

a half-second of arc with this arrangement.—On the determination of maxima and minima of transparency, by M. C. **Camichel**. A modification of the Gouy spectrophotometer, in which the two Nicols are replaced by a rotating disc, partly cut away in sectors.—Some remarks on the magnetic storm of October 31, by M. Em. **Marchand**. The author concludes that during magnetic storms the currents disturbing the earth's field are situated at least partially in the upper regions of the atmosphere. The magnetic storm coincided with the passage of an important group of sun-spots across the central meridian.—On a rigorous separation of the rare earths, by MM. G. **Urbain** and H. **Lacombe**. By the addition of the double nitrate of magnesium and bismuth to the mixture of double nitrates of rare earths, each earth has as its only impurity bismuth, which is readily removed, instead of another rare earth. The method has been applied with success to mixtures of samarium and gadolinium.—On kermes mineral, by M. J. **Bougault**.—On the acetylenic ketones, a new synthesis of the isoxazols, by MM. Ch. **Mourou** and M. **Brachin**. Ketones of the type of acetyl-phenyl-acetylene react quantitatively upon hydroxylamine, giving isoxazols.—On the retrogradation of starch, by M. L. **Maquenne**. The retrogradation is favoured by lowering the temperature and by the presence of minute amounts of mineral acids.—The influence of the nature of the external medium on the organic composition of the plant, by MM. Alex. **Hébert** and E. **Charabot**.—On the relation between the luminous intensity and energy of assimilation in plants belonging to different biological types, by M. Fr. **Weis**.—On the structure of the cotyledons and the disposition of certain adventitious roots in young labiate plants, by M. René **Viguer**.—On polymorphism in nitrates, by M. Frédéric **Wallerant**.—On some analogies of geological facies between the central zone of the eastern Alps and the internal zone of the western Alps, by M. Pierre **Fermier**.—On artesian wells, by M. D. **Pantanelli**. A consideration of the influence of the pressure exerted by the rock mass upon the subterranean sheet of water upon the well level.—On a new fossil-bearing level in the Keuper beds, by MM. M. **Piroutet** and Arm. **Laurent**.—A comparison of the letters of the alphabet from the point of view of the speed of writing. The formation of a rational alphabet, by MM André **Broca** and D. **Sulzer**. The present alphabet is badly conceived from a physiological point of view. A series of signs is suggested by means of which the speed of recognition of letters could be increased one-third.—The electrical resistance of the human body, by M. Stéphane **Leduc**. The electrical resistance of the human body is especially the resistance of the skin, and this, like all electrolytes, depends on the nature and concentration of the ions it contains.—Contribution to the treatment of cancer by the X-rays, by M. **Biraud**. The disease was a typical epithelioma, and had recurred after one operation. After four months' treatment with the X-rays the pain disappeared, and the size of the tumour was reduced three-quarters.—Contribution to the study of hydrochloric acid in digestion, by MM. A. **Desgrez** and J. **Adler**.

DIARY OF SOCIETIES.

THURSDAY, NOVEMBER 26.

ROYAL SOCIETY, at 4.30.—Mathematical Contributions to the Theory of Evolution, XII., On a Generalised Theory of Alternative Inheritance, with Special Reference to Mendel's Laws: Prof. K. Pearson, F.R.S.—On the Distribution of Stress and Strain in the Cross-Section of a Beam: J. Morrow.—Some Experiments in Magnetism: T. C. Porter.

INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—The Testing of Electric Generators by Air Calorimetry: R. Threlfall; F.R.S.—The Edison Accumulator for Automobiles: W. Hibbert.

FRIDAY, NOVEMBER 27.

PHYSICAL SOCIETY, at 5.—An Electrical Thermostat: Horace Darwin.—On the Occurrence of Cavitation in Lubrication: S. Skinner.—A Lecture Experiment in Electrical Resonance: Dr. W. Watson.

ROYAL ASTRONOMICAL SOCIETY, at 8.—Lecture by the President, Prof. H. H. Turner.

MONDAY, NOVEMBER 30.

SOCIETY OF ARTS, at 8.—The Mining of Non-Metallic Minerals: Bennett H. Brough. (Cantor Lectures. II.)

INSTITUTE OF ACTUARIES, at 5.—On the Comparative Mortality among Assured Lives of Abstainers and Non-Abstainers from Alcoholic Beverages: Mackenzie Moore.

TUESDAY, DECEMBER 1.

INSTITUTION OF CIVIL ENGINEERS, at 8.—Discussion of Paper on the Distribution of Mean and Extreme Annual Rainfall over the British Isles: Dr. H. R. Mill.

ZOOLOGICAL SOCIETY, at 8.30.—Note upon the Tongue and Windpipe of the American Vultures, with Remarks on the Inter-relations of the Genera *Sarcophagus*, *Gypagus* and *Cathartes*: F. E. Beddard, F.R.S.—On the Mammals of Cyprus: Miss Dorothy M. A. Bates.—On the Cause of Death of a Polar Bear recently Living in the Society's Gardens.—Dr. R. N. Salaman.

WEDNESDAY, DECEMBER 2.

ENTOMOLOGICAL SOCIETY, at 8.

SOCIETY OF ARTS, at 8.—The Fiscal Problem: Sir C. M. Kennedy, K.C.M.G.

GEOLOGICAL SOCIETY, at 8.—Note on the Garnet-bearing and Associated Rocks of the Borrowdale Volcanic Series: (The late) E. E. Walker.—A Contribution to the Glacial Geology of Tasmania: Prof. J. W. Gregory, F.R.S.

SOCIETY OF PUBLIC ANALYSTS, at 8.—The Characteristics of some Almond and Allied Oils: Dr. J. Lewkowitsch.—Note on the Quantitative Estimation of Mechanical Wood Pulp in Papers: C. F. Cross and E. J. Bevan.—The Estimation of Aldehydes and Ketones in Essential Oils: H. E. Burgess.—Note on the Estimation of Sperm Oil: L. M. Nash.

THURSDAY, DECEMBER 3.

ROYAL SOCIETY, at 4.30.—*Probable Papers*:—On the Fructification of *Neuropteris heterophylla*, Brongniart: R. Kidston, F.R.S.—Histological Studies on Cerebral Localisation: Dr. A. W. Campbell.

LINNEAN SOCIETY, at 8.—On Littoral Polychaeta from the Cape of Good Hope: Dr. Arthur Willey, F.R.S.—Notes on *Myriactis Areschougii* and *Colodasma californica*: Miss May Rathbone.

RÖNTGEN SOCIETY, at 8.30.—A New Jointless Section Wound Induction Coil, and a Flat Spiral High Frequency Apparatus: Leslie Miller.

AERONAUTICAL SOCIETY, at 8.—Report of the International Kite Competition—(1) Mathematical Portion: Prof. C. V. Boys, F.R.S.; (2) Descriptive Portion: Eric Stuart Bruce.—Preliminary Communication on the Longitudinal Stability of Aeroplane Machines: Prof. G. H. Bryan, F.R.S., and W. E. Williams.—The Balloon Ascents made by the late Mr. James Glaisher, F.R.S., for Scientific Purposes: W. Marriott.—The Mechanical Imitation of Bird Flight: W. Cochrane.

CHEMICAL SOCIETY, at 8.—On the Molecular Formulae of some Fused Salts as Determined by their Molecular Surface Energy: J. F. Bottomley.—Acid Salts of Monobasic Acids: R. C. Farmer.—The Atmospheric Corrosion of Zinc: G. T. Moody.—The Solubilities of the Hydrates of Nickel Sulphate: B. D. Steele and F. M. G. Johnson.

FRIDAY, DECEMBER 4.

GEOLOGISTS' ASSOCIATION, at 8.—On Land, Freshwater and Estuarine Deposits, with Special Reference to Recent Excursions; Lecture by the President, Mr. H. W. Monckton.

INSTITUTION OF CIVIL ENGINEERS, at 8.—Artificial Draught, as Applied by Fans to Steam Boilers: W. H. A. Robertson.

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