and suitable preliminary training for the students. Tenders for the extension of the college have been accepted by the City Council, and the building is now in course of erection. The scheme provides for an entirely new building for the department of textile industries, which is to be equipped with complete plants for the carding, combing, and weaving of textiles. There is also to be provided a small practical dyeing and finishing plant, capable of dealing with the material produced in the textile department. The committee has further decided to erect a power house equipped with various types of modern power-producing plant arranged for experimental use. These extensions constitute the most important developments of the institution within recent years, and, when completed, will place the college in the front rank as regards the facilities offered to students for experimental work in the textile and engineering industries.

SOCIETIES AND ACADEMIES.

PARIS.

Academy of Sciences, October 4.—M. Bouchard in the chair.—A method permitting the measurement of the effective temperatures of the stars. First results: Charles **Nordmann.** A development of the photometric method described by the author in a previous paper. Values are given for fifteen stars, ranging from 2980° C. for the absolute effective temperature of ρ Perseus, 5990° C. for the sun, to >60,000 for λ Taurus. It is noted that the numbers found, with slight exceptions, are arranged in the order predicted by Sir Norman Lockyer from considerations based on the appearance of the *enhanced lines* of the spectrum.—The hypergeometric equation: Mme. V. **Myller-Lebedeff.**—The differential equations the general integral of which is uniform and admits mobile essential singularities: J. **Chazy.**—The measurement of high pressures deduced from the variations of resistance of conductors submitted to the pressures to be measured: A. **Lafay.** The change of resistance with pressure has been studied for platinum, mercury, and manganin. The first of these is not practicable for pressure measurements, since the temperature coefficient is more than 1900 times the pressure coefficient, and there are variations with different wires. Mercury gives more satisfactory results, but on account of its low temperature coefficient manganin is better.—The thermal properties of silver nitrate: M. **Guinchant.** Cryoscopic determinations with solutions of the nitrates of lithium, potassium, and thallium in fused silver nitrate gave cryoscopic constants agreeing closely with that deduced from the latent heat of fusion. Determinations were also made with lead nitrate, silver chloride, iodide, fluoride, iodate, and sulphate.—The examination of essence of turpentine: Paul **Nicolardot** and Louis **Clément.** Mixtures of pure essences with known quantities of resin oil, petrol, and white spirit were made, fractionally distilled both under ordinary and reduced pressure, and the physical properties of the fractions measured.—The decomposition of silver tetrachlorplatinate by water, and the preparation of fulminating platinum: Jules **Jacobsen.**—The magnetic disturbance and aurora borealis of September 25, 1909: Alfred **Angot.** This magnetic disturbance is the greatest that has been observed since the commencement of observations at the Parc-Saint-Maur Observatory in 1883.

NEW SOUTH WALES.

Linnean Society, August 25.—Mr. T. Steel, vice-president, in the chair.—Contribution to a knowledge of Australian Hirudinea, part iii.: E. J. **Goddard.** Three species are dealt with:—*Glossiphonia intermedia*, n.sp., from a creek near Fairfield; *G. heteroclita*, a European and North American form, now recorded as Australian also; and the common species, usually known as *Hirudo quinquestriata*, Schmarda, but which should bear the name *Limnobdella australis*, Bosisto, of which no adequate account had been published.—Australian fresh-water Polyzoa, part i.: E. J. **Goddard.** Six named species, representing six genera (including Alcyonella), and several unnamed forms, have been recorded from Australia and New Zealand, of which three species are endemic:—*Victorella pavida*, Sav. Kent; *Lophopus lendenfeldi*, Ridley; *Paludicella ehrenbergii*, van Beneden (New Zealand, *teste* Hamilton); *Plumatella Aplinii*, McGillivray; *P. princeps*, Kraepelin; P. sp., and Alcyonella sp. To these are now added *Fredericella australiensis*, n.sp., which grows luxuriously in the screening tank at Potts' Hill Reservoir, near Rookwood, and also in the 72-inch main from the end of the lower canal to Potts' Hill.—Mollusca from the Hope Islands, North Queensland: C. **Hedley.** In continuation of former investigations as to the coral-reef fauna of Queensland, the author organised another party to examine the reefs several degrees further north. The exact position selected was close to the scene of Captain Cook's misfortunes in the *Endeavour*. A week's work dredging and shore-collecting provided a series of about seven hundred molluscs. Of these, one hundred of the more interesting are discussed in the present communication, about half of which are introduced as new species. The novelties are distributed among the genera Chlamys, Cuna, Rochefortia, Sportella, Phacoides, Gafrarium, Chione, Tellina, Arcopagia, Semele, Theora, Liotia, Cyclostrema, Obtortio, Triphora, Cerithiopsis, Epitonium, Vermicularia, Odostomia, Turbonilla, Glyphostoma, Eulima, Marginella, Mangilia, Nassaria, and Retusa.

DIARY OF SOCIETIES.

FRIDAY, OCTOBER 15.

INSTITUTION OF MECHANICAL ENGINEERS, at 8.

WEDNESDAY, OCTOBER 20.

ENTOMOLOGICAL SOCIETY, at 8.

ROYAL MICROSCOPICAL SOCIETY, at 8.—On the Microscopical Structure of an Inoceramus Limestone in the Queensland Cretaceous Rocks: Frederick Chapman.

FRIDAY, OCTOBER 22.

PHYSICAL SOCIETY, at 5.—On Cadmium Amalgams and the Normal Weston Cell: F. E. Smith.—The Production of Helium from Uranium and Thorium: Frederick Soddy.—The Production of Radium from Uranium: Frederick Soddy.—Note on a Gravitational Problem: Dr. C. V. Burton.

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