondrite" group of Tschermak's classification, was found on analysis to contain about 9 per cent. of nickel-iron and 7 per cent. of troilite, which were disseminated in small particles through a colourless matrix of enstatite and olivine showing only few chondrules.—Dr. A. W. Gibb: Kämmererite from Unst, Shetland Islands.

Royal Meteorological Society, June 18.—Mr. C. J. P. Cave, president, in the chair.—J. S. Dines: Pilot balloon observations in Barbados, 1911-12. These balloon ascents were carried out by Prof. J. P. d'Albuquerque and other gentlemen, on behalf of the joint upper air committee of the Royal Meteorological Society and the British Association. Great difficulties were experienced in carrying out the work, the most serious of which was due to the adverse effect of the climate of Barbados on the rubber fabric of the balloons, thus causing them to deteriorate more rapidly than in colder regions. Consequently no very high ascents could be obtained.—H. W. Braby: The Harmattan wind of the Guinea coast. This is a north-east wind which blows during the winter months along the coast of Upper Guinea from French Guinea to the Cameroons. It is exceedingly dry and brings with it fine sand which enters the crevices of doors and windows, covering everything with a film of dust. The sun is partially obscured and distant objects become invisible. This wind, which blows intermittently from November to March, is locally known as "the doctor."—Dr. E. C. Snow and J. Peck: The correlation of rainfall. The authors dealt with the monthly rainfall from a number of stations in the south-eastern counties of England for the four years 1908-11, and found that the rainfall in two or three of the months is more highly associated with that in certain other months than with the rainfall in the remaining months.

DUBLIN.

Royal Irish Academy, June 9.—Prof. Sydney Young, F.R.S., vice-president, in the chair.—R. Southern: Clare Island reports. (1) *Polychaeta errantia*. In this paper the families Syllidæ to Paraonidæ were treated systematically. The total number of species found in these families was 143. Of these, nine were described as new, belonging to the genera Sphaerosyllis (1), Pionosyllis (1), Streptosyllis (2), Opistho-

donta (1), Pholoë (1), Prægeria (1), Mystides (1), and Paronides (1). A new genus, Prægeria, was described, belonging to the family Pisionidæ, previously known only from the west coast of South America. In addition, twenty species were added to the British fauna. (2) Hirudinea. The leeches found in the Clare Island area comprise eleven species, of which six are fresh-water species, and five are marine. Of the fresh-water forms, *Hemiclepsis marginata* was found for the first time in Ireland.—E. Heron-Allen and A. Earland: Foraminifera from the area of the Clare Island Survey. The authors have worked out as independent units of their study thirty-seven stations in the area. Of these, eleven were shore-sands, five were dredgings taken by themselves from small boats, and the rest were dredgings made by them on board the fisheries cruiser *Helga*, kindly placed at their service by the Irish Fisheries Board. The authors record fifteen species new to science, thirty-five species new to Great Britain, and twelve species recorded for the second time in British waters. The most important contribution to zoology is a complete revision and rearrangement of the genus *Discorbina*, the affinities of which have become almost hopelessly confused in the literature of the subject. Altogether two hundred and ninety-nine species are recorded from the district.

PARIS.

Academy of Sciences, June 16.—M. F. Guyon in the chair.—P. Appell and H. Vergne: A transformation of a movement of a given conservative holonomical system into the movement of another system given the same freedom.—Charles Moureu and Georges Mignonnac: The ketimines. It is suggested that imines derived from aldehydes of the type R.CH:NH should be termed aldimines, whilst those derived from ketones of the type RR'.C:NH are called ketimines. A new general method of preparing the latter is described based on the condensation of a nitrile with alkylmagnesium bromide, and the treatment of the compound thus formed with hydrochloric acid in dry ether under special conditions. Eight ketimines have been prepared, the properties of which are given.—M. de Forcrand: The Trouton coefficient and the heat of vaporisation of pure bodies boiling at low temperatures. Data for helium. The empirical formula recently proposed by the author is applied to the cases of chlorine, radium emanation, oxygen, nitrogen, hydrogen, and helium, and the values calculated for the latent heats of vaporisation compared with the experimental figures; the agreement is fairly satisfactory. The case of helium is dealt with in detail.—Eugène Fabry: An attempt at a demonstration of Fermat's theorem.—H. Jonas: A transformation which depends on a partial differential equation of the third order.—Paul Montel: Total differentials and monogenous functions.—Michel Petrovitch: Hypertrigonometric series.—Ch. Platrier: The holomorphic solutions of certain linear integral equations of the third species.—Theodor Poschl: The canonical equations of non-holonomical systems.—Z. Carrière: A new method of measuring the velocity of fluids. A small jet of steam is introduced into the flowing gas the velocity of which it is required to measure. A series of small isolated clouds is formed, which are studied by a rotating mirror and a formula deduced giving the velocity.—Marcel Moulin: The terminal curves of a chronometer balance spring.—Pierre Weiss: The magnetisation of crystals and the hypothesis of the molecular field.—G. Sagnac: Interferential strioscopes and simplified interferometers with inverse circuits. Stationary vibrations on a transparent silver film.—F. Bodroux and F. Taboury: The bromination of some

ketones and some secondary hydroaromatic alcohols. The method of bromination of *cyclohexanone* and *cyclohexanol* described in a previous paper has been extended to some homologues of these compounds.—J. Durand: The fossil shells in inclusions in the clear crystals of gypsum of the Oligocene at Narbonne. The shells observed include *Potamides*, *Lymnæa*, *Planorbis*, and *Helix*. The inclusion of such shells in gypsum crystals appears not to have been noted before; it is of interest as regards the theory of the formation of certain gypsums.—L. Reutter: Chemical researches on cocoa seeds.—P. A. Dangeard: The action of radiation in a mixture of colouring matters. A mixture of chlorophyll and pinaverdol was exposed on a collodion film to light; the pinaverdol is transformed and finally destroyed by the energy absorbed by the chlorophyll. Pinaverdol exposed under similar conditions in the absence of chlorophyll to light is unaffected.—Y. Manouélian: Researches on the cardiac plexus and on the innervation of the aorta.—Marcel Belin: The action of oxidising substances on toxins *in vivo*. The experiments were made with guinea-pigs and the oxidising substance employed was sodium chlorate in doses of 0.08 gram per kilogramme of body weight. A favourable action was observed with typhoid fever and streptococcus infections.—Charles Nicolle and A. Conor: Vaccinotherapy in whooping-cough. Inoculation with living cultures of Bordet's micro-organism resulted in cure of about one-third of the cases, improvement in a third, and the remainder were stationary. One hundred and twenty-two children were treated, and in no case was the inoculation followed by any general or local reaction.—M. Emm. Pozzi-Escot: Researches on the mechanism of the acclimatisation of yeasts to formaldehyde. Formaldehyde loses its antiseptic properties in yeast solution owing to its combination with the amido-compounds present. There is no evidence that formic acid is formed by oxidation.—W. Kopaczewski: An analytical dialyser.—Henri Agulhon: The action of boric acid on zymase; comparison with the action of phosphates.—Mme. and M. A. Chauchard: Quantitative study of the action of monochromatic ultra-violet rays on amylase. The photochemical action of the ultra-violet rays on amylase is proportional to the absorption of these rays by the solution containing the ferment.—Jean Bielecki and Victor Henri: Quantitative study of the absorption of the ultra-violet rays by monoamines, diamines, nitriles, carbylamines, amides, and oximes of the fatty series.—H. Zilgien: The transformation of calomel into soluble mercury salts in the digestive fluids.—Emile Haug: The western termination of Sainte-Baume.—Léon Bertrand and Antonin Lanquine: Tectonic observations in the neighbourhood of Grasse.—E. Hernandez Pacheco: The Miocene mammals of Palencia in the Spanish *Meseta*.—Carl Störmer: An expedition for the observation of the aurora borealis at Bossekop in the spring of 1913. Six hundred and thirty-six pairs of simultaneous photographs of the aurora were taken, of which 450 pairs were good enough to furnish material sufficient to calculate with great precision the form, situation, and altitude of the principal species of the aurora borealis.

CAPE TOWN.

Royal Society of South Africa, May 21.—The president in the chair.—A. G. Stigand: Notes on Ngamiland. A general account of Ngamiland and its inhabitants.—H. A. Wager: Some new South African mosses.—W. A. Douglas Rudge: Magnetic observation taken at Bloemfontein. In this paper some account is given of the diurnal range of the declination at Bloemfontein during the period from August to December, 1912.

Tables are given showing the daily range of the variation, and also the times of the maximum and minimum declinations to the east. The mean value of the declination is about 24° W. The greatest deviation from this occurs during the afternoon, and amounts in some cases to 7.2 minutes of arc, less than 24° . The total change in the declination has been as much as 10.8 minutes in the day. Twelve curves are given. The change in the position of the maximum, and also of the range, is of the same order as that noted by General Sabine in the records taken at Cape Town more than sixty years ago.—R. B. Thomson: Note on the vertebral column of the Bushman race in South Africa. The object of the investigation was to determine whether racial character could be said to exist in the cervical and thoracic vertebrae, such having already been pointed out in the lumbar and sacral regions. The results would tend to show that the bodies of the cervical and thoracic vertebrae are relatively narrower in their anterior-posterior diameter, and deeper in their vertical depth by about 5 per cent as compared with Europeans. The vertebral foramen in both regions is relatively longer, but not to such a marked extent in the thoracic region. The vertical anterior and posterior depths of the bodies of the cervical and thoracic vertebrae show that these vertebrae, in common with the lumbar, are not adapted to the vertebral curves. The adaptation of the curves must therefore be purely undertaken by the cartilaginous disc.

CALCUTTA.

Asiatic Society of Bengal, June 4.—Rasik Lal Datta: The action of nitrosyl chloride on secondary amines, methylbenzyl nitrosamine and ethylbenzyl nitrosamine. The amines experimented with were methylbenzylamine and ethylbenzylamine, the corresponding nitrosamines being obtained as yellowish oils.—Sarat Chandra Jan: A new compound of ethylacetoacetate with mercuric oxide. The preparation of the compound $3\text{HgO}_4\text{CH}_3\text{COCH}_2\text{COOC}_2\text{H}_5$ is described.—Rasik Lal Datta and Haridas Mukherji: The double mercuri-periodides of substituted ammonium bases. Terrapropylammonium mercuri-periodide. A description of the preparation of the salt $5\text{N}(\text{C}_2\text{H}_5)_3\text{I}_2\text{HgI}_2$ is given.—Hem Chandra Das-Gupta: Two-shouldered stone implements from Assam. A short note describing two small stone adzes approaching the Burmese type, obtained from the districts of Tezpur and Cachar in Assam and now in the collection of prehistoric antiquities of the Indian Museum. The occurrence of these implements in areas through which the wave of Khasia immigration may have passed is of some interest in view of the relationships which exist between this tribe and the Mon-Hkmer peoples of Burma.—Prof. George H. Carpenter: A new springtail from Galilee. In describing a new species of Cyphoderus from near Tiberias the author notes its resemblance to forms from the valley of the White Nile.—Dr. N. Annandale: Polyzoa from the Lake of Tiberias. A large number of specimens of Phylactolæmatous Polyzoa were obtained in the Lake of Tiberias, but only two species were represented, a hitherto undescribed Plumatella, remarkable for its yellow lophophore, and *Fredericella sultana*, Blomh. Reasons are given for regarding the Galilean race of the latter as distinct from the common European form, and particulars of its biology are noted.—Dr. N. Annandale: Note on a sponge larva from the Lake of Tiberias. Free-swimming larvæ of Nudospongilla were found to agree in the more important characters with those of Spongilla. In view of the resemblance between the skeleton of the former genus and that of some marine sponges the point is of interest.

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BOOKS RECEIVED.

- U.S. Department of Agriculture. Weather Bureau. Bulletin x. Hurricanes of the West Indies. By Prof. O. L. Fassig. Pp. 28+xxv plates. (Washington: Government Printing Office.) 1.50 dollars.
- Die Süßwasser-Flora Deutschlands, Oesterreichs und der Schweiz. Edited by Prof. A. Pascher. Heft 2, 3, 9, 10. (Jena: G. Fischer.) 5 marks, 1.80 marks, 1.50 marks, 4 marks respectively.
- Le Monde Polaire. By O. Nordenskjöld. Traduit du Suédois par G. Parmentier et M. Zimmermann. Pp. xi+324+xx plates. (Paris: A. Colin.) 5 francs.
- Les Pyrénées Méditerranéennes. Etude de Géographie biologique. By Prof. M. Sorre. Pp. 508+xi plates. (Paris: A. Colin.) 12 francs.
- L'Espèce et son Serviteur (Sexualité, Moralité). By Prof. A. Cresson. Pp. 347. (Paris: F. Alcan.) 6 francs.
- Der Manihot-Kautschuk. Seine Kultur, Gewinnung und Präparation. By Prof. A. Zimmermann. Pp. ix+342. (Jena: G. Fischer.) 9 marks.
- The Archæological Survey of Nubia. Report for 1908-9. Vol i., part i., Report on the Work of the Season, 1908-9. Part ii., Catalogue of Graves and their Contents. Pp. v+209. Vol ii., Plates and Plans accompanying vol. i. Pp. 16+56 plates+xx plans. (Cairo: Government Press.) L.E.2 the two vols.
- Memoirs of the Indian Museum. Vol iii., No. 3. Indian Trypanoids (Fruit-flies) in the Collection of the Indian Museum. By Prof. M. Bezzi. Pp. 53-175 +plates viii-x. (Calcutta: Baptist Mission Press.) 6 rupees.
- Measurements of Proper Motion Stars, made with the 40-inch Refractor of the Yerkes Observatory in the Years 1907 to 1912. By S. W. Burham. Pp. iv+311. (Washington: Carnegie Institution.)
- An Introduction to the Chemistry of Plant Products. By Dr. P. Haas and T. G. Hill. Pp. xii+401. (London: Longmans and Co.) 7s. 6d. net.
- Dent's Practical Notebooks of Regional Geography. By Dr. H. Piggott and R. J. Finch. Book vi. (London: J. M. Dent and Sons, Ltd.) 6d. net.
- Practical Mathematics. First Year. By A. E. Young. Pp. vii+124. (London: G. Routledge and Sons, Ltd.) 1s. 6d. net.
- Bacon's New Series of County Contour Hand Maps. 16 Maps. (London: G. W. Bacon and Co., Ltd.) 1d. net each.
- Transactions of the Royal Society of South Africa. Vol. iii., part 2. Pp. 187-339+xiv. (Cape Town: Royal Society of South Africa.) 15s.
- Livingstone College Year Book. Centenary Number. (Leyton: Livingstone College.) 6d.
- Carnegie Endowment for International Peace. Year Book for 1912. xvi+165. (Washington.)
- Die Bestimmung der Elemente des Erdmagnetismus und ihrer zeitlichen Aenderungen. By Dr. H. Fritsche. Pp. 96+12 charts. (Riga: Müllerschen Buchdruckerei.)
- Gas Analysis. By Prof. L. M. Dennis. Pp. xvi+434. (London: Macmillan and Co., Ltd.) 9s. net.
- Liquid Air, Oxygen, Nitrogen. By G. Claude. English edition, corrected and brought up to date by the author. Translated by H. E. P. Cottrell. Pp. xxv+418. (London: J. and A. Churchill.) 18s. net.
- The Resistance of the Air and Aviation. Experiments conducted at the Champ-de-Mars Laboratory. By G. Eiffel. Second edition, revised and enlarged.