calcium carbide), a good yield of the arsenite is produced. The physical properties of propyl, normal butyl, and iso-butyl arsenites are given.—The orthosubstituted azo-acids and their transformation into *c*-oxyindazylic derivatives: P. **Freundler.**—The condensation of oxalacetic ester with cyanacetic ester in presence of piperidine: Ch. **Schmitt.** The condensation can take place in two ways, giving rise to isomeric substances possessing different properties.—The replacement of hydroxyl of some carbinols by the radical $-CH_2.CO_2H$: R. **Fosse.**—The constitution of hordenine: E. **Léger.** The regulated oxidation of acetyl-hordenine with potassium permanganate gives acetyl-para-oxybenzoic acid. This fixes the orientation of the hydroxyl group in hordenine, which is thus found to be para-oxyphenylethyl-dimethylamine.—The volcanic rocks of the peninsula of Cape Verde (Senegal): Jean **Chautard.**—The presence of galena amongst the minerals produced by the fumerolles of the last eruption of Vesuvius: Ferruccio **Zambonini.** Referring to a recent paper by M. Lacroix on this subject, the author mentions that he contributed a paper on the same subject to the Accademia dei Lincei in August last.—The intracellular inclusions of the leaf of *Rhamnus cathartica*: Wladimir **Tichomirow.**—The evolution of the metachromatic corpuscles of seeds during germination: J. **Beauverie.**—The histological modifications produced in the flowers of *Teucrium Chamaedrys* and of *Teucrium montanum* by the larvæ of Copium: C. **Houard.**—The coral formations of the island of San-Thomé, Gulf of Guinea: Ch. **Gravier.**—A respiratory calorimetric room: M. **Letulle** and Mlle. **Pompilian.** A diagram is given of the apparatus, which allows of simultaneously measuring the respiratory exchanges and heat evolved by a man over a long period. The heat is determined by reading the inlet and outlet temperatures of a measured flow of water, the regulation of the temperature of the calorimeter being made automatically at any desired point between 12° C. and 24° C. The apparatus was standardised electrically with a possible error of 0·5 per cent.—The *rôle* of the chromotropic phenomena in the study of biological and psychophysiological problems: Romuald **Minkiewicz.**—The prophylaxy of glandular cancer of the prostate: A. **Guépin.**—The production in medicine of static effects by high frequency resonators: H. **Guilleminot.**

DIARY OF SOCIETIES.

THURSDAY, DECEMBER 13.

ROYAL SOCIETY, at 4.30.—The Relation between Breaking Stress and Extension in Tensile Tests of Steel: A. Mallock, F.R.S.—On the Intensity of Light Reflected from Transparent Substances: Prof. R. C. Maclaurin.—Contributions to our Knowledge of the Poison Plants of Western Australia, Part ii., *Oxylobium parviflorum*, Lobine: E. A. Mann and Dr. W. H. Ince.—Experiments on the Length of the Kathode Dark Space with Varying Current Densities and Pressures in Different Gases: F. W. Aston.—An Examination of the Lighter Constituents of Air: J. E. Coates.—The Velocity of the Negative Ions in Flames: E. Gold.—The Electric or Magnetic Polarisation of a Thin Cylinder of Finite Length by a Uniform Field of Force: Dr. T. H. Havelock.—Further Observations on the Effects produced on Rats by the Trypanosomata of Gambia Fever and of Sleeping Sickness: H. G. Plimmer.

SOCIETY OF ARTS, at 4.30.—The Indian Mohammedans: their Past, Present, and Future: A. Yusuf Ali.

LONDON INSTITUTION, at 6.—Tadpoles—a Study in Embryology: D. J. W. Jenkinson.

MATHEMATICAL SOCIETY, at 5.30.—On the Form of the Surface of a Search-light Reflector: C. S. Jackson.—The Potential Equation and Others with Function given on the Boundary: L. F. Richardson.—On the Limits of Real Variants: J. Mercer.—The Asymptotic Expansion of Integral Functions defined by Generalised Hypergeometric Series: Rev. E. W. Barnes.—The Diophantine Equation $x^n - Ny^n = z$: Major P. A. MacMahon.—The Uniform Convergence of Fourier's Series: Dr. E. W. Hobson.

FRIDAY, DECEMBER 14.

PHYSICAL SOCIETY, 7 p.m. to 10 p.m.—Second Annual Exhibition of Electrical, Optical, and other Physical Apparatus.

ROYAL ASTRONOMICAL SOCIETY, at 5.—(1) Observations of Comet *c*, 1905, and Comets *a* and *b*, 1906, from Photographs taken with the 30-inch Reflector of the Thompson Equatorial; (2) Pogson's Observations of U Geminorum, edited by H. H. Turner: Royal Observatory, Greenwich.—Hansteen's Eclipse at Stiklastad, 1030 August 31: P. H. Cowell.—The Proper Motion of Castor: A. C. D. Crommelin.—Note on some Proper Motions derived from a Comparison of Carrington's Catalogue, 1855: W. G. Thackeray.—Note on the Approaching Return of Halley's Comet: A. C. D. Crommelin.—On the Accidental Production of Temporary Errors of Division on a Graduated Circle: W. M. Witchell.—*Probable Papers:* (1) Note on Silicon in the Chromosphere; (2) The Enhanced Lines of Iron in the Region C to F: A. Fowler.—Estimate of the Number of Stars within Certain Limits of Proper Motion: W. G. Thackeray.—Discussion (*time permitting*): Possibility of Improving the Places of Reference Stars for the Astrographic Catalogue: H. H. Turner.—Solar Parallax Papers, No. 5, Photographic Places of Stars in the Paris *Eros* Circular: A. R. Hinks.

INSTITUTION OF CIVIL ENGINEERS, at 8.—Mechanical Improvements in the Drainage of the Bedford Level: A. Carmichael.

INSTITUTION OF MECHANICAL ENGINEERS, at 8.—*Discussion:* Steam as a Motive Power for Public Service Vehicles: T. Clarkson.—*Probable Paper:* Lighting of Railway Premises; Indoor and Outdoor: H. Fowler.

MALACOLOGICAL SOCIETY, at 8.—Description of *Latirus* (*Peristernia*) *Sowerbyi*, sp.n.: J. Cosmo Melvill.—On the Anatomy of *Tagelus gibbus* and *T. divisus*: H. H. Bloomer.—Descriptions of two New Helicoid Forms from German New Guinea: J. H. Ponsonby.

MONDAY, DECEMBER 17.

SOCIOLOGICAL SOCIETY, at 8.—Sociology as a Province of Biology: M. Maxweiler.

SOCIETY OF ARTS, at 8.—Artificial Fertilisers: Potassic Fertilisers: A. D. Hall.

INSTITUTE OF ACTUARIES, at 5.—On the Error introduced into Mortality Tables by Summation Formulas of Graduation: G. King.

TUESDAY, DECEMBER 18.

ROYAL STATISTICAL SOCIETY, at 5.

SOCIETY OF ARTS, at 8.—Basket Making: Thomas Okey.

INSTITUTION OF CIVIL ENGINEERS, at 8.—Mechanical Considerations in the Design of High-tension Switch-gear: H. W. E. Le Fanu.

WEDNESDAY, DECEMBER 19.

SOCIETY OF ARTS, at 8.—Modern Developments of Flour-milling: A. E. Humphries.

ROYAL METEOROLOGICAL SOCIETY, at 7.30.—The Guildford Storm of August 2, 1906: Admiral J. P. Maclear.—The Metric System in Meteorology: R. Inwards.

ROYAL MICROSCOPICAL SOCIETY, at 8.—Exhibition of Slides from the Collection presented to the Society by Mr. Jas. Hilton.

THURSDAY, DECEMBER 20.

INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—The Track Circuit as Installed on Steam Railways: H. G. Brown.

LINNEAN SOCIETY, at 8.—Botanical Results of the Third Tanganyika Expedition, 1904–5: Dr. A. B. Rendle and others.—Fossil Foraminifera of Victoria; the Balcombian Deposits of Port Phillip: F. Chapman.—*Exhibition:* Albino Woodlice: Wilfred Mark Webb.

CHEMICAL SOCIETY, at 8.30.—A New Laboratory Method for the preparation of Hydrogen Sulphide: F. R. L. Wilson.—The Reaction of Acids with Methyl Orange: V. H. Veley.—(1) Contributions to the Study of the Calcium Phosphates, I., The Hydrates of the Calcium Hydrogen Orthophosphates; (2) Contributions to the Study of the Calcium Phosphates, II., The Action of Ammonia Gas on the Calcium Hydrogen Orthophosphates: H. Bassett, jun.

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