

### UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

WE have received a copy of the prospectus of the Merchant Venturers' Technical College, which provides and maintains the faculty of engineering of the University of Bristol, and we note that the courses include schemes of study for persons intending to engage in civil, mechanical, and electrical engineering. The department of automobile engineering has been closed for the duration of the war, as the professor of that department is doing important work in connection with munitions

### SOCIETIES AND ACADEMIES.

#### PARIS.

**Academy of Sciences**, July 29.—**M. Ed Perrier** in the chair.—**G. Humbert**: Ternary indefinite quadratic forms.—**J. Boussinesq**: The fundamental formula of Tresca for punching a cylindrical block of lead.—**G. Bigourdan**: Delisle at the Hôtel de Taranne; Lalande, Bailly, and Coulvier-Gravier at the Luxembourg.—**M. Balland**: The use of lime-water in the preparation of munition bread. An account of some experiments made in 1917 by order of the Minister for War on the use of lime-water in bread-making.—**P. Bruère** and **Ed. Chauvenet**: Zirconium nitride. Starting with the ammonia compound of zirconium chloride,  $ZrCl_4 \cdot 4NH_3$ , a rise of temperature gives successively the amide,  $Zr(NH_2)_4$ , the imide (impure),  $Zr(NH)_2$ , and finally, at about  $350^\circ C.$ , the nitride,  $Zr_3N_4$ . This last appears to be the only nitride, and no evidence of the compounds  $Zr_2N_3$  and  $Zr_3N_8$  has been obtained.—**M. Verzat**: The measurement of temperature in very deep soundings. Two thermometers were cut at a temperature ( $40^\circ C.$ ) lower than that expected; after remaining at the bottom for an hour they were raised, and some mercury was found to have escaped. Comparison with a standard then showed the temperature ( $62.5^\circ C.$ ) at which the mercury exactly filled the tube, and thus gave indirectly the temperature at the bottom, 1616 metres from the surface. This gives a rise of  $1^\circ C.$  for every 32.3 metres depth.—**F. Morvillez**: The leaf-trace of the Cælpine Leguminosæ.—**H. Colin** and **Mlle. A. Chaudun**: The law of action of sucrase. The deviation from Wilhelmy's formula is less marked as the ratio of saccharose to sucrase diminishes.—**E. Ladreyt**: Epithelial regeneration. Besides normal physiological renovation, epithelium may abnormally be regenerated at the expense of conjunctive tissue.—**A. Besredka**: Experimental paratyphoid fever B. The mechanism of immunity in paratyphoid B. Vaccination by the mouth.—**H. Bordier**: A radio-therapeutic unit of quantity. The unit is based on the amount of iodine set free from a 2 per cent. solution of iodoform in chloroform. It has been proved that the iodine liberated is regular, and proportional to the time of irradiation by the X-rays. The unit is then defined as the quantity of X-rays capable of setting free 0.1 milligram of iodine in 1 c.c. of a 2 per cent. solution of iodoform in chloroform. thickness 1 cm., and in the dark.—**A. Paine** and **A. Peyron**: Seminome of the testicle of the rabbit, with graft and generalisation to the second generation.

#### VICTORIA.

**Royal Society**, May 6.—**Mr. J. A. Kershaw**, president, in the chair.—**G. F. Hill**: Relationship of insects to parasitic diseases in stock. Part I. Life-histories of three nematode parasites of the horse, *Habronema muscae*, *H. microstoma*, and *H. megastoma*. Part II. Certain points in the life-history of *Melophagus ovinus*, the sheep "louse-fly" or sheep "tick."—**F. Chapman**: Ostracoda from the Upper Cambrian Limestone of

South Australia. Three new species of Leperditioid Ostracoda are described from the Archæocyathina Limestone of Curramulka, namely, *Leperditia tatei*, *L. capsella*, and *Isochilina sweeti*. *L. tatei* has its nearest analogue in *L. anna* of the Upper Cambrian of St. Ann's, Canada, whilst *L. capsella* bears a certain resemblance to *L. canadensis* of the Canadian Lower Palæozoic. The species of *Isochilina* is of large size (length more than 7 mm.), and has a general resemblance to some forms of *Aristozoe* (cephalic region), but is a true Ostracod from its swollen proportions and thickly calcified carapace.

### BOOKS RECEIVED.

Studies in Electro-Pathology. By A. W. Robertson. Pp. viii+304. (London: G. Routledge and Sons, Ltd.) 12s. 6d. net.

Wealth from Waste. By Prof. H. J. Spooner. Pp. xvi+316. (London: G. Routledge and Sons, Ltd.) 7s. 6d. net.

Sir William Ramsay. By Prof. T. C. Chaudhuri. Pp. ix+66. (Calcutta: Butterworth and Co. (India), Ltd.) Rs.1.8 net.

On the Determination of the Principal Laws of Statistical Astronomy. By W. J. A. Schouten. Pp. 128. (Amsterdam: W. Kirchner.)

Modern Dyeing Methods. By C. M. Whittaker. Pp. xi+214. (London: Baillière, Tindall, and Cox.) 7s. 6d. net.

Industrial Electrometallurgy, including Electrolytic and Electrothermal Processes. By Dr. E. K. Rideal. Pp. xii+247. (Baillière, Tindall, and Cox.) 7s. 6d. net.

The Science of Health and Home-making. By E. C. Abbott. Pp. xv+302. (London: G. Bell and Sons, Ltd.) 3s. 6d. net.

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