

in the air, by MM. A. Gerardin and M. Nicloux. The variation in volume of air after treatment with a glowing platinum wire is suggested as giving a measure of bad odours in air.—Statistical researches on the cultivated oyster on the coasts of France, by M. G. Roché.—On the metamorphic gypsiums of Algeria, by M. L. Gentil.—The allotropic state of the elementary gases, by M. C. V. Zenzer.—A new general method for calculating the roots of algebraical equations which contain four terms and more, by M. Wisthaler.

DIARY OF SOCIETIES.

LONDON.

THURSDAY, MAY 7.

ROYAL SOCIETY, at 4.30.—On the Liquefaction of certain Alloys of Gold: E. Matthey.—On the Occurrence of the Element Gallium in the Clay-Ironstone of the Cleveland District of Yorkshire. (Preliminary Notice): Prof. Hartley, F.R.S., and H. Ramage.—The Electromotive Properties of Malapterurus electricus: Prof. Gotch, F.R.S., and G. J. Burch.—The Occurrence of Nutritive Fat in the Human Placenta (Preliminary Communication): Dr. T. W. Eden.

ROYAL INSTITUTION, at 3.—The Art of Working Metals in Japan: W. Gowland.

LINNEAN SOCIETY, at 8.—On the Tooth-Genesis of the Canidæ: Dr. H. Maret Tims.—Exhibitions: Lantern-Slides illustrative of the Habits of the Tiger Beetle, *Cicindela campestris*: F. Enock.—Preparations of the Hermaphrodite Glands of Apus: H. M. Bernard.

CHEMICAL SOCIETY, at 8.—Ballot for Election of Fellows.—Morin, Part I.: Dr. H. Bablich and A. G. Perkin.—Luteolin, Part II.: A. G. Perkin.

INSTITUTION OF CIVIL ENGINEERS, at 8.—The "James Forrester" Lecture: Physical Experiment in relation to Engineering: Dr. Alexr. B. W. Kennedy, F.R.S.

IRON AND STEEL INSTITUTE (Institution of Civil Engineers), at 10.30 a.m. GRESHAM COLLEGE (Basinghall Street), at 6.—The Planet Saturn: Rev. E. Ledger.

FRIDAY, MAY 8.

ROYAL INSTITUTION, at 9.—Electric Shadows and Luminescence: Prof. Silvanus P. Thompson, F.R.S.

ROYAL ASTRONOMICAL SOCIETY, at 8.—Note on a Determination of Precession and Drift, based on Auwer's Proper Motions: R. H. M. Bosanquet.—Royal Observatory, Greenwich: Diameters of Jupiter measured with the Filar and Double-Image Micrometers.—And probably: Photographs of the Spectra of the Helium Class of Stars: F. McClean.—Royal Observatory, Greenwich: Observations of Comets *a* 1896 (Perrine-Lamp) and of Comet *b* 1896 (Swift).

PHYSICAL SOCIETY, at 5.—On Dielectrics: R. Appleyard.—On the True Resistance of the Electric Arc: Messrs. Frith and Rodgers.

IRON AND STEEL INSTITUTE, at 10.30 a.m.—On the Rate of Diffusion of Carbon in Iron: Prof. W. C. Roberts-Austen, C.B., F.R.S.—On some Alloys with Iron Carbides: J. S. de Benneville.—On Mond Gas as applied to Steel-making: John H. Darby.—On Hot Blast Stoves: B. J. Hall.—On the Hardening of Steel: H. M. Howe.—On the Introduction of Standard Methods of Analysis: Baron Hanns Jüptner von Jonstorff.—On the Production of Metallic Bars of any Section by Extrusion: Perry F. Nursey.—On Mr. Howe's Researches on the Hardening of Steel: F. Osmond.—On the Treatment of Magnetic Iron Sand: E. Metcalf Smith.—On the Making of the Middle Lias Ironstone of the Midlands: E. A. Walford.

AFFILIATED PHOTOGRAPHIC SOCIETIES, at 8.—Process Work Applications: W. T. Wilkinson.

GRESHAM COLLEGE (Basinghall Street), at 6.—The Planet Saturn: Rev. E. Ledger.

MALACOLOGICAL SOCIETY, at 8.

SATURDAY, MAY 9.

ROYAL BOTANIC SOCIETY, at 3.45.

GEOLOGISTS' ASSOCIATION (Liverpool Street Station), at 2.3.—Excursion to Chingford Museum and Epping Forest. Director: T. V. Holmes.

MONDAY, MAY 11.

SOCIETY OF ARTS, at 8.—Applied Electro-chemistry: James Swinburne.

ROYAL GEOGRAPHICAL SOCIETY, at 8.30.—Through the Central Sudan to Sokoto: William Wallace.—Hausaland: Rev. Chas. H. Robinson.

TUESDAY, MAY 12.

ROYAL INSTITUTION, at 3.—Ripples in Air and on Water: C. V. Boys, F.R.S.

SOCIETY OF ARTS, at 8.—The Future of the Fine Art of Wood Engraving: W. Biscombe Gardner.

ANTHROPOLOGICAL INSTITUTE, at 8.30.—Recent Observations on the Andamanese by Mr. M. V. Portman: Dr. J. G. Garson.—Photographic Apparatus for Travellers: Dr. J. G. Garson.—The Cranial Characteristics of the South Saxons compared with those of some of the other Races of Great Britain: R. J. Horton-Smith.—An Unpublished Batak Creation Legend: Heer C. M. Pleyte.

INSTITUTION OF CIVIL ENGINEERS, at 8.—Papers to be further discussed: American and English Methods of Manufacturing Steel Plates: Jeremiah Head.—Four American Rolling-Mills: Samuel T. Wellman.

ROYAL PHOTOGRAPHIC SOCIETY, at 8.—Dry Plates for Röntgen Ray Photography: H. Snowden Ward.—Notes on the Pyro-developed Image: Alfred Watkins.—A New Stripping Film for Negative Work: J. B. B. Wellington.

ROYAL VICTORIA HALL, at 8.30.—The New Photography: A. W. Porter.

WEDNESDAY, MAY 13.

SOCIETY OF ARTS, at 8.—Tunnelling by Compressed Air: E. W. Moir.

GEOLOGICAL SOCIETY, at 8.—An Account of a Head or Gateway driven into the Eastern Boundary-Fault of the South Staffordshire Coalfield: William

Farnworth.—Dundry Hill: its Upper Portion, or the Beds marked as Inferior Oolite (G 5) in the Maps of the Geological Survey: S. S. Buckman and E. Wilson.—On the Geographical Evolution of Jamaica: Dr. J. W. Spencer.

THURSDAY, MAY 14.

ROYAL INSTITUTION, at 3.—The Art of Working Metals in Japan: W. Gowland.

SOCIETY OF ARTS, at 4.30.—Tea Planting in Darjeeling: G. W. Christison MATHEMATICAL SOCIETY, at 8.—On the Application of the Principal Function to the Solution of Delaunay's Canonical System of Equations: Prof. E. W. Brown.

INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—The Influence of the Shape of the Applied Potential Difference Wave on the Iron Losses in Transformers: Stanley Beeton, C. Perry Taylor, and I. M. Barr.

FRIDAY, MAY 15.

ROYAL INSTITUTION, at 9.—Cable-laying on the Amazon River: Alexander Siemens.

EPIDEMIOLOGICAL SOCIETY, at 8.

QUEKETT MICROSCOPICAL CLUB, at 8.

BOOKS, PAMPHLETS, and SERIALS RECEIVED.

BOOKS.—Biological Experimentation: Sir B. W. Richardson (Bell).—Elementary Practical Physics: W. Watson (Longmans).—Quain's Elements of Anatomy, Appendix, 10th edition (Longmans).—The Student's Lyell: edited by Prof. Judd (Murray).—Riverside Letters; G. D. Leslie (Macmillan).—A History of the Warfare of Science with Theology in Christendom: Dr. A. D. White, 2 Vols. (Macmillan).

PAMPHLETS.—Slavery and Servitude in the Colony of North Carolina: Dr. J. S. Bassett (Baltimore).—The Crambidæ of North America: Dr. C. H. Fernald (Massachusetts).—Report of the Marlborough College Natural History Society, 1895 (Marlborough).

SERIALS.—Memorie della Società Geografica Italiana, Vol. v. Part 2 (Roma).—Humanitarian, May (Hutchinson).—Bulletin de la Société Impériale des Naturalistes de Moscou 1895, No. 4 (Moscou).—Fortnightly Review, May (Chapman).—History of Mankind: F. Ratzel, translated, Part 8 (Macmillan).—National Review, May (Arnold).—Himmel und Erde, April (Berlin).—Journal of the Scottish Meteorological Society, third series, Nos. xi. and xii. (Blackwood).—Century Magazine, May (Macmillan).—Geographical Journal, May (Stanford).—Contemporary Review, May (Isbister).—Proceedings of the Physical Society, May (Taylor).—Scribner's Magazine, May (Low).—Zeitschrift für Physikalische Chemie, xix. Band, 4 Heft (Leipzig).—Archives of Clinical Skiagraphy: S. Rowland, Part 1 (Rebman).—Westminster Review, May (Warne).

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