SCIENTIFIC SERIALS

THE *Journal of Mental Science*, October 1874.—This number opens with the address of Thomas Laws Rogers, M.D., president at the annual meeting of the Medico-Psychological Association, Aug. 6, 1874. His object was to procure a fixed meaning for the terms "restraint" and "seclusion," and the clear sense and practical aim of his remarks present a sharp contrast to the rather wandering discussion which followed.—Dr. J. Batty Tuke has a paper on a case in which the clinical history and *post-mortem* examination will, he thinks, support its being designated one of syphilitic insanity.—Dr. Daniel Hack Tuke writes about the Hermit of Red-Coat's Green, and finds him insane, an opinion from which there is little room for dissent. Probably also it would have been well had he individually "been put under the protection of the Lord Chancellor and the inspection of his visitors;" it "would have been better for the neighbourhood, better for his family, and better for the Hermit of Red-Coat's Green himself." But could not those very considerations be urged, and often with greater force, in favour of a curtailment of the liberty of thousands of frivolous, reckless, immoral persons, who are a far greater pest to their family and neighbourhood than poor Lucas was after he became the hermit?—Dr. H. Hayes Newington contributes a thoughtful paper On different forms of stupor.—In an interesting article on the mental aspects of ordinary disease, Dr. J. Milner Fothergill obtrudes his materialism in a way that will be distasteful to many, while to others the thing itself will appear shallow. Thought "is the product of the combustion of what was originally food." The brain of "Robbie Burns transmuted his oatmeal porridge into Tam O'Shanter."—In reviewing Dr. Maudsley's "Responsibility in Mental Disease," Mr. J. Burchell Spring, chaplain to the Bristol Lunatic Asylum, while doing justice to the ability of the work, seems to have the advantage of the author in matters of history. He very cleverly cuts away the ground from under Dr. Maudsley's rather uncalled-for assertion that the brutal treatment of the insane "had its origin in the dark ages of Christian superstition."

Journal de Physique, tome iii., No. 33, September.—This number commences with a description of the "phonoptometer" by M. J. Lissajous. This apparatus consists of an ordinary terrestrial telescope, of which the eye-piece is broken across, and the third lens from the eye (the one which inverts the image formed by the objective) attached to the prong of a tuning-fork. The lens is thus capable of vibrating in a vertical plane, the vibrations of the fork being maintained by an electro-magnet and contact-breaker. The telescope being directed to a distant object presenting a brilliant point, and the electro-magnet put into action, the point becomes a luminous vertical line if at rest, but if vibrating in a direction transverse to that of the motion of the lens, then the composition of the two movements gives rise to the well-known optical sound figures. The author claims for this ingenious instrument the power of determining the velocity of a luminous point on its trajectory, such as luminous projectiles, bolides, &c.—Theory of the phenomena of diffraction observed to infinity or in the focus of a lens, by M. J. Joubert.—On the mutual influence which two bodies vibrating in unison exercise upon one another, by M. A. Gripon. The author describes several experiments illustrating this remarkable action, employing for the purpose collodion membranes, which vibrate in unison with the column of air in the resonance boxes of tuning-forks, organ-pipes, &c. A small pendulum composed of a pith ball suspended by a thread of cotton is attached to such a membrane, and the system is then brought near the resonant case of a vibrating fork, with which the membrane is capable of vibrating in unison. The membrane vibrates strongly when at a distance of one metre, but when brought to within four or five centimetres of the mouth of the case, the sound of the latter undergoes a considerable weakening, and the pendulum of the membrane is scarcely moved. If the vibrations of the fork have but small amplitude, the proximity of the membrane to the resonant case extinguishes the sound altogether. None of these effects are produced if the membrane is not capable of vibrating in unison with the fork. If a membrane of a lower note is placed in front of the case and a current of warm air directed upon it, the weakening of the sound only occurs when the note of the fork is reached. Arrangements for repeating the experiments with organ-pipes are also described.—Graphic representation of the constants of voltaic elements, by M. A. Crova.—Some experiments concerning the effects of magnetism on the electric discharge through a rarefied gas when the discharge occurs in the prolongation of the axis of the magnet, by MM. Auguste De la Rive and Edouard Sarasin. The authors employed in this research a columnar electro-magnet. The tube through which the discharge is transmitted rests on the upper extremity of the magnet, the line of electrodes being a prolongation of the axis of the magnet. Various gases sealed up in Geissler tubes have been experimented with, the discharge from a Ruhmkorff coil being allowed to traverse the gas. Changes occur in the appearance of the luminous discharge where the magnet is excited, these changes being accompanied by a change in the resistance offered to the current by the gas. Thus a tube containing hydrogen permitted the passage of an induced current marking 25° on the galvanometer when the magnet was not excited, but when excited the galvanometer reading was 40°. It seems to be a law that the augmentation in the intensity of the current is greater with a gas which is a good conductor than with one which is an inferior conductor of electricity. The authors confine themselves in this paper to a description of the facts without entering into theoretical considerations.—The number concludes with three papers reprinted from *Poggendorff's Annalen*: On the stroboscopic determination of the intensity of sounds, by E. Mach; Researches on magnetisation, by Holz; O. E. Meyer and F. Springmuhl, On the internal friction of gases.

Zeitschrift der Œsterreichischen Gesellschaft für Meteorologie, Oct. 15.—In an article on the state of development or forwardness of vegetation in Italy compared with that of Giessen, in Germany, Prof. H. Hoffmann expresses his regret that for the greater part of Italy we possess no observations of the kind to which he wishes to direct attention. A knowledge of the relative state of vegetation at many different places would help invalids to the choice of a residence congenial to them, and dispel the false estimates of Italian climate now so common. In the course of a rapid visit to Italy in March and April, 1874, he took a number of observations, and compared them on his return to Giessen with like observations simultaneously taken at that place. The weather was fortunately fine and fairly uniform over Central and Southern Europe during the period of his travels. The average state of vegetation in open situations can be roughly calculated under normal conditions by reckoning for every degree southwards an advance of $3\frac{3}{4}$ days. Direct observation shows this rule generally to hold good. Rome is 8° south of Giessen, Naples 9°; this gives, at the rate above mentioned, an advance for Rome of 30, for Naples of 34 days. On looking at the map which accompanies Prof. Hoffmann's paper, we find the real difference to have been for Naples 35, for Rome 23; and so with many other places in Italy. If we have the number of days' advance in the spring, by doubling it we obtain the relative length of summer, or the period of vegetation. The Riviera di Porrente is quite abnormal, having a warm and early spring. Prof. Hoffmann's method consisted in taking the mean of the number of days' advance before Giessen, of the bursting into leaf or flower of several common kinds of trees in a certain place, and making this number the criterion of climate. In conclusion, he affirms that the extended observation of a single species of tree in the above manner, with regard also to the time of first fruits, would give us a new insight into comparative climatology, and that after various species had been so dealt with, maps might be made, exhibiting for each month a fair example in the development of one of these species. A list of the plants observed is appended. Among the *Kleinere Mittheilungen*, in a communication from Dr. Hildebrandtson, director of the Meteorological Department of Upsala Observatory, we find that he arrives at results similar to those of Mr. Ley respecting the movements of cirrus, this cloud appearing to move away from the centre of a cyclone and towards the centre of an anticyclone.

SOCIETIES AND ACADEMIES

MANCHESTER

Literary and Philosophical Society, Oct. 20.—Edward Schunck, F.R.S., president, in the chair.—E. W. Binney, F.R.S., stated that he had been so fortunate as to find a specimen of *Stigmaria* which he exhibited to the Society, from the bullion coal at Clough Head, near Burnley, having the medulla perfectly preserved.—Mr. R. D. Darbishire, F.G.S., exhibited and described the Palæolithic (French and English drift) implements collected

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