instructor in experimental psychology in Harvard University; Dr. Charles Palache, instructor in mineralogy, and Mr. R. J. Forsythe in metallurgy and metallurgical chemistry; Baron Eötvös to be full professor of experimental physics in the University at Buda-Pesth; Dr. O. Hildebrand to be extraordinary professor of surgery in Berlin University, and Dr. Oestreich to be *privat-docent* in general and anatomical pathology; Dr. Klecki to be *privat-docent* in general and experimental pathology at Cracow.

THE new Franco-Scottish Society was inaugurated in Paris last week at the Sorbonne. The objects of the Society are to bring the universities of France and Scotland into connection with each other by study in the one and the other of their respective students, to bring about intercourse between their professors and other officers, to promote historical research concerning the ancient relations between the two countries, in general by periodical meetings held in France and Scotland, and all other means, to renew, as far as possible, the bonds of sympathy between them. About forty delegates attended on behalf of the Scottish universities and interest in higher education; and on the French side, the Paris University and Upper Schools were represented by their chief authorities. Among the subjects discussed was the place of political science in higher education. The congress terminated with a banquet, at which M. Jules Simon presided, given to the Scottish guests by their French colleagues on Saturday.

REFERRING to the late Mr. George Holt, whose death we briefly announced a fortnight ago, the *Lancet* remarks that he took the greatest interest in University College, Liverpool—an interest substantially shown by his first subscription of £10,000 which was requisite to complete its equipment for incorporation in the Victoria University. It was in its medical school that he took a special interest, and his benefactions to it have been numerous. The chairs of Physiology and Pathology were endowed by him in the amount of £10,000 each, to which was added a further sum of £10,000, for the maintenance of laboratories in those branches of investigation. In addition to these benefactions he presented its medical faculty in 1886 with the sum of £2000 for distribution during the ten succeeding years in tutorial scholarships of the value of £100 each. He further fitted up in a complete manner Ashton Hall as a pathological and bacteriological laboratory, which is one of the most complete of its kind in this country. This does not exhaust the list of his benefactions; a further sum of £1000 was given as a donation to the college library, to be expended in annual instalments of £100. He was also a generous contributor to the maintenance fund of the college and a warm friend of education in general. Indeed, it is probably as a benefactor of University College that his name will live longest in local memory.

THE Teacher's Registration Act, which was recently introduced in the House of Commons without comment, is a direct outcome of the work of the late Commission on Secondary Education. Though the Registration Council which it is proposed to establish is not exactly that suggested in the Report of the Commissioners, it will prove quite satisfactory to most of those whose interests are concerned. The Council is to consist of eighteen members—six, appointed by Her Majesty with the advice of her Privy Council; six, elected by the Universities, one by each of the following—Oxford, Cambridge, Durham, London, Victoria, and Wales. Two members chosen by registered teachers engaged otherwise than in elementary schools, two chosen by elementary teachers, and two by registered teachers generally. It is provided by the Act that no person shall be admitted to the register unless he possesses (*a*) "a degree or certificate of general attainments which is granted by some university or other body recognised for that purpose by the Council, and is accepted as satisfactory by the Council; (*b*) a certificate or diploma of adequate knowledge of the theory and practice of education and of practical efficiency in teaching, which is granted by some university or other body recognised for that purpose by the council." Teachers in elementary schools are to be admitted to the register on the same terms as those engaged in secondary schools. It is further to be enacted that if any person (*a*) "wilfully makes or causes to be made any falsification in any matter relating to any register under this Act, or (*b*) by false representation procures himself to be registered under this Act, or not being so registered fraudulently represents himself as being so registered, he shall be guilty of misdemeanour, and shall on summary conviction be liable to be imprisoned with or without hard labour for any term not exceeding twelve months." Teachers of proved attainments and competence who are at present engaged in teaching are to be admitted to the first register.

SCIENTIFIC SERIALS.

THE numbers of the *Journal of Botany* for March and April are again almost entirely occupied by descriptive papers.—Mr. G. Murray describes a new species of *Caulerpa* from South Africa. A number of new fungi are described by Mr. G. Massee, including a new genus *Clypeum*, with no near affinities.

THE second part of vol. vii. of Cohn's *Beiträge zur Biologie der Pflanzen* contains three papers.—Dr. O. Kirchner describes the root-tubercles of the Soja-bean, which, like those of other plants belonging to the pea-tribe, are caused by a microbe; large quantities are found imbedded in the tissue of the tubercle, and he regards them as belonging to a new species, which he names *Rhizobacterium japonicum*, found in the soil of Japan. As in other cases, the relation of the microbe to the host is a symbiotic one, enabling it to absorb into its tissues the free nitrogen of the atmosphere.—T. Rosen contributes a chapter to his *Beiträge zur Kenntniss der Pflanzen-zellen*, in an account of the nuclei and nucleoles in meristematic and sporogenous tissues. It is a very important contribution to our knowledge of the intricate phenomena connected with cell-division, and of the part played by the nucleus and its nucleoles in the process.—Dr. E. Heinricher describes the structure and function of the haustoria of the parasitic genus *Lathræa* or toothwort, especially of the two species *L. squamaria* and *L. clandestina*. From various points of structure he concludes that *Lathræa* is more nearly allied to the typical *Scrophulariaceæ* through *Rhinanthus*, than it is to the *Orobancheæ*, under which it is usually placed.

SOCIETIES AND ACADEMIES.

LONDON.

Royal Society, March 10.—"Helium: a Gaseous Constituent of certain Minerals. Part II. Density." By William Ramsay, F.R.S.

The gas obtained from the minerals bröggerite, samarskite, and fergusonite is rich in hydrogen, but contains only an infinitesimal quantity of nitrogen; carbon dioxide and helium are also evolved, but no gas of new spectrum, even in samples not passed through the usual absorbents, soda-lime and phosphoric anhydride. From 1 gram of clèveite, 7·2 c.c. of helium is obtainable; 1 gram of bröggerite yields less than 1 c.c.; 1 gram of samarskite, about 0·6 c.c.; and 1 gram of fergusonite 1·1 c.c.

The density of the samples of gas from these various minerals appears to show small, but real differences. That from clèveite was found to be 2·205 (oxygen = 16), but Langlet found a sample from the same source to possess the density 2. The helium from bröggerite has the density 2·18; that from samarskite 2·12, and that from fergusonite 2·14. These differences are small; but as they are the means of several determinations with different preparations, and as the individual determinations differ less among themselves than the densities of specimens from different minerals, there appears ground for the supposition that helium is a mixture. The possibility of this conclusion is strengthened by the fact that the relative intensity of the lines in the spectrum of the gas from clèveite is different from that of the samples from bröggerite, samarskite, and fergusonite; and this difference, indeed, is visible without the aid of a spectroscope, for the clèveite gas has a richer shade of yellow, tending towards orange, than that from the other minerals; the colour of such samples is a purer yellow. Moreover, there are certain faint lines in the blue-green in the spectrum of the clèveite gas, which have not been observed, even under the most favourable circumstances, with "end-on" tubes, in that of the gas from other sources.

The author is engaged in an attempt to separate the possible constituents of helium.