Schlœsing. Reply, by M. Berthelot.—On the laws of compressibility of liquids, by M. E. H. Amagat. Deformations of the piezometers were investigated and allowed for in these experiments, and the pressures carried as far as 3000 atmospheres. The liquids operated upon were ether, alcohol, carbon bisulphide, acetone, the ethyl halides, and chloride of phosphorus. In every case the coefficient of compressibility was found to decrease regularly as the pressure increased. At 3000 atmospheres that of water was reduced by nearly one-half its ordinary value, that of ether by two-thirds. This diminution again is greater the higher the temperature. The ratio of the difference of the coefficient to the corresponding difference of temperature, $\frac{\Delta\mu}{\Delta t}$, increases rapidly with the temperature, and decreases rapidly as the pressure increases. The value of $\frac{1}{\mu}\frac{\Delta\mu}{\Delta t}$ also diminishes rapidly as the pressure increases; but whilst for alcohol it grows decidedly with the temperature, for ether it seems sensibly independent of it. It is probable that the ratio passes through a maximum at a certain temperature.—Observation of the comet Barnard (October 12), made at the Algiers observatory with the *equatorial coudé*, by M. F. Sy.—Elliptic elements of the comet Barnard, by M. Schulhof. Discussing the probabilities of the new comet being identical with, or a part of, the comet Wolf, which was subjected to considerable perturbations by Jupiter in 1875.—On the equations of dynamics, by M. R. Liouville.—On the solution of the ballistic problem, by M. E. Vallier.—Displacements of a magnet on mercury under the action of an electric current, by M. C. Decharme. If a light magnetic needle be floated on a bath of perfectly pure mercury, and conductors carrying a current be dipped into the mercury at different places, the needle will, before assuming the position of equilibrium according to Ampère's law, go through a series of excursions, rendered necessary by the difficulty of its motion, perpendicular to its length. If the current crosses the mercury in a direction perpendicular to the length of the needle for instance, with the negative pole of the current on the left of the south-seeking pole, the needle will move away parallel to itself, will turn round, and return to take up the normal position.—On the temperature of maximum density of mixtures of alcohol and water, by M. L. de Coppet. The lowering of the freezing-point in solutions of alcohol is sensibly proportional to the quantity of alcohol, in confirmation of Blagden's law. But the lowering of the temperature of maximum density is not proportional to the percentage of alcohol. For weak solutions there is no lowering, but rather an elevation of the temperature of the maximum.—On the dissociation of barium dioxide, by M. H. Le Chatelier.—On a limited reaction, by M. Albert Colson.—On the fixation of free nitrogen by plants, by MM. Th. Schlœsing, jun., and Em. Laurent.—Purification of drain waters by ferric sulphate, by MM. A. and P. Buisine.—Experiments on bread and biscuit, by M. Balland.—Ptomaïnes extracted from urines in erysipelas and puerperal fever, by M. A. B. Griffiths.—Hermerythrine, a respiratory pigment contained in the blood of certain worms, by M. A.-B. Griffiths.—Morphology of the skeleton of the star fish, by M. Edm. Perrier.—The secreting apparatus of the *Copaifera*, by M. Léon Guignard.—New observations on sexuality and parasitic castration, by M. Ant. Magnin.—A possible cause of the doubling of the canals of Mars; experimental imitation of the phenomenon, by M. Stanislas Meunier.—Devonian and permio-carboniferous of the Aspe valley, by M. J. Seunes.—A short account of the voyage of the *La Manche* to Iceland, Jan Mayen, and Spitzbergen during the summer of 1892, by M. Bienaimé. The maps of Jan Mayen were found to be very accurate, those of Spitzbergen much less so. The barometric changes in Iceland, Jan Mayen, and the Faroes agreed strikingly with those of Great Britain and Scandinavia, while those of Spitzbergen were of a particular order. Pendulum observations gave $g=9{\cdot}82345$ for Jan Mayen, and $9{\cdot}82866$ for Spitzbergen.—Eruption of Etna of 1892, by M. A. Ricco.—The analysis of complex odours, by M. Jacques Passy. Proceeding from very small doses, say of amyl alcohol, two different perfumes will be perceived to increase and then diminish in succession, finally giving way to an odour which soon becomes disagreeable as it increases in strength. The transition from perfume to unpleasant odour is very general in volatile substances.—Immunity against cholera conferred by milk, by M. N. Ketscher.—A new apparatus for hypodermic injections, by M. G. Baÿ.

BOOKS, PAMPHLETS, and SERIALS RECEIVED.

BOOKS.—A Text-book of Magnetism and Electricity: R. W. Stewart (Clive).—Public Health Problems: J. F. J. Sykes (Scott).—An Elementary Manual on Applied Mechanics: Prof. A. Jamieson (Griffin).—Mind in Matter, 3rd edition: Rev. J. Tait (Griffin).—Arthur Young's Tour in Ireland, 2 vols.: edited by A. W. Hutton (Bell).—Text-book of Elementary Biology: Dr. H. J. Campbell (Sonnenschein).—The Volcanoes of Japan, Part 1, Fujisan: J. Milne and W. K. Burton (Low).—Strange Survivals: S. Baring-Gould (Methuen).—Finger Prints: F. Galton (Macmillan).—Modern Mechanism: edited by P. Benjamin (Macmillan).—Catalogue of Eastern and Australian Lepidoptera Heterocera in the Collection of the Oxford University Museum: Part 1, Sphinges and Bombyces: Col. C. Swinhoe (Oxford, Clarendon Press).—An Introduction to the Study of Botany: A. Dendy and A. H. S. Lucas (Melville).—Hydrostatics and Elementary Hydrokinetics: Prof. G. M. Minchin (Oxford, Clarendon Press).—New Vegetarian Dishes: Mrs. Bowdich (Bell).—British New Guinea: J. P. Thomson (Philip).—Autres Mondes: A Guillemin (Paris, Carré).—Stéréochimie: J. H. Van't-Hoff (Paris, Carré).—Théorie Mathématique de la Lumière, II.: H. Poincaré (Paris, Carré).—Traité de Mécanique: V. Jamet (Paris, Carré).—In Savage Isles and Settled Lands: F. S. Baden-Powell (Bentley).—Stanford's Contoured Map of the County of London (Stanford).—Naked-Eye Botany: F. E. Kitchener (Percival).—Geometrical Drawing: A. J. Pressland (Percival).—Practical Physics, Part 1, Physical Processes and Measurements; the Properties of Matter: Prof. Barrett and W. Brown (Percival).—Beetles, Butterflies, Moths, and other Insects: A. W. Kappel and W. E. Kirby (Cassell).—The Principal Starches used as Food: W. Griffiths (Cirencester, Baily).—Charles Darwin: F. Darwin (Murray).—University College, Nottingham, Calendar, 1892–93 (Nottingham, Sands).—Proceedings and Transactions of the Royal Society of Canada, 1891 (Montreal, Dawson).

PAMPHLETS.—Report on the Operations of the Department of Land Records and Agriculture, Madras Presidency, 1890-91 (Madras).—Entwurf einer Neuen Integralrechnung: Dr. J. Bergbohm (Leipzig, Teubner).—Leaves from the Book of Nature: L. Piers (Ridgway).—Fossil Mammals of the Wahsatch and Wind River Beds, Collection of 1891: H. F. Osborn and J. L. Wortman.—Present Problems in Evolution and Heredity: H. F. Osborn.—Revision of the Species of Coryphodon: C. Earle.

SERIALS.—Quarterly Journal of the Geological Society, November (Longmans).—Festschrift zur Feier des 150 Jaehrigen Bestehens der Naturforschenden Gesellschaft in Danzig am 2 Jan.' 1893 (Danzig).—Schriften der Naturforschenden Gesellschaft in Danzig, Neue Folge, Achten Bandes, Erstes Heft (Danzig).—Notes from the Leyden Museum, vol. xv. No. 1 (Leyden, Brill).—Journal of the Chemical Society, November (Gurney and Jackson).—Mitteilungen des Vereins für Erdkunde zu Halle a/s 1892 (Halle a/s).—Medical Magazine, November (Southwood).

CONTENTS.