

principle, by means of which a volume of 20 c.c. can be continuously maintained at a temperature 70° below that of the room, with an expenditure of 100 c.c. of carbon bisulphide and 70 c.c. of acetone per hour.—**Jean Villey**: The measurement of very small displacements by means of the electrometer. A condenser formed of two parallel plates and charged to a suitable potential is applied to measure extremely small displacements of one of the plates. Using an electrometer giving a motion of 150 cm. per volt on a scale 350 cm. distant, with a condenser formed of circular plates 6.5 cm. radius and 158μ apart, a displacement of the spot of 150 cm. on the scale is obtained when the condenser plate, charged to 176 volts, is moved 0.001 mm., or a magnification of 1,500,000. The sensibility exceeds that of the interference methods.—**J. Carvalho**: The electrical purification of liquid sulphur dioxide and its electrical conductivity. Liquid sulphur dioxide, already fairly pure, is further purified by the prolonged passage of a current at a high potential. The limiting values obtained for the conductivity do not follow Ohm's law, but laws which recall those governing the conductivity of gases.—**Paul Nicolardot** and **Georges Chertier**: The nitrous esters of cellulose. In an attempt to find the cause of the differences in the percentage of nitric nitrogen in guncotton when determined by the Schloesing and Crum methods respectively, the author was led to examine the action of the nitrogen peroxides on cotton in presence of glacial acetic acid. The nitro-products thus obtained appear to contain nitrites, and do not yield their true percentage of nitrogen by the Crum method.—**MM. Magnan and Perrilliat**: An acephalous human monster.—**Mme. V. Henri-Cernovodeanu**, **MM. Victor Henri**, and **V. Baroni**: The action of the ultra-violet rays upon the tubercle bacillus and upon tuberculin. After a short exposure to the ultra-violet rays the tubercle bacilli are attenuated; after a more prolonged exposure they are destroyed. Tuberculin, after a very long exposure (five hours), gives no reaction with tuberculous guinea-pigs.—**A. Fernbach** and **A. Lanzenberg**: The action of nitrates in alcoholic fermentation. Nitrates are not prejudicial to the fermentation.—**E. Roubaud**: The influence of the physiological reactions of *Glossina* in the salivary development, and the virulence of the pathogenic trypanosomes.—**Paul Marchal**: Contribution to the biological study of *Chermes*.—**M. Fabre-Domergue**: The storage of oysters in filtered water. After remaining for eight days in filtered water oysters do not diminish in weight, and do not appear to be depreciated in any way.—**Carl Störmer**: The situation of the zone of maximum frequency of the aurora borealis according to the corpuscular theory.

DIARY OF SOCIETIES.

THURSDAY, NOVEMBER 3.

ROYAL SOCIETY, at 4.30.—The Origin of the Hydrochloric Acid in the Gastric Tubules: Miss M. P. Fitzgerald.—(1) Trypanosome Diseases of Domestic Animals in Uganda. II. *Trypanosoma Brucei*. (Plimmer and Bradford); (2) Trypanosome Diseases of Domestic Animals in Uganda. III. *Trypanosoma vivax* (Ziemann): Colonel Sir D. Bruce, C.B., F.R.S., and others.—Further Results of the Experimental Treatment of Trypanosomiasis; being a Progress Report to a Committee of the Royal Society: H. G. Plimmer, F.R.S., Capt. W. B. Fry, and Lieut. H. S. Ranken.—On the Peculiar Morphology of a Trypanosome from a case of Sleeping Sickness and the possibility of its being a new Species: Dr. J. W. Stephens and Dr. H. B. Fantham.—Note upon the Examination of the Tissues of the Central Nervous System, with Negative Results, of a case of Human Trypanosomiasis, which apparently had been cured for years by Atoxyl Injections: Dr. F. W. Mott, F.R.S.—On a remarkable Pharetronid Sponge from Christmas Island: R. Kirkpatrick.

LINNEAN SOCIETY, at 8.—Biscayan Plankton, Part XIII. The Siphonophora: H. B. Bigelow.—Plankton Fishing in Hebridean Seas: Prof. W. A. Herdman, F.R.S.

RÖNTGEN SOCIETY, at 8.15.—Presidential Address: Dr. G. H. Rodman.

MONDAY, NOVEMBER 7.

ARISTOTELIAN SOCIETY, at 8.—Self as Subject and Self as Person: S. Alexander.

ROYAL GEOGRAPHICAL SOCIETY, at 8.30.—A Sixth Journey in Persia: Ancient Parthia, Nishapur, and Turshiz: Major Molesworth Sykes, C.M.G.

SOCIETY OF ENGINEERS, at 7.30.—Public Slaughter Houses: S. M. Dodginton.

TUESDAY, NOVEMBER 8.

ILLUMINATING ENGINEERING SOCIETY, at 8.—Recent Advances in, and the Present Status of Gas Lighting: F. W. Goodenough.

INSTITUTION OF CIVIL ENGINEERS, at 8.—The London County Council Holborn to Strand Improvement, and Tramway Subway: G. W. Humphreys.

WEDNESDAY, NOVEMBER 9.

GEOLOGICAL SOCIETY, at 8.—The Rhetic and Contiguous Deposits of West, Mid, and Part of East Somerset: L. Richardson.—Jurassic Plants from the Marske Quarry: Rev. G. J. Lane.

THURSDAY, NOVEMBER 10.

ROYAL SOCIETY, at 4.30.—*Probable Papers*: The Tidal Observations of the British Antarctic Expedition, 1907: Sir George Darwin, K.C.B., F.R.S.—Conduction of Heat through Rarefied Gases: F. Soddy, F.R.S., and A. J. Berry.—The Chemical Physics involved in the Precipitation of Free Carbon from the Alloys of the Iron Carbon System: W. H. Hatfield.—On the Determination of the Tension of a recently-formed Water surface: N. Bohr.

MATHEMATICAL SOCIETY, at 5.30.—Annual General Meeting.—The Relation of Mathematics to Experimental Science (Presidential Address): Sir W. D. Niven.—Properties of Logarithmic-exponential Functions: G. H. Hardy.—The Double Six of Lines: G. T. Bennett.—On Semi-integrals and Oscillating Successions of Functions: Dr. W. H. Young.—On the Existence of a Differential Coefficient: Dr. W. H. Young and Mrs. Young.—The Analytical Extension of Riemann's Zeta-function: F. Tavani.—The Geometrical Representation of non-real Points in space of Two and Three Dimensions: T. W. Chaudy.—The Extension of Tauber's Theorem: J. E. Littlewood.—A Note on the Property of being a Differential Coefficient: Dr. W. H. Young.—The Stability of Rotating Shafts: F. B. Pidduck.—A Class of Orthogonal Surfaces: J. E. Campbell.—On Non-integral Orders of Summability of Series and Integrals: J. W. Chapman.—Optical Geometry of Motion: A. A. Robb.—Lineo-linear Transformations, specially in Two Variables: Dr. A. R. Forsyth.—On the Conditions that a Trigonometrical Series should have the Fourier Form: Dr. W. H. Young.

INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—Presentation of Scholarships and Premiums.—Inaugural Address of the President: S. Z. de Ferranti.

FRIDAY, NOVEMBER 11.

ROYAL ASTRONOMICAL SOCIETY, at 5.

MALACOLOGICAL SOCIETY, at 8.—On the names used by Bolten and Da Costa for genera of Veneridæ: A. J. Jukes-Browne, F.R.S.—On New Melaniidæ from Goram and Kei Islands, Malay Archipelago: H. B. Preston.—On the Anatomy of the British Species of the Genus *Psammobia*: H. H. Bloomer.—Note on *Trilon tessellatus*: Major A. J. Peile.

PHYSICAL SOCIETY, at 8.—On the supposed Propagation of Equatorial Magnetic Disturbances with Velocities of the Order of 100 miles per second: Dr. Chree, F.R.S.—On Cusped Waves of Light and the Theory of the Rainbow: Prof. W. B. Morton.—Exhibition of a Brightness Photometer: J. S. Dow.

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