

method has been followed up at the Meudon Observatory, various screens being tried. It was found that the best results were obtained when the screen absorbed nearly the whole of the luminous spectrum, leaving only the extreme red and infra-red rays. The ultra-red spectrum has been mapped out in this way down to 1μ , and, in certain circumstances, a little further with some difficulty.—A theorem of J. Clark: Maurice **d'Ocagne**.—The result of the experimental study of a centrifugal ventilator: Henri and Léon **Bochet**. A study of the Capell ventilator, for which an abnormal yield had been claimed by the inventor. The results generally support the inventor's views.—A galvanometer with a movable needle for alternating currents: Henri **Abraham**. The instrument is of the d'Arsonval type, the permanent magnet being replaced by an electromagnet excited by an alternating current of the same frequency. In delicate measurements the best results are obtained by exciting the electromagnet by a small auxiliary transformer. Details are given of the sensibility obtainable.—The spectra of alloys: J. **de Kowalski** and P. B. **Huber**. Copper-magnesium and copper-zinc alloys were studied. By interposing self-induction in the discharge circuit a larger number of lines disappear from the spectrum when the electrodes consist of the pure metal than when an alloy is used. The lines which have disappeared in the spectra of the alloys are the same for the copper-magnesium and the copper-zinc alloys, and belong to copper. The results can be explained by Prof. J. J. Thomson's views, or by supposing that the mean temperature in the oscillating discharge between the electrodes is higher in the case of the alloy than with the pure metal.—The synthesis of $\beta\beta$ -dimethyl- and $\beta\beta$ -trimethylpimelic acids: G. **Blanc**. The starting point of this synthesis is the anhydride of $\beta\beta$ -dimethylglutaric acid. This is reduced by sodium and absolute alcohol to a lactone, and the latter, treated by phosphorus pentabromide and alcohol consecutively, gives the ethyl ester of δ -bromo- $\beta\beta$ -dimethylvaleric acid. The condensation of this bromo-compound with the sodium derivative of malonic ester leads to the desired $\beta\beta$ -dimethylpimelic acid. The substitution of the sodium derivative of methyl-malonic ester in this condensation gives the trimethylpimelic acid.—The chemical composition of glauconite: Léon W. **Collet** and Gabriel W. **Lee**. The analysis of a fresh sample of glauconite from the collection of Sir John Murray of the Challenger Office, showed that it is a ferric and not a ferrous silicate.—Overlapping strata in Sicily: Maurice **Lugeon** and Emile **Argand**.—The existence of phenomena of drift earlier than the Stephanian in the region of Saint-Etienne: P. **Termier** and G. **Friedel**.

DIARY OF SOCIETIES.

THURSDAY, MAY 17.

ROYAL SOCIETY, at 4.30.—Determinations of Wave-Length from Spectra obtained at the Total Solar Eclipses of 1900, 1901 and 1905: Prof. F. W. **Dyson**, F.R.S.—Some Stars with Peculiar Spectra: Sir Norman **Lockyer**, K.C.B., F.R.S., and F. E. **Baxandall**.—An Apparent Periodicity in the Yield of Wheat for Eastern England, 1885-1905: Dr. W. N. **Shaw**, F.R.S.—Some Physical Constants of Ammonia: a Study of the Effect of Change of Temperature and Pressure on an Easily Condensable Gas: Dr. E. P. **Perman** and J. H. **Davies**.
 CHEMICAL SOCIETY, at 8.30.—The Relation between Absorption Spectra and Chemical Constitution, part vi., The Phenyl Hydrazones of Simple Aldehydes and Ketones: E. C. C. **Baly** and W. B. **Tuck**.—Aromatic Compounds obtained from the Hydroaromatic Series, part ii., The Action of Phosphorus Pentachloride on Trimethyl-dihydroresorcin: A. W. **Crossley** and J. S. **Hills**.—Studies of Dynamic Isomerism, part v., Isomeric Sulphonic-derivatives of Camphor: T. M. **Lowry** and E. H. **Magnon**.—Studies on Basic Carbonates, part i., Magnesium Carbonates: W. A. **Davis**.
 ROYAL INSTITUTION, at 5.—The Influence of Ptolemaic Egypt on Græco-Roman Civilisation: Rev. J. P. **Mahaffy**.
 INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—Notes on Overhead Equipment of Tramways: R. N. **Tweedy** and H. **Dudgeon**.

FRIDAY, May 18.

ROYAL INSTITUTION, at 9.—International Science: Prof. A. **Schuster**, F.R.S.

SATURDAY, MAY 19.

ROYAL INSTITUTION, at 3.—The Old and New Chemistry: Sir James **Dewar**, F.R.S.

MONDAY, MAY 21.

ROYAL GEOGRAPHICAL SOCIETY, at 3.—Anniversary Meeting.—(1) Presentation of Medals and Awards; (2) Address by the President; (3) Annual Report and Election of President and Council.

SOCIETY OF CHEMICAL INDUSTRY, at 8.—The Problem of the Electrochemical Fixation of Nitrogen: Prof. P. A. **Guye**.
 VICTORIA INSTITUTE, at 4.30.—Biblical Astronomy, part ii., The Morning Star: Colonel George **MacKinlay**.

TUESDAY, MAY 22.

ROYAL INSTITUTION, at 5.—Glands and their Products: Prof. William **Stirling**.
 ANTHROPOLOGICAL INSTITUTE, at 8.15.—(1) Exhibition of Slides of Stone Monuments from India; (2) The "Genna" in Assam: T. C. **Hodson**.

WEDNESDAY, MAY 23.

SOCIETY OF ARTS, at 8.—The General Supply of Electricity for Power and other Purposes: J. N. **Shoolbred**.
 GEOLOGICAL SOCIETY, at 8.—On the Importance of Halimeda as a Reef-forming Organism, with a Description of the Halimeda-limestones of the New Hebrides: F. **Chapman** and Douglas **Mawson**.—Notes on the Genera *Omospira*, *Lophospira*, and *Turritoma*, with Descriptions of New Species: Miss **Jane Donald**.

THURSDAY, MAY 24.

ROYAL SOCIETY, at 4.30.—Croonian Lecture: On the Presence of Special Excitable Substances in Striated Muscle and in Tissue Cells: Prof. J. N. **Langley**, F.R.S.
 ROYAL INSTITUTION, at 5.—Man and the Glacial Period: Prof. W. J. **Sollas**, F.R.S.
 UNIVERSITY OF LONDON, at 5.—The Atmospheric Circulation and its Relation to Weather: Dr. W. N. **Shaw**, F.R.S.
 INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—Annual General Meeting.—Report of Council and Election of the New Council.
 SOCIETY OF ARTS, at 4.30.—The Parsis of Persia: Major P. M. **Sykes**, C.M.G.
 LINNEAN SOCIETY, at 3.—Anniversary Meeting.

FRIDAY, MAY 25.

ROYAL INSTITUTION, at 9.—Compressed Air and its Physiological Effects: Leonard **Hill**, F.R.S.
 PHYSICAL SOCIETY, at 5.—Colour Phenomena in Photometry: J. S. **Dow**.—Exhibition of an Automatic Arc Lamp: H. **Tomlinson** and Rev. G. T. **Johnston**.—The Theory of Moving Coil and other Kinds of Ballistic Galvanometers: Prof. H. A. **Wilson**, F.R.S.—Exhibition of a Bifilar Galvanometer free from Zero Creep: A. **Campbell**.

SATURDAY, MAY 26.

ROYAL INSTITUTION, at 3.—The Old and the New Chemistry: Sir James **Dewar**, F.R.S.

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