

on bars of mild steel broken by pulling show that this view is not exact. Details of the various tests to which the bars were submitted are given.—P. Chevenard: Nickel alloys retaining their rigidity over an extended temperature range. The alloy in the form of wire was heated to a constant temperature and loaded with a weight: an automatic arrangement recorded photographically the elongation as a function of the time. Curves are given for nickel, electrolytic iron, and for four alloys. A nickel-chromium-tungsten alloy was the most resistant to high temperatures.—L. J. Simon: The direct oxidation by oxygen or air of the esters of the alcohol acids. Methyl, ethyl, butyl, and amyl lactates when heated in a current of air undergo oxidation, giving the pyruvates in notable proportion. Ethyl glyoxylate can similarly be recognised as one of the products of oxidation by air of ethyl glycolate.—E. Fournier: The nature and structure of the substratum of the Jura chain. An account of the strata pierced by an experimental boring at Chazelot (near Rougemont) carried to a depth of 700 metres.—L. Eblé: Magnetic measurements in the Paris basin. The results given for 41 stations form part of a new magnetic survey of France. The secular variation of the magnetic elements between January 1, 1896, and January 1, 1922, was practically the same for all the stations; the mean values were: declination $-2^{\circ} 58'$, inclination $-0^{\circ} 32'$, horizontal component $+0.0014$. These are almost exactly the values obtained at the central station of Val-Joyeux.—Marcel Mirandé: The influence of light on the formation of anthocyanine in the scales of the bulbs of lilies. It has been shown experimentally that the only radiations taking an active part in the reddening of the scales are those in the luminous part of the spectrum: there is a first maximum effect in the red, a much more important maximum in the indigo blue, and a minimum in the green.—L. Berger: The existence of an ovarian gland, homologous with the testicular interstitial gland.—L. Carrère: The dilator of the pupil in the selacians.—Paul Wintrebert: The cartilaginous pterygoid in the urodeles.

SYDNEY.

Royal Society of New South Wales, September 6.—Mr. C. A. Sussmilch, president, in the chair.—R. H. Cambage: Acacia seedlings, Pt. VIII. A number of seedlings of different species were described. A seed of *Acacia melanoxylon* germinated after having been continuously immersed in sea water for five years. The phyllodes of various species of Acacia, such as *A. conferta*, *A. elongata*, *A. floribunda*, and *A. longifolia*, close up towards the stem at night.—M. B. Welch: Relationship between oil glands and oil yields in the Eucalyptus. Measurements made of the oil glands in the leaves of different Eucalypts show that the oil yield on distillation is not absolutely dependent on the number and size of the oil glands.—S. Dodd: Poisoning of sheep by *Solanum cinereum*. Feeding experiments proved the berries to be very poisonous. The active principle is probably solanin. Half a pound of dried ripe berries given whole were innocuous, but the same amount mashed with water caused death to sheep in six hours. The probable reason for this is that when dry and whole they passed into the rumen, where they became mixed with other food; at the end of each rumination the total amount of fruits re-swallowed was insufficient to produce poisoning. In the other case the soluble alkaloid passed direct into the digestive stomach, etc., and the amount absorbed, being lethal, death resulted.

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Diary of Societies.

MONDAY, OCTOBER 30.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, at 5.—Prof. Shattock: Specimens of Foreign Bodies.

ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN, at 7.—W. B. Appleton: Past and Present Methods of making Photographic Lenses.

TUESDAY, OCTOBER 31.

ROYAL HORTICULTURAL SOCIETY, at 3.—C. T. Musgrave: Methods of Propagation in an Amateur's Garden.

WEDNESDAY, NOVEMBER 1.

SOCIETY OF PUBLIC ANALYSTS AND OTHER ANALYTICAL CHEMISTS (at Chemical Society), at 8.—C. Ainsworth Mitchell: The Colorimetric Estimation of Pyrogallol, Gallotannin, and Gallic Acid.—Dr. H. E. Annett and M. N. Bose: The Estimation of Narcotine and Papaverine in Opium.—J. R. Nicholls: The Estimation of Morphine.—R. L. Morris: Further Notes on the Estimation of Potassium; by Perchlorate and Cobaltinitrite Methods.

THURSDAY, NOVEMBER 2.

ROYAL SOCIETY, at 4.30.—*Probable Papers*.—Lord Rayleigh: Polarisation of the Light scattered by Mercury Vapour near the Resonance Periodicity.—Prof. G. P. Thomson: The Scattering of Hydrogen Positive Rays and the Existence of a powerful Field of Force in the Hydrogen Molecule.—H. D. Smyth: A new Method for studying Ionising Potentials.—I. Backhurst: Variation of the Intensity of reflected X-radiation with the Temperature of the Crystal.—S. Data: The Absorption Spectrum of Potassium Vapour.—K. R. Ramanathan: The Molecular Scattering of Light in Vapours and in Liquids and its Relation to the Opalescence observed in the Critical State.

LINNEAN SOCIETY, at 5.

ROYAL COLLEGE OF PHYSICIANS, at 5.—Sir Maurice Craig: Mental Symptoms in Physical Disease (Bradshaw Lecture).

ROYAL AERONAUTICAL SOCIETY (at Royal Society of Arts), at 5.30.—Major A. R. Low: A Review of Airscrew and Helicopter Theory, with Aeroplane Analogies.

CHILD-STUDY SOCIETY (at Royal Sanitary Institute), at 6.—Dr. P. B. Ballard: A Defence of Mental Tests.

INSTITUTION OF ELECTRICAL ENGINEERS, at 6.—F. Gill: Inaugural Presidential Address.

CHEMICAL SOCIETY, at 8.—N. V. Sidgwick and W. M. Dash: The Solubility and Volatility of the Nitrobenzaldehydes.—R. H. Pickard, J. Kenyon, and H. Hunter: Investigations on the Dependence of Rotatory Power on Chemical Constitution. Part XIII. The Spatial Configuration of the Unbranched Aliphatic Chain.—J. Kenyon and R. A. M'Nicol: Investigations on the Dependence of Rotatory Power on Chemical Constitution. Part XIV. The Normal Aliphatic Ethers of d - β -octanol.—H. Phillips: Investigations of the Dependence of Rotatory Power on Chemical Constitution. Part XV. The Normal Aliphatic Ethers of d -methylbenzylcarbinol.—H. Phillips: Investigations on the Dependence of Rotatory Power on Chemical Constitution. Part XVI. A new type of Walden Inversion.—L. Hall: Investigations on the Dependence of Rotatory Power on Chemical Constitution. Part XVII. The di - d - β -octyl Esters of the Acids of the General Formula $(CH_2)_n(COOH)_2$.—F. L. Pyman: Orientation of the 1:4 and 1:5-dimethylglyoxalines. Mode of Fission of 5-aminoglyoxalines.—L. Light and F. L. Pyman: Bromo-derivatives of 2-methylglyoxaline.

INSTITUTION OF BRITISH FOUNDRYMEN (at Institute of Marine Engineers), at 8.—F. A. Melmoth: Notes on the Development of the Manufacture of Steel Castings.

FRIDAY, NOVEMBER 3.

INSTITUTION OF MECHANICAL ENGINEERS, at 6.—Sir Frank Baines: Repairs to the Roof of Westminster Hall.

JUNIOR INSTITUTION OF ENGINEERS, at 7.30.—T. H. Sanders: Laminated Springs.

PUBLIC LECTURES.

SATURDAY, OCTOBER 28.

HORNIMAN MUSEUM (Forest Hill), at 3.30.—F. Balfour-Browne: The Life and Habits of Mason Wasps.

MONDAY, OCTOBER 30.

CITY OF LONDON Y.M.C.A. (186 Aldersgate Street), at 6.—Sir William M. Bayliss: The Unity of the Human Body.

WEDNESDAY, NOVEMBER 1.

UNIVERSITY COLLEGE, at 5.30.—Dr. P. Harting: Holland, the Land and its People.—S. Jones: Some Recent Results in Experimental Phonetics.

THURSDAY, NOVEMBER 2.

FINSBURY TECHNICAL COLLEGE, at 4.—Prof. C. H. Desch: The Metallurgical Chemist (Streetfield Memorial Lecture).

UNIVERSITY COLLEGE (in Physics Lecture Theatre), at 5.30.—Prof. E. G. Coker: Recent Photo-Elasticity Researches in Engineering Problems.

CITY OF LONDON Y.M.C.A. (186 Aldersgate Street), at 6.—Prof. H. Maxwell-Lefroy: How Insect Pests are tackled.

FRIDAY, NOVEMBER 3.

BEDFORD COLLEGE FOR WOMEN, at 5.30.—Miss C. A. J. Skeel: Ancient Tavel.

UNIVERSITY COLLEGE, at 8.—Prof. G. Dawes Hicks: The Philosophy of Religion. Succeeding Lectures on November 10, 17, 24, December 1 and 8.

SATURDAY, NOVEMBER 4.

HORNIMAN MUSEUM (Forest Hill), at 3.30.—E. Lovett: The Folklore of the Cat.