faults," as described in Mr. Geikie's "Text-Book of Geology," p. 532, which he concludes to be not merely local, but of general occurrence.—A standard of light, by John Trowbridge. Objections are raised to the standard adopted at the Paris Conference of 1881–4—that is, the light emitted by a surface of platinum at the point of solidification. A more satisfactory standard might be an incandescent strip of platinum radiating a definite amount of energy, this energy being measured at a fixed distance, which will best agree numerically with the absolute system of measures now universally adopted in heat and electricity.—On hanksite, a new anhydrous sulphato-carbonate of sodium from San Bernardino county, California, by W. Earl Hidden. This new Californian mineral has a density of 2·562, hardness 3·—3·5, and is readily soluble in water, yielding an abundant precipitate of barium sulphate when barium chloride is added to the solution. The author names it "hanksite," after Prof. Henry G. Hanks, whose name is so intimately associated with the mineralogy of the Pacific coast.—Mineralogical notes, by Edward S. Dana and Samuel L. Penfield. The chief subjects of this paper are the analysis of a large crystal of hanksite from California and an artificial crystallised lead silicate from the Desloge Lead Company, St. François County, Missouri.—On the amount of moisture which sulphuric acid leaves in a gas, by Edward W. Morley.—Local deflections of the Drift Scratches in Maine, by G. H. Stone. Traces of these indications of secondary glaciation have been observed, especially in the Sebasticook Valley, the Belfast and St. George River districts.—Successional relations of the species in the French Old Tertiary, by Otto Meyer. In these, as well as in the corresponding American formations, many animal and vegetable species can be traced along through the succeeding strata, the latter being apparently connected by descent with the earlier forms. The paper is accompanied by a comparative table of Lower, Middle, and Upper Eocene and Oligocene forms illustrating this principle.

The American Naturalist for August contains notices of some human remains found near the City of Mexico, by Mariano de la Barcena.—Evolution in the vegetable kingdom, by L. F. Ward.—The relations of mind and matter, by Charles Morris.—Affinities of Annelids to Vertebrates, by E. A. Andrews.—The use of copper by the Delaware Indians, by J. C. Abbott.—Notes of recent literature, &c.

Bulletin de l'Académie Royale de Belgique, June.—Note on some derivatives of tetrabromuretted hydrocamphene, by M. De la Royère.—On certain developments of algebraic series; the general formulas of these developments and their application to special cases, by M. J. Deruyts.—Researches on the action of a beam fixed at both ends and subjected to a movable overcharge, by M. G. Leman.—Questions of indeterminate analysis, by M. E. Catalan.—Note on the motions of the human brain, by M. Léon Frédéricq.—A new process of vivisection for the physiological study of the thoracic organs, by the same author.—On the optical properties of Ludwigite ($R_4FeB_2O_{10}$), by M. A. F. Renard.—Determination of the coefficient of compressibility for some fluids and of the variations of this quantity under different temperatures, by M. P. De Heen.

Rendiconti del Reale Istituto Lombardo, July 23.—On the causes and treatment of certain ophthalmic affections (preliminary note), by Dr. R. Rampoldi.—An exposition of the third paragraph of Riemann's memoir on the theory of the Abelian functions, by Prof. Giulio Ascoli.—Further researches on the neutralising agents of the tubercular virus, by Prof. G. Sormani and Dr. E. Brugnatelli.—Toxico-chemical affinities and differences of gelseminina and strychnine, by Dr. C. Raimondi.—On the phenomenon of etherification by double decomposition, by Prof. G. Bertoni.—The mental infirmities and last days of Torquato Tasso, by Prof. A. Corradi.—Note on an artistic palimpsest of the fourteenth century, by Prof. G. Mongeri.—Meteorological observations made in the Brera Observatory, Milan, for the month of July.

Rivista Scientifico-Industriale, July.—On the solar spots, their origin, nature, and harmless character, by Prof. Annibale Ricco.—Application of the telephone to the study of vibrating columns of gas, by Prof. Fossati.—A contribution to the study of etherification by double decomposition, by Prof. Giacomo Bertoni.—Geological constitution of Mount Vincigliata in the Fiesoli range, by C. del Lungo and R. Cocchi.

SOCIETIES AND ACADEMIES

PARIS

Academy of Sciences, September 28.—M. Bouley, President, in the chair.—Equilibrium of the moon, by M. F. Tisserand. In this paper calculations are submitted in support of M. Ch. Simon's theory, supplemented by M. Poisson, that, neglecting the excentricity of the lunar orbit, the axis of rotation is displaced in the interior of the moon in such a way as constantly to oscillate in the plane perpendicular to the main axis directed towards the earth.—Note on earthquakes, by M. A. d'Abbadie. The author gives an account of the seismic movements observed by him last winter in Egypt, where the seismograph was exceptionally active. He urges a systematic study of these phenomena in France, such as has already been commenced by M. E. de Rossi in Italy, and by Mr. Milne in Japan.—Researches on the nitric cellulose substances (gun cotton, &c.), by M. Ch. Er. Guignet. The constituents and properties are described of the four distinct nitric cellulose bodies hitherto determined, all of which may be regarded as derivatives of the cellulose $C_{48}H_{40}O_{40}$, where 4eq., 6eq., 8eq., or 10eq. of water are replaced by the same number of equivalents of hydrated nitric acid.—Memoir on the treatment of phylloxera by means of the organic sulphurs and the polysulphides of ammonium obtained by dissolving powdered sulphur in the night-soil of cesspools, by M. J. Jullien. This treatment is described as inexpensive, thoroughly efficient, and applicable to every description of soil.—Note on an unpublished document by Sergio Venturi, dated February 26, 1610, on the invention and the theory of the telescope, recently edited by M. G. Govi. This letter, addressed by the writer to the Marquis John Baptist Manso at Naples, is specially interesting as being anterior to the earliest publications of Galileo on the telescope which had just been invented by Lippersheim in Holland.—Note on the separation of liquefied atmospheric air into two distinct fluids, by M. S. Wroblewski.—Description of two new types of condensing hygrometers, by M. Georges Sire. The essential character of these hygrometers is that the moisture is precipitated on a bright metallic surface without solution of continuity. Perfect equality of temperature is secured in both instruments by the agitation of the volatile fluid and the thinness of the walls of the cylindric tube.—Genesis of the crystals of sulphur in square tables (five illustrations), by M. Ch. Brame. The author's experiments on the genesis of the square tables of sulphur show the direct passage from the curve to the straight line in the development of these crystals.—Morphology of the mandibule of the hymenoptera, by M. Joannès Chatin. This organ of the hymenopteræ is shown to be perfectly analogous in all its parts to that of the grinding insects.—Note on the application of thermo-chemistry to the explanation of geological phenomena, continued; iron ores, by M. Dieulafait.

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