

enter as graduates from the universities and large technical colleges.

The electrical profession is a democratic one, in that no matter what the educational level of the entrant is, he can, if he has the requisite ability and ambition, climb to the highest ranks. The importance of attracting the very best recruits from each level and of encouraging, and affording facilities for, the upward mobility of the individual according to his aptitude and capability, cannot be over-estimated.

The question of the selection of a recruit for a particular post is most important. Dr. Fleming is of the opinion that for most types of industrial employment the best results are obtained when methods of self-selection are employed, and the entrant is given an opportunity after he has had some manufacturing experience under sympathetic guidance, of deciding for himself the branch of work to which he is best suited. An increasing number of youths entering from the lowest educational level secure promotion through following a course of technical study leading to national certificates. There is now an increasing tendency on the part of employers to permit their apprentices to attend equivalent part-time day courses in the local technical institutions.

This democratic tendency is in sharp contrast to the system in operation in Germany where, for the most part, the upper level attainable even by an ambitious youth is dictated by his starting level. This restricting feature must react on the enthusiasm of one forced to resign himself to a predetermined status with little if any prospect of further advancement. The U.S.S.R. plan has certain political limitations, but it endeavours to select, educate and train its entrants to industry, solely on the basis of merit, with a considerable amount of success.

University Events

LEEDS.—Dr. P. L. Sutherland has been elected to the chair of forensic medicine in succession to the late Prof. Maxwell Telling. Prof. Sutherland, a graduate of the University of Glasgow, has held an appointment in the University as lecturer in the pathology of industrial diseases since 1920. He has been since 1910 pathologist to the West Riding County Council, a post which he will continue to hold.

LONDON.—Dr. Harry Jones has been appointed as from October 1 to the University readership in mathematics tenable at the Imperial College—Royal College of Science. During 1933–37 he was lecturer in theoretical physics in the University of Bristol, and since October 1937 he has been attached to the Royal Society Mond Laboratory in Cambridge.

Mr. F. W. Paish has been appointed as from October 1, 1938, to the Sir Ernest Cassel readership in business finance tenable at the London School of Economics. Since 1932 he has been one of the Sir Ernest Cassel lecturers in commerce at the School and also secretary of the London and Cambridge Economic Service.

The following titles have been conferred in respect of posts held at the institutions indicated: professor of Near Eastern archaeology on Mr. Sidney Smith (Institute of Archaeology); reader in electrical engineering on Dr. H. E. M. Barlow (University College).

Science News a Century Ago

The Ashmolean Society

AT a meeting of the Ashmolean Society, Oxford, on October 29, 1838, Prof. Baden Powell read a paper entitled "On Refractive Indices". The object of this communication was to state the results of a series of observations, in which the author had been engaged during the summer, in extension and verification of his former researches. Besides the general object of more accurate determination of refractive indices for definite rays in several important media, he had in view the settlement of some points on which questions had been raised, and in some preliminary remarks, he adverted especially to certain objections raised by Sir David Brewster at the Newcastle meeting of the British Association. At Newcastle, Powell had read a paper entitled "On Some Points connected with the Theory of Light" while Brewster had read another entitled "On a New Kind of Polarity in Homogeneous Light". In the discussion on these papers there was a marked difference of opinion, and this found expression also in the pages of the *Athenæum* after the reading of Powell's paper to the Ashmolean Society.

The Zoological Society

AT a meeting of the Zoological Society on November 1, 1838, the annual report, which was read, stated that the receipts for the year up to October 31 amounted to £13,230 and the expenditure to £10,997, leaving a balance of £2,232. The council had determined upon an alteration in the mode of introduction to the gardens on Sundays. Each fellow was to have a ticket for his own personal use and two checks for the admission of friends.

Henry's Electrical Researches

ONE of the most important memoirs of Prof. Joseph Henry, of Princeton College, was that "On Electro-dynamic Induction" read to the American Philosophical Society on November 2, 1838, in which he gave the results of his extension of the purely electrical part of "Faraday's Admirable Discovery". In his experiments, Henry had employed "five different sized annular spools of fine wire (about one-fiftieth of an inch thick) varying from one-fifth of a mile to nearly a mile in length (which might be called 'intensity' helices); and six flat spiral coils of copper ribbon varying from three-quarters of an inch to one inch and a half in width, and from 60 to 93 feet in length (which might be called 'quantity' coils)". These he combined in various ways. By the alternations of the ribbon and wire coils, the fact was established "that an intensity current can induce one of quantity, and by the preceding experiments the converse has also been shown that a quantity current can induce one of intensity; a result which has had an important bearing on the subsequent development of the electro-magnetic induction coil" (W. B. Taylor's discourse on the scientific work of Joseph Henry). In his experiments, Henry used various batteries, one being a cylindrical battery of one and three-quarters square feet of zinc surface, another a Cruickshanks battery of 60 elements 4 inches square and another Dr. Hare's battery, 32 one-gallon jars. The investigations were fully dealt with by the French physicist, Antoine C. Becquerel, in vol. 5 of his "Traité expérimental de l'Électricité et du Magnétisme".