

relieved therefrom. In the former case it must be alternately raised and depressed from 30 inches below *b* up to that level. In the latter it must be raised and depressed from the level of *b* to 30 inches above it. Castor oil is a useful medium to prevent the passage of air between mercury and the glass vessels. It is important to add a little sulphuric acid to the mercury, in order to remove the film of water which adheres to the inside of the globe *b*. On this account it would, perhaps, be desirable to substitute a plug of glass for the indiarubber one between *a* and *b*.

PARIS

Academy of Sciences, Feb. 10.—M. de Quatrefages, president, in the chair. M. Faye read an answer to Fathers Secchi and Tacchini's criticism on his recent paper on the solar spots. With regard to the assertion of the former that the gyratory motion of solar cyclones must be small, he replied by proving that it must be at least five times that of the most violent terrestrial cyclones; he then proceeded to answer the other objections in detail, and quoted a recent letter from Mr. Norman Lockyer, in opposition to the Rev. Father's theory of the spots being eruptions. MM. Becquerel and E. Becquerel then read a note on the temperature of soils, bare, and covered with vegetation, during rainy seasons. The bare soils are always at a lower temperature.—M. Daubrée read a note on two meteorites which fell, one at Montlivant in 1838, and the other at Beust in 1859, and also a communication on a new arrangement of the meteorite collection in the Museum d'Histoire Naturelle.—M. des Cloizeaux read a note on the determination of the form of amblygonite crystals; and M. Trécul the third part of his paper on the carpellary theory of the *Papaveraceæ* (*Chelidonium Macleya*), and on the same subject as regards the *Fossiflora Laudoni*. These papers were followed by one by M. de Caligny on certain works used in canal navigation. Notes on vine sickness and Phylloxera were received from MM. Marès, de Luca, Fancon, Nourrigat, Jeanheury, and Madame Vivien Jaworsta. A letter from M. Is. Pierre on the density of absolutely pure alcohol was read.—M. Janssen was then elected to the astronomical section in succession to the late M. Laugier. Out of fifty-six votes he obtained forty-two, M. Loewy thirteen, and M. Wolff one. M. A. Cornu read a paper on a new determination of the velocity of light. His determinations agree well with those of Foucault.—A note on the electric resistance of metals was then read.—M. V. de Luynes sent a note on the annealing of glass.—MM. Rabuteau and Ducoudray one on the toxic properties of calcic salts. The authors state that metals are more poisonous as their atomic weights increase, and compare calcium with strontium and barium, both of which are poisonous to a considerable extent.—M. F. Papillon sent a second note on experimental researches on the modification of the composition of bone.—M. Champouillon one on the properties of silicate of soda, &c.—M. S. de Luca one on a stalagmitic body from the solfaterra of Pozzuoli.—Messrs. Lockyer and Seabroke sent a description of their method of observing the solar prominences with an annular slit; this was followed by a paper on the "Heat of Transformation," by M. J. Moutier; and one on the maximum resistance of galvanometers, by M. Th. du Moncel.—MM. Laussedat and Magnin sent a note on the use of the pocket aneroid and on a new hypsometric formula of great simplicity.—M. E. Bourgoin sent a paper on the action of bromine on di-bromosuccinic acid. The author has thus obtained a hydride of tetra-brominated ethylene.—M. F. Hamel sent a note on a new red colouring matter from aniline. The body in question is produced by acting on aniline with chloride of sulphur.—M. J. Carlet sent a description of a new osmometer.—M. Locari sent a paper on the presence of human bones in the osseous breccia of Corsica; and M. E. T. Hamy one on the age of the fossil men of Guadeloup.—M. W. de Fonvielle sent a description of a new lightning conductor. The session then adjourned.

DIARY

THURSDAY, FEBRUARY 20.

ROYAL SOCIETY, at 8.30.—On the Anatomy and Histology of the Land Planarians of Ceylon: H. W. Moseley.—On a new Locality of Amblygonite, and on Montebrazite, a new Hydrated Aluminium and Lithium Phosphate: A. O. Des Cloizeaux.
SOCIETY OF ANTIQUARIES, at 8.30.—Memoir and Funeral Expenses of James Montagu, Bishop of Winchester, A.D. 1618: E. P. Shirley.
LINNEAN SOCIETY, at 8.
CHEMICAL SOCIETY, at 8.—On Aurin: R. S. Dale and Dr. C. Schorlemmer.—Researches on the Action of the Copper-Zinc Couple on Organic Bodies.—I. On Iodide of Ethyl: Dr. Gladstone and A. Tribe.—Solidification of

Nitrous Oxide: Mr. Wills.—Action of Hydrochloric Acid on Codeine: Dr. C. R. A. Wright.
NUMISMATIC SOCIETY, at 7.
ZOOLOGICAL SOCIETY, at 4.

FRIDAY, FEBRUARY 21.

GEOLOGICAL SOCIETY, at 8.—Anniversary.
ROYAL INSTITUTION, at 9.—Action at a Distance: Prof. Clerk Maxwell.
ROYAL COLLEGE OF SURGEONS, at 4.—Extinct Mammals (Hunterian Lectures): Prof. Flower.
OLD CHANGE MICROSCOPICAL SOCIETY, at 5.30.—On the Internal Economy of Insects: T. Rymer Jones.

SATURDAY, FEBRUARY 22.

ROYAL INSTITUTION, at 3.—Comparative Politics: Dr. E. A. Freeman.

SUNDAY, FEBRUARY 23.

SUNDAY LECTURE SOCIETY, at 4.—The Skin; its Structure and Uses: A. Balmaine Squire.

MONDAY, FEBRUARY 24.

ROYAL GEOGRAPHICAL SOCIETY, at 8.—A Journey in Southern Formosa: J. Thomson.—Notes on Badakhshan and Waknan: The President.
LONDON INSTITUTION, at 4.—Physical Geography: Prof. Duncan.
ROYAL COLLEGE OF SURGEONS, at 4.—Extinct Mammals: Prof. Flower.

TUESDAY, FEBRUARY 25.

ROYAL INSTITUTION, at 3.—Forces and Motions of the Body: Prof. Rutherford.

WEDNESDAY, FEBRUARY 26.

LONDON INSTITUTION, at 7.—Lecture.
ROYAL COLLEGE OF SURGEONS, at 4.—Extinct Mammals: Prof. Flower.
SOCIETY OF ARTS, at 8.—Discussion on Lieut.-Col. A. Strange's Paper on "Ships for the Channel Passage."
GEOLOGICAL SOCIETY, at 8.—On the Jurassic Rocks of Skye and Rarassay: Dr. James Bryce.—Observations on the more remarkable Boulders of the North-West of England and the Welsh Borders: D. Mackintosh.—On the Origin of Clay-ironstone: J. Lucas.
ARCHAEOLOGICAL ASSOCIATION, at 8.
ROYAL SOCIETY OF LITERATURE, at 8.30.—Remarks on Early Monastic and other Seals attached to Charters in the Bodleian Library, Oxford: W. H. Turner.

THURSDAY, FEBRUARY 27.

ROYAL SOCIETY, at 8.30.
SOCIETY OF ANTIQUARIES, at 8.30.
ROYAL INSTITUTION, at 3.—Artificial Formation of Organic Substances: Dr. Armstrong.

BOOKS RECEIVED

ENGLISH.—Elementary Anatomy: St. C. Mivart (Macmillan).—Caliban the Missing Link: Dr. Wilson (Macmillan).—Recent Discussions in Science, Philosophy, and Morals: new edition: H. Spencer.—Science Primer, No. 4, Physical Geography: A. Geikie (Macmillan).—Key to North American Birds: E. Coues (Trübner). Exalted state of the Nervous System: R. H. Collyer (Renshaw).

AMERICAN.—What am I? Vol. i.: E. W. Cox (Appleton, New York).

FOREIGN.—Anwendung des Spectral apparatus: Dr. K. Vurdott (Asher).

PAMPHLETS RECEIVED

ENGLISH.—Annual of the Royal School of Naval Architecture, No. 3, Jzn. 1873.—Physical Condition of the Inland Seas.—Report of the Scientific Researches carried on during the months of Aug., Sept., Oct., 1871, in H.M. Surveying Ship *Shearwater*: W. B. Carpenter.—Science and Art Dept.: Babbage Calculating Machine.

FOREIGN.—Sitzung-Berichte Nat. Gel. Isis, Dresden, April to September 1872.

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ERRATA.—Vol. vii p. 280, 1st col. 3rd line from bottom, after *Myxosporangia*, insert and *Hydrozoa*: p. 289, 1st col., line 17 from bottom, for *hematoids* read *Nematoids*: p. 289, 1st col., line 11 from bottom, for '175 read $\frac{1}{2}$ th: p. 297, 1st col. line 4 from top, for *leucocytes* read *leucocytes*.