calorific values of various direct and mixed types. Regarding alcohol, he rightly stressed not so much the value of this compound as a fuel, but the problem of its cheap, commercial production, without which its application is impracticable. The third lecture dealt with fuel-air mixtures, composition of fuels and efficiency, current research in the United States, and the interesting subject of "anti-knock" compounds, including the famous lead tetraethyl—the distinctive but poisonous ingredient of the temporarily prohibited ethyl gasoline in America. The intricate problems of mixed fuels such as petrol-benzole, petrol-tetralin, petrol-alcohol, and alcohol-ether, etc., were touched on, the whole syllabus thus forming a most comprehensive review of the subject up to the present time.

University and Educational Intelligence.

CAMBRIDGE.—The election of Prof. J. Barcroft to the chair of physiology did not come as a surprise to those who are acquainted with the Cambridge Physiological School. He was elected a fellow of King's in 1899, in which year he won the Walsingham medal; he has held several important physiological posts and was appointed reader in 1919.

Dr. R. G. W. Norrish has been elected to a Junior Fellowship at Emmanuel College; he was recently admitted to the degree of Ph.D. for physico-chemical research.

Early in December the town was visited by numerous candidates for entrance scholarships and exhibitions. It is reported that the numbers offering physics and chemistry are considerably greater than usual, whilst those taking biological subjects have fallen off. This is an unfortunate state of affairs in view of the shortage of high-grade biological students.

EDINBURGH.—The University Court has made the following appointments in the Department of Public Health:—Colonel P. S. Lelean, until recently professor of hygiene in the Royal Army Medical College, to the Bruce and John Usher chair of public health; Dr. William Robertson, Medical Officer of Health of the City of Edinburgh, to be Director of Instruction in Sanitary Administration.

Dr. Archibald Milne, Depute Director of Studies in the Edinburgh Provincial Training College, has been appointed a lecturer in the University to conduct the course on school organisation and administration, and Mr. R. B. Kerr, a lecturer in education in the Training College, to be a lecturer in the University to conduct the course on modern educational systems and problems.

LIVERPOOL.—At a meeting of the University Council held on December 15, Associate Professor F. J. Teago was appointed to the Robert Rankin chair of electrical machinery. Dr. Teago served his apprenticeship in engineering with Messrs. Charles Parsons and Co., returning to the designs staff of this Company in 1909, after spending three years at Armstrong College, Newcastle-upon-Tyne, where he graduated with the degree of B.Sc. In 1912 he was appointed lecturer in electrical engineering at the University of Liverpool. During the War he occupied important positions in connexion with the design of electrical machinery, and as Assistant General Manager of the Ministry of Munitions Steel Works, Manchester. After the War he was appointed senior lecturer in electrical engineering at the University of Liverpool, and in 1924 the title of associate professor was conferred upon him. In 1924 he was admitted to the degree of D.Sc. (Durham). Dr. Teago has published a number of papers on electrical machinery, three of which have been awarded special premiums by the Institute of Electrical Engineers.

LONDON.—Prof. A. V. Hill has, on his appointment by the Royal Society to a Foulerton chair, resigned the Jodrell chair of physiology tenable at University College. He will carry out his research work at University College, and the Senate has resolved that he shall continue to hold the title of "Professor of Physiology in the University of London" in respect of the functions to be discharged by him at that College.

The following doctorates have been conferred:—*D.Sc.* (*Embryology*), Mr. A. S. Rau (University College) for a thesis entitled "Contributions to our Knowledge of the Structure of the Placenta of Mustelidæ, Ursidæ and Sciuridæ"; *D.Sc.* (*Physics*), Mr. W. B. Haines (University College and the Rothamsted Experimental Station) for a thesis entitled "Studies in the Physical Properties of Soils"; *D.Sc.* (*Metallurgy*), Miss Constance F. Elam (Imperial College—Royal School of Mines) for a thesis entitled "(1) Tensile Tests of Crystals of an Aluminium-Zinc Alloy; (2) The Orientations of Crystals in Metal Test-pieces subjected to small Strains followed by Heat-treatment."

THE University College of the South-West of England, formerly known as University College, Exeter, directs attention in its report for 1924–25 to the harmonious development (justifying its change of name) of its scheme for co-operation with the Technical School, Plymouth. With effect from the beginning of the current session, the more technical part of the School of Pharmacy has been transferred to Plymouth, while the pure science part of the curriculum continues to be provided at Exeter as well as at Plymouth. The Department of Law also provides courses at Plymouth, and a project is on foot for establishing a School of Commerce there. The total number of full-time students has increased from 313 to 332, the increase of science degree students alone being from 67 to 87, and of pharmacy diploma students from 10 to 18. The number of degree students has more than doubled in the last four years.

STATISTICS of State Universities and State Colleges for the year 1923–24 are published in Bulletin, 1925, No. 12 of the United States Bureau of Education. Similar annual returns have been published by the Bureau for the past sixteen years, but in this bulletin appears for the first time a tabular statement of tuition and other fixed annual charges payable by students. The subject is one to which much attention has been directed of late. In the institutions, 106 in number, represented in the returns, the total student enrolment, excluding the summer school, was men 148,230, and women 77,567; and the student fees paid, excluding board and room rent, amounted to sixteen million dollars. There is very great diversity of practice in regard to the fixed charges which students are called upon to pay in these state universities and colleges, the amounts varying, in arts and sciences, for tuition and other fixed annual charges, excluding laboratory fees, from nine dollars in the University of Oklahoma to 314 dollars in Cornell University. The table includes figures for medicine, dentistry, law, and pharmacy as well as arts and sciences; in almost all instances the rates for other courses of study such as engineering and agriculture are the same as for arts and sciences. The highest professional school tuition charges are 500 dollars per annum for the Medical School of the University of California. Many institutions at which tuition is nominally free impose "incidental" and "registration" charges, generally small but sometimes considerable, *e.g.* Pennsylvania State College, 100 dollars.