University and Educational Intelligence

CAMBRIDGE.—It has been recommended that one University lectureship in forestry be transferred from the Faculty of Agriculture to the Department of Botany, and that the lectureship be called the University lectureship in forest botany.

LONDON.—The following appointments have recently been made: Capt. G. T. R. Hill to the Kennedy chair of engineering (University College); Dr. L. P. Garrod to the University readership in bacteriology (St. Bartholomew's Hospital Medical College); Dr. G. R. Cameron to the University readership in morbid anatomy (University College Hospital Medical School); Mr. John D. Cowley to the directorship of the University School of Librarianship at University College.

The Dunn exhibitions in anatomy and physiology for 1934 have been awarded respectively to Mr. Alfred Cohen (University College) and Mr. A. J. Bernfeld (Middlesex Hospital Medical School).

WALES.—University College, Cardiff, has received a further gift of £1,000 from the Rothschild residuary fund. It has been decided to expend the greater part of the sum on library purposes.

Sir Howell Williams, of Corris, Merioneth, has promised £10,000 for the new college building scheme of the University College at Aberystwyth. This scheme is estimated to cost £500,000. Lady Gladstone of Hawarden has offered to endow two Rendel Memorial Scholarships as a memorial to the late Lord Rendel.

The University College of North Wales at Bangor celebrates its jubilee this year.

HISTORY and geography teaching, considered in relation to the problems of 'moral disarmament', is dealt with in several papers published in the December issue of the League of Nations' *Educational Survey*. There is, first, the full text of a lecture by M. Maurette, assistant director of the International Labour Office, giving a vivid presentation of methods whereby history and geography teaching in primary and secondary schools may help their pupils to grow up "to realise the only hope for the salvation of man on earth and the law which must govern the inhabitants of a globe whose limits are shrinking daily and whose different parts are becoming increasingly members one of another". It is followed by two authoritative *communiqués* concluding an acrimonious debate provoked by an article which appeared in a previous issue of the *Survey*. The position of the writer of the article, Mrs. Corbett Ashby, as a delegate at the Disarmament Conference necessarily aggravated the seriousness of her accusations that "national and racial animosity are inculcated by teachers . . . in obedience to false ideals of morality". A communication from Dr. C. W. Kimmins includes a memorandum by Dr. C. B. Firth on the general characteristics of the way in which children are now encouraged to learn history in English schools, and emphasises that for the last twenty years the kind of geography taught in the majority of schools in England has been equally unlike anything that Mrs. Ashby described and rightly condemned.

Science News a Century Ago

"Great Points in Electricity"

In 1834 Faraday was approaching the end of the electro-chemical researches which had occupied him for the previous two years. His paper on the "Electricity of the Voltaic Pile" was read before the Royal Society in June of that year, and a few days earlier, on May 29, he wrote in his Diary a short passage which gives an interesting indication of his ideas on electrolytic conduction at the time. He hoped that electrolysis might afford a means of distinguishing between elementary and compound bodies.

The passage, which is headed "Great Points in Electricity which require to be decided", shows that he had grown accustomed to using the new word 'ion': "Is not the existence of compound *ions* assumed rather than proved? Has an acid or a base yet been determined to the electrodes except in a solution, and would they go in equivalent proportions in ordny. salt? In fact is it not the simple bodies only which truly and freely traverse? This not yet definitely decided."

"If there are; still, may we not by Electrical relations of the simple *ions* distinguish between real elements and such as we may think to be such because we have not decomposed them? That is, will not electricity prove to be the test between bodies really simple and those which are compound? If so, probably our present elements are true and ultimate elements."

Death of Laumont

On June 1, 1834, the French mineralogist, François Pierre Nicholas Gillet de Laumont, died in Paris. Born on May 28, 1747, he was educated at a military school and served in the army from 1772 until 1784. He was then appointed an inspector of mines and devoted his leisure to the study of mineralogy. He wrote many papers for the *Annales des Mines* and assisted in organising the Paris School of Mines. The mineral laumontite was named after him by Haüy.

London and Birmingham Railway

On June 1, 1834, at Chalk Farm, the first sod was cut for the London and Birmingham Railway, the first main trunk line in Great Britain. The royal assent to the bill for its construction had been obtained on May 6, 1833, after a Parliamentary struggle which had cost the promoters of the line £72,869. Robert Stephenson, then thirty years of age, had carried out the surveys for the line, and though there was much opposition, the directors on September 7, 1833, resolved "That Mr. Robert Stephenson be appointed engineer-in-chief for the whole line at a salary of £1,500 per annum, and an addition of £200 per annum to cover all contingent expenses, subject to the rules and regulations for the engineers' department, as approved by the respective committees". Fixing his residence in St. John's Wood, and with the Eyre Arms Hotel as his office, Stephenson reserved for his own personal supervision a length of about nine miles from Maiden Lane, Camden Town, and divided the remaining 103 miles into four districts, each under an assistant engineer. The actual construction of the line was entrusted to about twenty contractors, but the completion of

some of the most difficult portions had to be superintended by Stephenson himself. The work of the greatest magnitude was the construction of the Kilsby Tunnel south of Rugby, a costly undertaking rendered necessary through the short-sighted opposition of the inhabitants of Northampton to the proposal that the line should pass by way of that town.

John Dalton

Dalton was elected a fellow of the Royal Society in 1822, and received one of the Society's Royal Medals in 1826, the first year of award, but until May 1834, he had not attended to be formally admitted. Babbage was, at the time, actively interesting himself in Dalton's presentation at Court, duly effected, it may be mentioned, though he did not go clad in levée dress. The particular reason, however, for Dalton's stay in London was to give sittings to Chantrey, the sculptor, who had been commissioned by a representative committee to execute a statue of him. Dalton recorded his visit to Chantrey thus: "He [Chantrey] took a profile as large as life by a camera lucida, and then sketched a front view of the face on paper. He then gave me the next day for a holiday and told me I should see my head moulded in clay on Wednesday morning, at which time he invited me to breakfast. I went accordingly, and found, as he said, a head *apparently* perfect. He said he had not yet touched it, the head having been formed from his drawings by some of his assistants. He set to work to model and polish a little whilst I was mostly engaged in reading the newspaper, or conversing with him. On looking right and left he found my ears were not alike, and the modeller had made them alike, so that he immediately cut off the left ear of the bust and made a new one more resembling the original. At last he took a pitcher and blew a little water in my face (I mean the model), and covered my head with a wet cloth and we parted, he having desired me to bring Dr. Henry and Dr. Philip with me next morning to breakfast. We went accordingly and found an abundant table; soon after Dr. Faraday came in and we all went into the working room for a time. . . . At intervals we have a little amusement and instruction about our respective arts and sciences, and how we acquired our knowledge, etc., in which we vie with each other". . . . (Henry, "Memoirs of John Dalton", 1854.)

Sir Henry Holland in his "Recollections" (p. 212) remarks, referring to Dalton's early years, that he "well knew that philosopher in his rude laboratory of bottles and uncouth apparatus at Manchester—an individuality in himself, apart from the Quaker garb he wore."

Wernerian Natural History Society, Edinburgh

In May 1834 the Society promoted and offered a number of honorary premiums, open unconditionally to all scientific workers. The terms were incorporated in a circular notice, from which three examples are quoted:—

(1) Twenty sovereigns, or a suitable piece of plate of that value for the best geological account, with a geognostical map, sections, and specimens, of the Three Lowthians, with as much of the neighbourhood as may be required for the elucidation of the districts. To be given in against December 1835.

(2) Ten sovereigns, or a piece of plate for the best natural and economical history of the fishes, marine, fluviatile, and lacustrine of the river district of the Forth. To be given in against December 1835.

(3) Ten sovereigns, or a piece of plate for the best account of the entomology of the Three Lothians, and river district of the Forth; with a collection of specimens, and map of the distribution of the insects. To be produced against December 1836. (Memoirs, vol. 7.)

Societies and Academies

LONDON

Physical Society, March 16. N. THOMPSON: The effective rotation temperature of the negative glow in nitrogen. The effective temperature increases slightly with the pressure and current strength, and to a much greater extent with the temperature of the furnace surrounding the discharge tube. At high temperatures it becomes less than the temperature of the furnace, and an explanation of this surprising behaviour is sought. It is concluded that, in this particular case at least, the effective temperature is not identical with the gas temperature, though it depends in part on that quantity. S. S. WATTS and B. J. LLOYD-EVANS: The measurement of flame-temperatures in a petrol engine by the spectral line-reversal method. Until recently no satisfactory method existed for the measurement of the temperatures during combustion in a petrol engine. The reversal of a spectral line provides a suitable method which shows that the maximum temperature in the engine cylinder persists for a longer period than the maximum pressure. E. B. Moss: An apparatus for the determination of the dew point. The paper describes an optical system which uses diffraction by the dew droplets on a mirror and aids greatly the visual detection of dew-formation. Then follows an account of the application of this system to an automatic photoelectric apparatus for maintaining a mirror at the dew point.

DUBLIN

Royal Irish Academy, April 9. R. SOUTHERN: Food and growth of brown trout in Lough Derg and the River Shannon. The growth-rate and size of the trout is definitely correlated with the composition of the rocks in the drainage area. The water of Lough Derg and the Shannon is derived from limestone rocks and is alkaline; that of Lough Atorick comes from an area of Old Red Sandstone and peat and is acid. The trout from Lough Derg and the River Shannon are large, quick-growing, have a relatively long life and mature late. Those from Lough Atorick are small, slow-growing, have a short life and mature at an early age. In the diet of the Lough Derg trout, 'mid-water' food, consisting of *Cladocera* of the plankton and perch fry, forms a considerable part, but the Lough Atorick trout do not utilise this abundant food and live to a large extent on terrestrial insects blown on to the water. The Shannon trout subsists almost entirely on bottom-living organisms.

LEEDS

Philosophical and Literary Society, March 6. A. Y. AMIN: Note on a property of *Steinerian trihedra*. H. FRAZER: Subharmonic functions. The author generalises the various results he has given recently