

gas (15·898), is increased to 15·878, a number sensibly in agreement with the 15·88 found by the author by the gravimetric method.—On the increase of pressure produced by the mixture of two gases, and on the compressibility of the mixture, by M. Daniel Berthelot. The formulæ proposed by the author in a previous paper are applied to the gas mixtures, $\text{SO}_2 + \text{CO}_2$, $\text{N}_2 + \text{O}_2$, and $\text{H}_2 + \text{O}_2$, and the results compared with the experiments of Sacerdote, Leduc, Rayleigh, and the author. The agreement is very close.—Researches on the separation of traces of bromine existing in chlorides, by M. H. Baubigny. A strong solution of the chloride, to which a large amount of copper sulphate has been added, is treated with potassium permanganate in the cold, and the whole reduced to dryness *in vacuo*. The whole of the bromine is thus given off, together with a little chlorine; the original method proposed by the author and M. Rivals is then applied to this mixture. Two test analyses show satisfactory results, even when only 0·05 gram of bromide was present with 12 grams of chloride.—On the impurities of aluminium, by M. Adolphe Minet.—On magnesium phosphide, by M. Henri Gautier. The phosphide Mg_3P_2 was prepared in a pure state by the direct combination of the elements in a stream of hydrogen. Pure PH_3 is obtained on treating this with water.—On the flame of hydrogen, by MM. Schlagdenhauffen and Pagel. The violet-blue colour of a hydrogen flame obtained when the gas is prepared from zinc is not due to sulphur, as proposed by Salet, but selenium. Some selenium is invariably left behind in the residue, probably as lead selenide.—Hydrogenation of acetylene in presence of nickel, by MM. Paul Sabatier and J. B. Senderens. A mixture of hydrogen and acetylene acts vigorously upon reduced nickel, even in the cold, ethylene, ethane, and liquid hydrocarbons being produced in quantity.—On the dextrines arising from saccharification, by M. P. Petit.—Method for rapidly measuring the dimensions of small objects, independently of their distance. Application to pupillometry and to laryngometry. Illusion due to the muscular sense in the appreciation of the size of objects, by M. Th. Guilloz.—Pathological physiology of pregnancy, by MM. Charrin and Guillemonat.—The influence of freezing upon the development of the hen's egg, by M. Etienne Rabaud. The eggs were not killed by exposure to -15°C ., but the development was markedly affected, and that permanently.—Some remarks on the *Haementeria costata* of Müller, by M. A. Kowalevsky.—On the existence of a fauna of Arctic animals in the Charente at the Quaternary epoch, by MM. Marcellin Boule and Gustave Chauvet.—New researches on the caverns of Padirac, by MM. Armand Viré and Etienne Giraud.—On the ascent of the *Balashoff* on March 24, by M. G. Le Cadet.

DIARY OF SOCIETIES.

THURSDAY, MAY 18.

ROYAL SOCIETY, at 4.30.—Bakerian Lecture: The Crystalline Structure of Metals: Prof. J. A. Ewing, F.R.S., and W. Rosenhain.—The Yellow Colouring Matters accompanying Chlorophyll and their Spectroscopic Relations: C. A. Schunck.—The Diffusion of Ions into Gases: J. S. Townsend.—The Diurnal Range of Rain at the Seven Observatories in connection with the Meteorological Office, 1871–1890: Dr. R. H. Scott, F.R.S.

INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—Electric Locomotives in Practice and Tractive Resistance in Tunnels, with Notes on Electric Locomotive Design: P. V. McMahon.

CHEMICAL SOCIETY, at 8.—Corydaline, Part VI.: Dr. J. J. Dobbie and A. Lauder.—Oxidation of Furfural by Hydrogen Peroxide: C. F. Cross, E. J. Bevan, and T. Freiberg.

FRIDAY, MAY 19.

ROYAL INSTITUTION, at 9.—Runic and Ogam Characters and Inscriptions in the British Isles: The Lord Bishop of Bristol.

EPIDEMIOLOGICAL SOCIETY, at 8.30.—A Study of Enteric Fever in the Netherlands: Prof. R. H. Saltet.

TUESDAY, MAY 23.

ROYAL INSTITUTION, at 3.—Recent Advances in Geology: Prof. W. J. Sollas, F.R.S.

ROYAL PHOTOGRAPHIC SOCIETY, at 8.—Corea: Mrs. Isabella Bishop.

WEDNESDAY, MAY 24.

GEOLOGICAL SOCIETY, at 8.—On the Distal End of a Mammalian Humerus from Tonbridge: Prof. H. G. Seeley, F.R.S.—On Evidence of a Bird from the Wealden Beds of Ansty Lane, near Cuckfield: Prof. H. G. Seeley, F.R.S.—On the Rhyolites of the Hauraki Goldfields (New Zealand): J. Park and F. Rutley.—On the Progressive Metamorphism of some "Dalradian" Sediments in the Region of Loch Awe: J. B. Hill.

THURSDAY, MAY 25.

ROYAL INSTITUTION, at 3.—Water Weeds: Prof. L. C. Miall, F.R.S.

FRIDAY, MAY 26.

ROYAL INSTITUTION, at 9.—Climbs and Explorations in the Andes: Sir W. Martin Conway.

PHYSICAL SOCIETY, at 5.—On the Thermal Properties of Normal Pentane, Part 2: Prof. S. Young and Mr. Rose-Innes.—On the Distribution of Magnetic Induction in a Long Iron Bar: C. G. Lamb.

BOOKS, PAMPHLETS, and SERIALS RECEIVED.

BOOKS.—Cours Élémentaire de Zoologie: R. Perrier (Paris, Masson).—Chapters on the Natural History of the U.S.: Dr. R. W. Schufeldt (Gay).—Das Tierreich, 7 Liefg.: Profs. Canestrini and Kramer (Berlin, Friedländer).—Ditto, 8 Liefg.: Prof. K. Kraepelin (Berlin, Friedländer).—Electromagnetic Theory: O. Heaviside, Vol. 2 (*Electrician* Company).—The Tides Simply Explained: Rev. J. H. S. Moxly (Rivingtons).—A Manual of Surgical Treatment: Prof. W. W. Cheyne and Dr. F. F. Burghard, Part 1 (Longmans).—Physique et Chimie Viticoles: A. de Saporta (Paris, Carré and Naud).—The Aborigines of Tasmania: H. Ling Roth, 2nd edition (Halifax, King).

PAMPHLETS.—Die Elemente des Erdmagnetismus, &c.: Dr. H. Fritsche (St. Petersburg).—Man the Microcosm: L. Hall, Part 1 (Williams).—Die Lokalisation Morphogenetischer Vorgänge: H. Driesch (Leipzig, Engelmann).—Die Aufstellung der Tiere in Neuen Museum zu Darmstadt: G. von Koch (Leipzig, Engelmann).—Siebenter Jahres-Bericht des Sonnblück-Vereines für das Jahr 1898 (Wien).

SERIALS.—Science Gossip, May (Strand).—Botanische Jahrbücher, Siebr. Bd. 1 and 2 Heft (Leipzig).—Fortnightly Review, May (Chapman).—Zeitschrift für Physikalische Chemie, xxviii. Band, 4 Heft (Leipzig).—Himmel und Erde, April (Berlin).—Natural Science, May (Pentland).—Journal of Botany, May (West).—Observatory, May (Taylor).—Journal of the Chemical Society, May (Gurney).—Geographical Journal, May (Stanford).—Monthly Weather Review, January (Washington).—Proceedings of the Royal Society of Edinburgh, Vol. xxii. pp. 361–440 (Edinburgh).—Engineering Magazine, May (Strand).—Physical Review, March (Macmillan).—Scientia, No. 3 (Paris, Carré).—Journal of Applied Microscopy, March (Rochester, N.Y.).—L'Anthropologie, Tome x. No. 2 (Paris).—Record of Technical and Secondary Education, April (Macmillan).—Memoirs of the Boston Society of Natural History, Vol. v. Nos. 4 and 5 (Boston, Mass.).—American Journal of Mathematics, April (Baltimore).—Psychological Review, May (Macmillan).—National Geographic Magazine, May (Washington).—American Journal of Science, May (New Haven).—Botanischer Jahrbücher, Sechr. Band, v. Heft (Leipzig).

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