

spend the afternoons in their employers' workshops. The experiment is interesting as an attempt to solve the problem of providing instruction for the artisan without the drawbacks involved in attendance at evening classes after a strenuous day's work. In the evening classes an important series of lectures on illuminating engineering is being given jointly by the electrical engineering, technical chemistry, and technical optics departments.

THE calendar of the University of Bristol for the session 1911-12, which is now available, reminds us that the University of Bristol Act was passed in 1909 only, and that excellent progress has been made since that date in establishing the various departments of the University which is to serve the west of England. Several institutions in the neighbourhood have been affiliated with the University. The work of the faculty of engineering in all its branches is carried on in the Merchant Venturers' Technical College, agreements between the University and the Society of Merchant Venturers having been signed in July, 1909, and May, 1911. In July, 1910, the Royal Agricultural College, Cirencester, became associated with the University for the purpose of instruction in agriculture, forestry, veterinary science, and kindred subjects. Two theological colleges in Bristol are similarly associated for instruction in theology and certain linguistic subjects. There are, in addition, day training colleges for teachers, and the University is fortunate in the number of institutions near it open to students of medicine for hospital practice and clinical instruction. A public health laboratory has been established to enable medical men in the area to obtain trustworthy information and reports upon pathological material, and of placing at the disposal of authorities dealing with drinking water, persons concerned with the supply or consumption of milk, and those engaged in manufacturing processes, the resources of a properly equipped bacteriological research laboratory. It is clear that the University authorities are fully alive to their opportunities of influencing the life and industries of the counties surrounding the University, and that it will not be long before the good effects of higher instruction in the various branches of knowledge will follow.

### SOCIETIES AND ACADEMIES.

#### PARIS.

**Academy of Sciences, September 18.**—M. Armand Gautier in the chair.—Ch. **Lallemand**: The deformations resulting from the mode of construction of the international map of the world on the scale of one millionth. The author establishes simplified formula for the construction of the map, having regard to the accuracy possible with the scale chosen. It is shown that the linear and angular errors, due to the method employed, would be much less than those due to the hygrometric deformations of the paper on which the map is printed.—Edm. **van Aubel**: Hall's phenomenon and the transversal thermo-magnetic effect in graphite. Details of measurement of the thermo-electric power of a graphite-copper thermocouple. This was found to be +17.8 microvolts per degree between 21.0° C. and 57.6° C., and 18.1 microvolts per degree between 20.9° C. and 98.55° C.—Georges **Baume** and Albert F. O. **Germann**: Fusibility curves of gaseous mixtures: the oxonian systems formed by acetylene, ethylene, nitric oxide, and methyl oxide. Diagrams are given showing the fusibility curves of the systems (methyl oxide-acetylene), (methyl oxide-ethylene), and (methyl oxide-nitric oxide). Each of these curves shows a clearly marked angular point corresponding to the molecular proportions  $((\text{CH}_3)_2\text{O} + \text{C}_2\text{H}_2)$ ,  $((\text{CH}_3)_2\text{O} + \text{C}_2\text{H}_4)$ , and  $((\text{CH}_3)_2\text{O} + 2\text{NO})$ .—J. **Bougault** and C. **Charaux**: Lactarinic acid, a keto-stearic acid extracted from some fungi of the genus *Lactarius*. This acid is present in the free state in *L. theiogalus*, *L. plumbeus*, *L. pyrogalus*, and *L. widius*, and can be extracted by boiling alcohol. The properties of the acid are described; it is shown to be a keto-stearic acid of the composition  $\text{C}_{18}\text{H}_{34}\text{O}_5$ .—P. **Gaubert**: The indices of refraction of some crystalline liquids. Measurements of the refractive indices of propionate, benzoate, acetate, and caproate of cholesterol are given.—E. **Kayser** and H. **Delaval**: Contribution to the study of ropy bread.—Charles **Nicolle**, A. **Conor**, and E. **Conseil**:

The nature and the seat of the pathogenic agent in exanthematic typhus. Experiments are adduced in support of the hypothesis that the virus is localised in the leucocytes. The blood was separated by centrifugation; the white corpuscles proved on inoculation to be the most virulent; the plasma is less active, and appears to owe its poisonous action to the leucocytic debris difficult of removal; the wasted red corpuscles are inactive. The blood serum was proved to be inoffensive to man, and the cephalorachidian fluid, devoid of cells, proved to be also inactive.

### DIARY OF SOCIETIES.

#### TUESDAY, OCTOBER 3.

**FARADAY SOCIETY**, at 8.—The "Paragon" Electric Furnace and Recent Developments in Metallurgy: J. Hårdén.—Progress in the Electro-metallurgy of Iron and Steel: Donald F. Campbell.—The Hering "Pinch Effect" Furnace: E. Kilburn Scott.

#### WEDNESDAY, OCTOBER 4.

**ENTOMOLOGICAL SOCIETY**, at 8.—Report on a Collection of Bombyliidae (Diptera) from Central Africa, with Descriptions of New Species: Prof. Mario Bezzi.

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