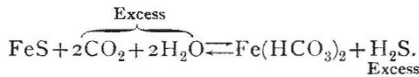


cases the time taken to attain the maximum value of fatigue with the transverse field was about double that with the longitudinal field.—Prof. E. A. Letts: The chemistry of foul mud deposits. The sulphides and carbonates usually present in foul mud deposits are those of iron, calcium, and, more rarely, magnesium and sodium. It has been stated, but also denied, that the action of hydrogen sulphide on carbonates, and the opposite, namely, that of carbon dioxide on sulphides, is a reversible reaction, e.g.:



In the first part of their paper the authors prove that the actions are reversible. The second part of the paper deals with actual analyses of foul mud deposits before and after keeping.—E. J. Sheehy: Abnormality in arterial arches in a rabbit. The right subclavian artery is absent. A blood-vessel which originates from the aorta behind the left subclavian runs dorsal to the oesophagus and trachea, and appears on the right side, where it serves as a subclavian, i.e. it branches into the right vertebral artery and blood-vessels to the arm. The recurrent laryngeal nerve associated with the abnormal blood-vessel is quite normal, even though the vessel which it usually embraces is absent. Persistence of an unusual portion of the embryological blood system, namely, the right descending aorta, explains this exceptional condition, and the normal position of the recurrent nerve suggests that the nervous system was well developed previous to the obliteration of the embryonic arches.

#### PARIS.

**Academy of Sciences, December 4.**—M. Camille Jordan in the chair.—W. Kilian and J. Révil: Discontinuities of sedimentation and the levels of the breccias in the French Alps.—W. Sierpinski: The rôle of Zermelo's axiom in modern analysis.—G. Julia: The forms of Dirichlet and the loxodromic substitutions of the Picard group.—M. Brillouin: Fundamental solution in a heavy liquid with free surface.—M. Baticle: The calculation of thick arches submitted to uniform pressure.—B. Globa-Mikhailenko: A new figure of equilibrium of a fluid mass in rotation.—L. Roy: The problem of the wall and its application to the discharge of a condenser on its own dielectric.—L. Gentil: The "Trouée de Taza," northern Morocco. The Miocene deposits found at Taza confirm the view put forward in earlier papers, that there was communication between the Mediterranean and the Atlantic during the Neogene epoch, the narrowest point being at the gap of Taza.—J. Boussac: The existence, between Modane and the Col de Chavière, of a *fenêtre* showing the Trias under the Permian.—P. de Sousa: The earthquakes of the eighteenth century in the neighbourhood of the oval Lusitania-Spain-Morocco depression.—F. Baco: Variations of a sexual hybrid of the vine by grafting on one of its parents.—C. Sauvageau: A *Laminaria* new for the French coast, *Laminaria Lejolisii*.—J. Georgévitch: The various forms of *Ceratomyxa Herouardi*.—A. Lumière and E. Astier: Tetanus and frost-bite. Evidence that precautions against tetanus should be taken in cases of lesions caused by frost-bite.—A. Arnoux: The mechanical protection and preservation of eggs. The newly laid egg is wrapped up in layers of a material impregnated with a solution of sodium silicate, and air-dried for twelve hours. The preservative properties of the alkaline silicate are well known. The above method of applying it gives mechanical strength; the treated eggs can be allowed to roll down a flight of stairs without breaking.

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#### BOOKS RECEIVED.

**Fertilizers.** By the late Dr. E. B. Voorhees. Revised edition by J. H. Voorhees. Pp. xv+365. (New York: The Macmillan Co.; London: Macmillan and Co., Ltd.) 6s. 6d. net.

**The Fauna of British India, including Ceylon and Burma.** Coleoptera, Rhynchophora, Curculionidæ. By Dr. G. R. K. Marshall. Pp. xv+367. (London: Taylor and Francis.) 15s.

**A Memoir on British Resources of Sands suitable for Glass-making.** By Dr. P. G. H. Boswell, with Chemical Analyses by Dr. H. T. Harwood. (London: Longmans and Co.) 1s. 6d.

**The Principles of Electric Wave Telegraphy and Telephony.** By Prof. J. A. Fleming. Third edition. Pp. xvi+911. (London: Longmans and Co.) 30s. net.

**The "Wellcome" Photographic Exposure Record and Diary, 1917.** Northern Hemisphere and Tropical Edition. Pp. 256. (London: Burroughs, Wellcome and Co.) 1s.

#### DIARY OF SOCIETIES.

**TUESDAY, JANUARY 2.**  
RÖNTGEN SOCIETY, at 8.15.—A Spectroscopic Investigation of Some Sources of Ultra-violet Radiation in Relation to Treatment by Ultra-violet Rays: C. A. Schunk.

**SATURDAY, JANUARY 6.**  
GEOLOGISTS' ASSOCIATION, at 3.—The Age of the Chief Intrusions of the Lake District: J. F. N. Green.—The Ibex-zone at Charmouth: W. D. Lang.

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