compounds. He held academic posts at the Heriot Watt College, Edinburgh, Battersea Polytechnic and University of Liverpool; he went to Nottingham in 1914.

Prideaux's researches ranged over the whole field of chemistry. He investigated Kauri resin while in New Zealand and discovered new compounds of fluorine and selenium. With Cuthbertson he made the first determination of the refractive index of gaseous fluorine; he studied the molecular volumes of phosphorus and the mercury halides, the dissociation constants of the phosphoric acids and of boric acid, and published the method of titration of boric acid in the presence of sodium chloride. Papers on the structure of the halides of the fifth, sixth and seventh groups of the periodic table, and "Coordination and Conjugation, the Mixed Bond, Definition and Rules", were valuable contributions to the development of modern views on molecular structure. With A. T. Ward he developed the first universal buffer mixture; he worked on indicators, diffusion and membrane potentials, and compounds of fatty acids with nitrogen bases. Other work ranged from the vegetable and animal plankton and photosyntheses by *Algæ* in sea water (with B. Moore and G. A. Herdman) to the corrosion of cement, the titration of pyridine, the dissociation constants of alkaloids and the kato-phoresis of insulin. He published in all some ninety original papers. His best known books are his "Theory and Use of Indicators", "Problems in Physical Chemistry", the volumes "Phosphorus" and "Nitrogen" (with Herbert Lambourne) in Newton Friend's "Text-Book of Inorganic Chemistry" and "A Laboratory Course in Elementary Chemistry" (with F. C. Laxton); but he also published "A Survey of English Elementary Education" and wrote many articles on educational and scientific topics. His popular broadcast talks on scientific topics in the early days of the British Broadcasting Corporation were models of lucid exposition.

During the First World War, Prideaux assisted at the national shell-filling factory at Chilwell, especially in the analysis of nitrotoluenes.

Prideaux came of a family chiefly interested in the classics, and was highly literary in his tastes. He was a man of very wide interests, philosophic and economic as well as scientific. He will be remembered with affection by the many generations of students to whose interests he devoted his life. In 1908 he married Annie, elder daughter of Rowland Bramwell of Auckland, New Zealand, who, with one daughter, survives him.

Sir Charles Marston

SIR CHARLES MARSTON died at Bournemouth on May 21 at the age of seventy-nine. Sir Charles, who had for long been the head of extensive business interests connected especially with the motor industry, was a liberal supporter of archaeological excavation in Egypt and the Middle East. He was also, himself, responsible for two important expeditions for archaeological excavation in Palestine. Of these the first was Prof. John Garstang's excavation on the site of the ancient city of Jericho, which produced much new evidence on the activities of Egypt in Palestine in the days of Amenhotep III. His second expedition was directed to the exploration of the mound of Tell Duweir, identified as the site of the ancient city of Lachish. This expedition he organised and financed, in the first season with some assistance from America,

and in its later stages with the co-operation of the late Sir Henry Wellcome. The excavation produced some remarkable results, throwing much new light on Hebrew history and culture from early times to the Assyrian and Babylonian incursions. The expedition was lavishly equipped for complete efficiency. Permanent camps and field laboratories were constructed with a view to the complete excavation of the mound, a task which it was anticipated would take many years. It was tragically interrupted. In January 1938, Mr. J. Starkey, the field-director, was assassinated by Arabs while on his way to Jerusalem, and shortly after the close of the season's operations the camp was wrecked and the equipment looted or destroyed, a total loss of many thousands of pounds.

Sir Charles's personal interests were bound up in Palestine. It was his hope and belief that archaeological excavation would prove his intense conviction of the literal accuracy of the Bible to be correct. He was the author of several books, in which his view was ably stated and argued, though not always so as to carry conviction.

Dr. Simon Flexner

THE death of Dr. Simon Flexner in New York on May 2, at the age of eighty-three, has deprived America of one of its best-known pathologists. He was born in 1863 at Louisville, Kentucky, and qualified at the University there in 1889. He soon made pathology his choice and studied at Johns Hopkins Hospital and in Europe, where he worked in Strasbourg, Paris and Berlin. At Johns Hopkins Hospital he became associate professor in 1895, and in 1898 professor of pathology. The next year he went to the University of Pennsylvania until 1903, when at the age of forty he was appointed director of the Rockefeller Institute for Medical Research in New York. It was here that he became best known and remained for thirty-two years before retiring in 1935.

Flexner's name is associated with many diseases—dysentery, poliomyelitis, cerebrospinal fever and encephalitis. In 1900 he showed in the Philippines that one form of bacillary dysentery is due to an organism that has always been associated with his name. With poliomyelitis he showed very shortly after the Vienna work that the disease was transmissible to monkeys and was due to a virus. Flexner and his colleagues did much to elucidate the pathology of this condition. He advanced the theory that the infection was carried by droplets from the nasopharynx, and in spite of other views it still seems to be the most valid. In meningococcal meningitis he made important therapeutic advancement, producing with Jobling an antimeningococcal serum that reduced the high death-rate of this epidemic disease; a very notable advance indeed.

It is not so much by his personal achievements that he will be remembered, however, but by the great influence he exerted on all who worked at the Rockefeller Institute for Medical Research. I had the privilege of working directly under him during 1922–23. He was guide, philosopher and friend to all his associates. He was never too busy to advise, criticize and help his most junior workers. He hated dishonesty and laziness, and had no use for the shirker or slacker. He had a keen intellect, a vast knowledge of his subject, and a personality that inspired work and confidence in his associates. He

knew everyone in the Institute from the humblest cleaner upwards, and had a kindly greeting for all. He was familiar with the progress of all the numerous workers in the Institute, and could instantly grasp their problems and help elucidate their difficulties whenever they came to him for assistance.

As editor of the *Journal of Experimental Medicine*, Flexner exerted a keen critical and literary control, and woe betide any paper that was sent to him which was not up to the high standards which he set for that journal. His blue pencil, however, was constructive and taught many lessons. Outside his work he was a most charming host with an encyclopædic knowledge of many subjects and of different parts of the world. He leaves kindly memories with all those who were associated with him.

J. E. MCCARTNEY

WE regret to announce the following deaths:

Dr. M. Epstein, editor of "The Statesman's Year-book" and "The Annual Register", on June 23, aged sixty-six.

Prof. T. H. Laby, F.R.S., during 1915-44 professor of natural philosophy in the University of Melbourne, aged sixty-six.

Prof. William Peddie, during 1907-42 Harris professor of physics in University College, Dundee (University of St. Andrews), on June 2, aged eighty-five.

Dr. A. W. Rogers, F.R.S., formerly director of the Geological Survey of South Africa, aged seventy-four.

Dr. H. E. Wood, for many years Union astronomer and director of the Union Observatory, Johannesburg, on February 27, aged sixty-five.

NEWS and VIEWS

Prof. C. L. Fortescue

PROF. C. L. FORTESCUE, who is retiring at the end of the present academic year from the chair of electrical engineering in the Imperial College of Science and Technology, went to the City and Guilds (Engineering) College, a constituent body of the Imperial College, in 1922 with a background of electrical engineering, radio and teaching experience obtained largely with the Admiralty and at the Royal Naval College, Greenwich. In addition to maintaining the traditions of the City and Guilds College in the general field of electrical engineering, Prof. Fortescue has successfully developed the radio and general communications sections, the foundations of which were laid by the pioneer work of Duddell, Howe and Marchant. During the past twenty years or so, this provision of adequate education and fundamental training in the lighter side of electrical engineering has coincided with the rapid and widespread application of radio and audio-frequency techniques to communication, broadcasting, cinemas, radar and navigational aids. A surprisingly large proportion of the radio and sound engineers now working in industrial and other types of establishments in Great Britain and elsewhere owe their initial instruction and training in these fields to Prof. Fortescue and his colleagues at the Imperial College.

In addition to orienting a portion of the College syllabus towards telecommunications, Prof. Fortescue has been very active in the radio research field, with particular reference to the use of thermionic valves and measuring technique at increasingly higher frequencies. This work started during his service with the Admiralty before and during the First World War, and has been continued at the Imperial College, both as a personal effort and in association with a series of post-graduate students, who have thus been provided with unusual opportunities for securing training in research under a very able leader and adviser. The results of much of this research work have been published in a series of papers, notably in the *Journal of the Institution of Electrical Engineers*: this Institution has recognized Prof. Fortescue and his achievements by electing him chairman of the Radio (then Wireless) Section in 1926 and president of the Institution in 1942. He has also served on the council of the Physical Society and been associated from time to time with the Radio Research Board of the Department of Scientific and Industrial Research.

Prof. Willis Jackson

PROF. WILLIS JACKSON, who has recently been appointed to succeed Prof. C. L. Fortescue as head of the Electrical Engineering Department at the Imperial College of Science and Technology, has occupied the chair of electrotechnics at the University of Manchester since 1938. He graduated there in 1925, and after a period at Bradford Technical College joined the Metropolitan-Vickers Electrical Co., Ltd., and afterwards Prof. Miles Walker's staff at the College of Technology, Manchester. During 1933-36 he worked with Dr. E. B. Moullin in the Engineering Laboratory, Oxford, and then spent a period as personal assistant to Sir Arthur Fleming in the research department of Messrs. Metropolitan-Vickers. He served as a member of council of the Institution of Electrical Engineers during 1939-42, was re-elected in 1945, and is now chairman-elect of its Radio Section. He is also a member of the Radio Research Board (Department of Scientific and Industrial Research). His research work prior to the War, and during it on behalf of the Ministry of Supply, was concerned mainly with the behaviour of dielectric materials, to which subject, as also in the field of very high-frequency measurements for radar purposes, he has made important contributions. He has also published several papers dealing with the education and training of engineers, and his interest in general, as well as technical, education has been recognized by the Ministry of Education in appointing him a member of its Central Advisory Council for England.

U.S. National Academy of Sciences

THE following have been elected members of the U.S. National Academy of Sciences: Dr. Samuel K. Allison, director, Institute for Nuclear Studies, University of Chicago; Dr. Rudolph J. Anderson, Department of Chemistry, Yale University; Dr. Ernest B. Babcock, Department of Genetics, University of California, Berkeley; Dr. Kenneth T. Bainbridge, Department of Physics, Harvard University; Dr. Elmer K. Bolton, director, Chemical Department, E. I. duPont de Nemours and Company, Wilmington, Delaware; Dr. Wilmot H. Bradley, chief geologist, United States Geological Survey; Dr. Perry Byerly, Department of Seismology, University of California, Berkeley; Dr. Paul R. Cannon, Department of Pathology, University of Chicago; Dr. Milislav