

of the current through the contact considered.—The influence of the quality of the lighting on the photographic reproduction of colour: **J. Thovort**.—The freezing of mixtures of water and soluble fatty acids: **A. Faucon**. Solutions of formic, acetic, and propionic acids were used. The freezing points of the eutectic mixtures with these three acids were -48° , -27° , and $-29^{\circ}.4$ respectively, and no formation of any hydrate could be proved.—The density of methane and the atomic weight of carbon: **George Baume** and **F. Louis Perrot**. The gas was prepared by the action of water on methyl-magnesium iodide, and after washing purified by fractional distillation under reduced pressure. Air being appreciably soluble in liquid methane, special precautions were necessary to remove this impurity. The mean weight of the normal litre of methane was found to be 0.7168 gram. According to the method of reduction employed, the atomic weight of carbon from this density is deduced as 12.004 (Leduc), 12.005 (D. Berthelot), and 12.003 (P. A. Guye).—Concerning the atomic weight of silver: **A. Leduc**. A reply to some criticisms of **M. Dubreuil**.—The silicides of hydrogen: **P. Lebeau**. A large quantity of the gas produced by the action of hydrochloric acid on magnesium silicide was cooled with liquid air, and the compounds of silicon with hydrogen submitted to fractional distillation. Besides pure SiH_4 , not inflammable in air, a gas the density of which (2.18) corresponded with Si_2H_6 was obtained. A third compound, isolated in small quantity, and characterised by its extreme inflammability in contact with air, is probably silico-ethylene, Si_2H_4 . It is this substance which renders the impure silicon hydride spontaneously inflammable.—A case of isodimorphism: **H. Marais**. The forms of ethylamine chlorhydrate and bromhydrate stable at the ordinary temperature are perfectly isomorphous. The forms realisable at higher temperatures are isodimorphous, the stable form of one of the bodies being isomorphous with the unstable form of the other.—The hypotypical regeneration of the chelipeds in *Atya serrata*: **Edmond Bordage**.—Leprosy and demodex: **A. Borrel**.—The parthenogenetic segmentation of the egg in birds: **A. Lécaillon**.—The gastric digestion of casein: **Louis Gaucher**. Coagulation of the milk does not necessarily occur in the stomach, and is not peptonised in that organ.—The effect of bases on the action of certain ferments: **C. Gerber**.—A gravimetric method of constant sensibility for the measurement of high altitudes: **Alphonse Berget**. The apparent variation of the weight of a body, passing from one altitude to another, is proportional to the difference of level of the two stations. This variation is of the order of $1/10,000$ for the height of the Eiffel Tower.—Rain and springs in Limousin in 1908: **P. Garrigou-Lagrange**.—The earthquake of December 28, 1908: **Alfred Angot**. A reproduction of the curve registered by the Milne seismograph at the Parc Saint-Maur Observatory is given.—The earthquake of December 28, 1908: **R. Cirera**. An account of observations made at Ebro.

DIARY OF SOCIETIES.

THURSDAY, JANUARY 14.
ROYAL SOCIETY, at 4.30.—The Yielding of the Earth to Disturbing Forces: **Prof. A. F. H. Love, F.R.S.**—The Relation of the Earth's Free Precessional Nutation to its Resistance against Tidal Deformation: **Prof. J. Larmor, Sec.R.S.**—Notes on Observations of Sun and Stars in some British Stone Circles. Fourth Note. The Botallack Circles, St. Just, Cornwall: **Sir Norman Lockyer, K.C.B., F.R.S.**—On the Depression of the Filament of Maximum Velocity in a Stream flowing through an Open Channel: **A. H. Gibson**.—On the Passage of Röntgen Rays through Gases and Vapours: **J. A. Crowther**.—On the Velocity of the Cathode Rays ejected by Substances exposed to the γ -Rays of Radium: **R. D. Kleeman**.
INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—The G. B. System from a Tramway Manager's Point of View: **Stanley Clegg**.
MATHEMATICAL SOCIETY, at 5.30.—The Canonical Form of a Linear Substitution: **H. Hilton**.—On the Solution of the Quintic: **J. Hammond**.—On Octavic and Sexdecimic Residuarity: **Lieut.-Col. A. Cunningham**.—On Change of the Variable in a Lebesgue Integral: **Dr. E. W. Hobson**.—On Abel's Extension of Taylor's Series: **Rev. F. H. Jackson**.—Note on the Evaluation of a Certain Integral containing Bessel's Functions: **Prof. H. M. Macdonald**.
FRIDAY, JANUARY 15.
INSTITUTION OF MECHANICAL ENGINEERS, at 8.—The Filtration and Purification of Water for Public Supply: **John Don**.
MONDAY, JANUARY 18.
ROYAL SOCIETY OF ARTS, at 8.—The Public Supply of Electric Power in the United Kingdom: **G. L. Addenbrooke**.
VICTORIA INSTITUTE, at 4.30.—Science and the Unseen: **Dr. A. T. Schofield**.

TUESDAY, JANUARY 19.
ROYAL INSTITUTION, at 3.—Albinism in Man: **Prof. Karl Pearson, F.R.S.**
ROYAL STATISTICAL SOCIETY, at 5.
INSTITUTION OF CIVIL ENGINEERS, at 8.—Further Discussion: High Speed on Railway-curves: **J. W. Spiller**.—A Practical Method for the Improvement of Existing Railway-curves: **W. H. Shortt**.
WEDNESDAY, JANUARY 20.
ENTOMOLOGICAL SOCIETY, at 8.—Annual General Meeting.
ROYAL MICROSCOPICAL SOCIETY, at 8.—Presidential Address, by **Lord Avebury**: On Seeds, with Special Reference to British Plants.
ROYAL METEOROLOGICAL SOCIETY, at 7.30.—Annual General Meeting.—Address on Some Aims and Efforts of the Society: **Dr. Hugh Robert Mill**.
THURSDAY, JANUARY 21.
ROYAL SOCIETY, at 4.30.—Probable Papers: Syntonic Wireless Telegraphy, with Specimens of Large-scale Measurements: **Sir O. Lodge, F.R.S.**, and **Dr. Alex. Muirhead, F.R.S.**—The Leakage of Helium from Radio-active Minerals: **Hon. R. J. Strutt, F.R.S.**—The Mobilities of the Ions produced by Röntgen Rays in Gases and Vapours: **E. M. Wellisch**.—On the Electricity of Rain and its Origin in Thunderstorms: **George C. Simpson**.—The Photo-electric Fatigue of Zinc, II.: **H. Stanley Allen**.
LINNEAN SOCIETY, at 8.—The Genus *Nototriche*, Turcz.: **Arthur W. Hill**.—The Longitudinal Symmetry of Centrospermeae: **Dr. Percy Groom**.
ROYAL INSTITUTION, at 3.—Mysteries of Metals: **Prof. J. O. Arnold**.
FRIDAY, JANUARY 22.
ROYAL INSTITUTION, at 9.—The World of Life: as Visualised and Interpreted by Darwinism: **Alfred Russel Wallace, O.M., F.R.S.**
PHYSICAL SOCIETY, at 5.

CONTENTS.

	PAGE
Construction and Use of Cranes. By F. C. L.	301
An Oxford Champion of Darwinism. By F. A. D.	302
Archæology in Greece. By H. R. Hall	303
Sylvester's Mathematical Papers. By G. B. M.	303
A Geography of Russia	304
Locomotive Engineering	305
Our Book Shelf:—	
Bruni: "Feste Lösungen und Isomorphismus."— H. M. D.	306
Owen: "The Economic Open-air Chalet for the Hygienic Treatment of Consumption and other Diseases."— R. T. H.	307
Kassowitz: "Welt-Leben-Seele. Ein System der Naturphilosophie in gemeinsamer Darstellung."— Lorentz : "Abhandlungen über theoretische Physik."— G. H. B.	307
Millard: "The Wonderful House that Jack Has"	307
Letters to the Editor:—	
Sequestered Church Property.— Francis Galton, F.R.S.	308
The Isothermal Layer of the Atmosphere.— Charles J. P. Cave	308
Magnesium in Water and Rocks.— Prof. Ernest H. L. Schwarz	309
Phosphorescence on a Scottish Loch.— Thos. Jamieson	309
The Movement of Water in Soils. (With Diagram.)— Dr. J. Walter Leather ; Dr. E. J. Russell	309
The Correlation of Teaching.— Charlie Woods ; Prof. John Perry, F.R.S.	310
An Electromagnetic Problem.— A. Core ; D. F. Comstock	310
The Anthropology of the Greenland Eskimo. (Illustrated.)	311
A Human Fossil from the Dordogne Valley. (Illustrated.) By H. O. F.	312
Black-water Fever	313
Animated Photographs in Natural Colours	314
Prof. H. G. Seeley, F.R.S. By R. L.	314
Notes	315
Our Astronomical Column:—	
Further Photographs of Morehouse's Comet	320
Search-ephemeris for Halley's Comet	320
The Distribution of Eruptive Prominences on the Solar Disc	320
Double-star Orbits	320
Errors in Measures of Star Images and Spectra	320
Physical Observations of the National Antarctic Expedition. (Illustrated.)	320
The North of England Education Conference	322
The Æther of Space. By Sir Oliver Lodge, F.R.S.	322
Science and the Practical Problems of the Future. By Prof. E. L. Nichols	325
University and Educational Intelligence	327
Societies and Academies	329
Diary of Societies	330