

associated with a differential equation of the first order.—G. **Valiron**: The theorem of M. Picard and the generalisations of M. Borel.—M. **d'Ocagne**: The distribution of curvatures round a point on a surface.—J. **Villey**: Explosion motors for rarefied atmospheres. Five methods are classified by means of which a normal motor may be made more effective at high altitudes.—G. **Claude**: The advantages of the synthesis of ammonia at very high pressures. At 1000 atmospheres the number of passages of the gaseous mixture over the catalyst necessary for complete combination can be reduced to three, and, as a consequence, the volume of the part of the apparatus containing the catalyst can be reduced to at least one-tenth of that currently in use in German practice. At this pressure the ammonia formed can be liquefied out by simply cooling with water.—W. A. **Noyes, jun.**: Polarisation in iron solutions. The Nernst formula does not apply to the polarisation of iron solutions, but indicates values proportional to the experimental values.—C. **Matignon** and E. **Monnet**: The reversible oxidation of sodium nitrite. Sodium nitrite heated to about 500° C. with oxygen under pressure (175 atmospheres) is almost completely oxidised to the nitrate. The reaction is slow, but possibly a suitable catalyst may make the reaction of practical interest in the synthetic nitrate and nitrite industry.—G. **Chaudron**: The reversible reaction between steam and molybdenum.—F. **Kerforne**: Some observations on the Redonian sea of Brittany.—L. **Couégnas**: Contribution to the study of the Argentat fault between Eymoutiers and Treignac.—H. **Coupin**: The causes of the elongation of the stem of etiolated plants. Plants grown in the dark in water containing the juice extracted from green plants do not have elongated stems, but resemble seedlings grown in the light.—E. **Gain** and A. **Gain**: The thermal differences of opposite sides of a lacustral valley.—A. **Guilliermond**: The evolution of the chondriome in the plant-cell.—R. **Mirande**: Alum carmine and its use, combined with iodine green in plant histology. Alum carmine should be considered as a stain for pectic materials, and not for cellulose, as usually believed.—G. **Mangenot**: The evolution of the chondriome and plasts in *Fucus*.—G. **Arnaud**: The family of the Parodiellinaceæ.—A. **Marie** and L. **MacAuliffe**: The anthropometric study of 136 natives of Tunis.—J. **Pellegrin**: The sub-fossil fish strata of the Tchad low country and their significance.—J. **Legendre**: The food of the Madagascan perch.

January 26.—M. Henri Deslandres in the chair.—Y. **Delage**: An integrating Pitot tube for measuring the average velocity of variable currents. The instrument, a diagram of which is given, is based on the measurement of the water flowing from the upper end of the Pitot tube at the sea-level.—F. **Widal** and P. **Vallery-Radot**: Anaphylaxy due to antipyrin after a long phase of sensibilisation. The case described had taken antipyrin monthly for nine years before any trouble arose, then each dose of antipyrin produced definite effects, localised in the lips. After seven years without this drug, antipyrin immediately reproduced the same symptoms. The treatment by which this anaphylactic state was cured, following the method of Pagniez, is described.—J. **Andrade**: The photographic measurement of rolling resistance.—L. and E. **Bloch**: A spectroscopic arrangement for the study of the extreme ultra-violet. The prism and lenses are made of fluorspar, and air absorption is prevented by maintaining the whole apparatus in a high vacuum (0.001 mm.) by means of a Gaede pump. Spark spectra of several metals have been photographed with apparatus down to a wave-length of 1550 Angström units.—E. **Wourtsel**: The velocity of oxidation

of nitric oxide. The oxidation of nitric oxide by oxygen is a reaction of the third order, and the course of the reaction undergoes no sudden modification when half the nitric oxide is oxidised. The velocity of the reaction diminishes as the temperature rises.—C. **Matignon** and Mlle. G. **Marchal**: Some properties of sodium nitrite. Determinations of the melting point (276.9° C.), heat of solution, heat of neutralisation, heat of formation, and action on colouring matters. An aqueous solution of sodium nitrite at 100° C. in oxygen at 50 to 55 atmospheres remained unoxidised during five or six hours. Platinum black is without action as a catalyst.—A. **Kling**, D. **Florentin**, and E. **Jacob**: The properties of the chlorinated methyl carbonates. All nine possible chlorine substitution products of methyl carbonate have been prepared, and their physical properties are given in a table.—G. **du Bellay** and M. **Houdard**: The chemical properties of humus and their utilisation for the protection of combatants against asphyxiating gases. Filtration of air through about 60 cm. of earth containing humus can protect against chlorine and phosgene for several hours.—P. **da Souza**: Contribution to the lithological study of the interior of Angola.—F. **La Porte**: The beaches of Gâvre and Penthievre (Morbihan).—E. **Mesnard**: Lunations and rainy periods.—Ch. **Dufour**: Values of the magnetic elements at the Val-Joveux Observatory on January 1, 1920.—E. **Surgis**: Contribution to the study of the Frankeniaceæ.—A. **Vandel**: The development of the copulating apparatus in the Planaria is under the control of the genital glands.—L. **Léger**: Young fresh-water stages and biology of the marine lamprey.

#### BOOKS RECEIVED.

- Peat Industry Reference Book. By F. T. Gissing. Pp. xxiv+292. (London: C. Griffin and Co., Ltd.) 7s. 6d.
- Airman's International Dictionary, including the most Important Technical Terms of Aircraft Construction. English, French, Italian, German. By M. M. Dander. Pp. vii+227. (London: C. Griffin and Co., Ltd.) 6s.
- Contributions to the Genetics of *Drosophila melanogaster*. By T. H. Morgan and others. Pp. v+388+12 plates. (Washington: Carnegie Institution of Washington.)
- A New Type of Hereditary Brachyphalangy in Man. By O. L. Mohr and C. Wriedt. Pp. 64+7 plates. (Washington: Carnegie Institution of Washington.)
- Displacement Interferometry by the Aid of the Achromatic Fringes. By Prof. C. Barus. Part iv. Pp. 122. (Washington: Carnegie Institution of Washington.)
- Papers from the Department of Marine Biology of the Carnegie Institution of Washington. Pp. iv+128+4 plates. (Washington: Carnegie Institution of Washington.)
- Contributions to the Geology and Paleontology of the West Indies. Pp. 184+plates. (Washington: Carnegie Institution of Washington.)
- Climatic Cycles and Tree-Growth. By A. E. Douglass. Pp. 127+12 plates. (Washington: Carnegie Institution of Washington.)
- The Environment of Vertebrate Life in the Late Paleozoic in North America. By Prof. E. C. Case. Pp. vi+273. (Washington: Carnegie Institution of Washington.)
- A Biochemic Basis for the Study of Problems of Taxonomy, Heredity, Evolution, etc. By Prof. E. T. Reichert. Part i. Pp. xi+376+34 plates. Part ii. Pp. vii+377-834. (Washington: Carnegie Institution of Washington.)