

Journal of the Franklin Institute, August.—Boiler explosion in Philadelphia in June, by W. B. Le Van.—Auchincloss's averaging machine.—Radodynamics II., by P. E. Chase.—The properties of air relating to ventilation and heating, by R. Briggs.

Annalen der Physik und Chemie, No. 8.—Experimental investigation of the tones which arise in passage of gases through slits, by W. Kohlrausch.—On the observation of air-vibrations in organ-pipes, by R. König.—On the conductivity of metals for heat and electricity (continued), by L. Lorenz.—On the application of photometry to the study of the phenomena of diffusion in liquids, by S. v. Wroblewski.—Experimental contribution to the theory of influence-machines, by W. Holtz.—On the development of polar electricity in hemimorphous crystals by variation of pressure in the direction of the unsymmetrically formed axes, by W. Hankel.—On the decomposition of water on platinum electrodes by discharge of Leyden jars, by F. Streintz.—On the resistance of polarised cells, by E. Cohn.—On the phenomena in Geissler tubes under external action, by E. Reitlinger and H. v. Urbanitzky.—Note on the maximum of temporary magnetism in soft iron, by C. Fromme.

La Nature, August.—The air-barometer, by Prof. Ferrini. The electro-photometer of Dr. Nachs.—On the electric phenomena of Canton's jar, by Prof. Righi.—On the origin of electricity in storm-clouds and atmospheric air, and on electricity in general, by Dr. Nachs.—On the direction of sounds and the object of double hearing, by Prof. Pinto.

Journal de Physique, August.—Researches on the capacity of polarisation (continued), by R. Blondlot.—Discharge of a condenser, and energy of telephonic currents, by H. Pellat.—On a new interrupter for induction-coils, by M. Deprez.—Note on the registering instruments of MM. Richard frères.

Bulletin de l'Académie Royale des Sciences de Belgique, No. 6.—Note on a new dolphin of New Zealand, by M. van Beneden.—A word on some new infusoria parasitic on Cephalopoda, by M. Foettinger.—Study on the hypophysis of Ascidians and the neighbouring organs (second paper), by M. Julin.—Note on the fossiliferous Porphyroids met with in Brabant, by M. Poussin.

Reale Istituto Lombardo di Scienze e Lettere. Rendiconti, Vol. xiv, fasc. xii., xiii.—Researches on the phenomena of sense, motion, circulation, and respiration in hypnotism, and on their modification by aesthesiogenic agents, by Prof. Tamburini and Dr. Sepilli.—On some products of transformation of chinoline, by Prof. Körner.—Theorem on linear systems in projective measurements, by Prof. D'Ovidio.—Consequences of pachymeningitis and hematoma of cerebral membranes, by Prof. Sangalli.—Fasc. xiv.—On the small volcano of Quetzola in the province of Reggio, by S. Taramelli.—On the resistance to passage of the voltaic current in an iron wire at different temperatures, by Dr. Poloni

Rivista Scientifico-Industriale, July 1 and 15.—Determination of vapour density, by Dr. Valente.—Palaeontological peregrinations in the Pliocene of Mount Falcone Apennino, in the province of Fermo (Marche), by Prof. Spada.—On determination of the electromotive force of the Voltaic couple by Fuchs' method, by Dr. Guglielmo.

SOCIETIES AND ACADEMIES
PARIS

Academy of Sciences, September 5.—M. Wurtz in the chair.—The following papers were read:—The direct-vision spectroscopy applied to physical astronomy, by M. Zenger. One may (as before shown) compound refringent media whose index for the red ray A is less than that of crown glass or quartz, while the index for the violet ray H is much greater. The spectrum so produced is fan-shaped, and, with a single dispersion parallelepiped (two similar prisms with their refringent angles opposite), may be made of considerable length (25° and more). With one arrangement all the rays, except blue or red, may be eliminated, and the sun, e.g., viewed in monochromatic light. M. Zenger specifies various combinations of quartz or crown glass with anethol, benzene, alcohol, &c. He obtains effects equal to those of the most powerful spectroscopes hitherto made.—Influence of nutrition on poisoning with strychnine, by M. Delaunay. Strychnine affects more quickly and intensely strong frogs than weak ones; frogs well fed than those which

have been fasting; frogs that have been in vigorous exercise than those at rest; frogs that are exercised immediately after injection than those which are not; a frog hung by the leg than one hung by the head; an intact frog than one which has been bled; the right side of frogs than the left, &c.—Observations of Cruls' comet (b 1881) at Marseilles Observatory, with an equatorial of 0.26 n. aperture, by MM. Borelly and Coggia.—Observations of Schäberle's comet (c 1881) in the same way and place, by M. Coggia.—Observations of Encke's comet, by M. Tempel. He observed it on the 21st ult. A letter from M. Loewy stated that M. Struve found it on the 24th (MM. Winnecke and Hartwig at Strasburg about the same time). The comet (according to M. Tempel) was large, but very diffuse, without nucleus or condensation towards the centre, and so, very difficult to observe.—On the light of comets, by M. Respighi. He considers we are not yet in a position to say that comets have a light of their own, due to incandescence of cometary matter. The discontinuity of the spectrum, and the bright lines and bands, may arise from reflected light as affected in traversing the gases and vapours of the comet; the same cause as affects the spectrum of the sun when near the horizon. Only the phenomenon is exaggerated in comets by reason of the enormous thickness of the absorbent layers, their richness of chemical composition, and the weakness of the light they reflect to us.—On observations of meteors from July 25 to 30, 1881, by M. Cruls (Rio). More than 90 per cent. of the meteors seemed to radiate from near Fornalhaut. The hourly average increased rapidly between the evening and morning hours, and there was a remarkable recrudescence shortly before sunrise. It would thus seem that the stream of meteors moves in opposite direction to the earth. This is corroborated by the fact that the morning meteors, especially after 5 a.m., all moved with great velocity, and were very brilliant. They were all sensibly displaced in the plane of the ecliptic; their direction is probably very little inclined to this plane.—On ferruginous carbonated waters, by M. Ville. Neutral alkaline carbonates precipitate such water immediately; neutral alkaline earthy carbonates also have this effect, but more slowly. Alkaline and alkaline-earthly bicarbonates do not alter ferruginous water. Chlorides and sulphates sensibly retard the decomposition of ferruginous water in air. The disturbing influence of neutral alkaline carbonates may explain the relation between the richness of ferruginous carbonated waters and the presence of these saline compounds. The action of neutral carbonate of calcium explains the existence of considerable beds of limonite in calcareous strata.—On absorption by the vesical mucus, by MM. Cazeneuve and Lépine. The sound bladder absorbs the normal elements of urine. Certain toxic or medicamentary substances (e.g., sulphate of strychnine) are not absorbed.—On experimental tuberculosis, by M. Brunet.

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