

India (1898), Georgia (1900), Spain (1905), Flint Island (1908), Kiev (1914), Washington (1918) and West Australia (1922), where he obtained results confirming the theoretical value of the Einstein effect. Apart from this, Campbell's main contribution was to the study of the flash spectrum by means of a spectrograph provided with a slit and moving plate, by which the height of the exciting elements in the reversing layer could be accurately recorded. His preparations for an eclipse expedition were a model of organization.

So conspicuous were these powers of organization and administration that Campbell was persuaded in 1923 to become president of the University of California, a position which he retained until 1930 without giving up the control of the Lick Observatory. These were years of notable expansion in the University, which is now perhaps the largest in the world, having more than 15,000 students resident at Berkeley and a total enrolment with other local centres exceeding 24,000. After retirement from the University and from the direction of the Observatory in 1930, Campbell became president of the National Academy of Sciences (1931-35).

Campbell's astronomical writings will be found for the most part in the publications of the Lick Observatory. His "Elements of Practical Astronomy" (1899) is an unpretentious work, which many students must have found useful. His "Stellar Motions", which was published in 1913, brings together in an attractive form that part of astronomy to which his own researches had made so large and important a contribution.

In addition to numerous academic honours, Campbell received the gold medal of the Royal Astronomical Society in 1906, both the Lalande and the Janssen Medals from the Paris Academy of Sciences, and the Bruce Medal in 1915. As president of the International Union of Astronomy in 1922-25, he presided over the Cambridge meeting of that body. In the same year, 1925, he delivered the Halley Lecture at Oxford.

The opening years of the present century witnessed a notable expansion in the methods and outlook of astronomy. In this development Campbell played an outstanding part. His character was energetic and forceful, and his successful career can be attributed to a perfect harmony between his considerable powers and the researches which the circumstances of the time led him to undertake. An English fellow in the Lick Observatory cannot fail to add a tribute to his unflinching kindness, and the practical help which he was always ready to give. His sense of duty was outstanding. When, after recovering from the serious illness which brought his services to the University of California to an end, he became president of the National Academy of Sciences, he might have looked forward to an honourable period of comparative leisure at Washington. But it was not to be. The condition of national affairs led the Government to appeal to the Academy for help in a great variety of problems. In dealing with these Campbell did not spare himself, with the result that these years of office, so far from bringing dignified ease, were perhaps

even more strenuous than any in his busy life. In him has passed away not only a great astronomer whose name will remain in the history of the science, but also one who was no less conspicuous in the public service of his country.

H. C. P.

### Dr. Alexander Galt

DR. ALEXANDER GALT, whose death at the age of eighty-three years occurred on June 26, was appointed keeper of the Technological Department, the Royal Scottish Museum, Edinburgh, in 1901, the year in which the Department was founded. He graduated at the University of Glasgow where he was a Thomson (Lord Kelvin) scholar in physical science, and a Donaldson scholar in natural science. For eight years he was official assistant to Lord Kelvin in Glasgow University. Among his publications were papers on physics and physical chemistry in the *Proceedings* and *Transactions* of the Royal Societies of London and Edinburgh. He was external Examiner in Experimental Physics for degrees in Arts and Science in the University of Edinburgh in 1910-14.

Soon after the Royal Scottish Museum came under the control of the Scottish Education Department, the new post of keeper of the Department of Technology was offered to Dr. Galt. The inauguration of this Department was really a reversion to the original purpose of the Museum, founded in 1854, under the name of the "Industrial Museum of Scotland". Dr. Galt had no previous experience of museum work, although he had the important qualifications of a large educational experience, a scientific training and a wide and intimate knowledge of science, and its application to industry.

While the work of organizing the Department was one of exceptional difficulty, it offered great opportunities to Dr. Galt's creative abilities. After careful study of the problem it was decided to illustrate, by means of models and specimens, the great industries of general engineering, coal mining, and the manufacture of iron and steel. Other branches of science and industry were added later and the scope of the collections was extended.

Under Dr. Galt's personal supervision many very fine working models of engineering, mining, and other interest were constructed in the Museum workshops, and added to the growing collections, which are to-day of world-wide repute.

### Miss Edith Stoney

THE British Federation of University Women has suffered a great loss in the death, on June 25, at the age of sixty-nine years, of Miss Edith Stoney who, on the day of her death, had been elected one of its vice-presidents. Edith Stoney was a member of a distinguished Irish family of scientific workers; her father, an uncle and a brother all being fellows of the Royal Society, whilst her sister, Dr. Florence Stoney, was one of the pioneers of X-ray work in medicine.

Edith herself was a mathematical physicist. As a student of Newnham College in 1890-94 she took