

**T. O. Bergman (1735-84)**

TORBERN OLOF BERGMAN was born at Katrineberg, Vestergotland, on March 10, 1735. Educated at Uppsala, he first taught mathematics and physics at the University there, before becoming professor of chemistry and mineralogy in 1767. He greatly improved upon the early technique of blowpipe and 'wet' methods of analysis. His most important contribution to theoretical chemistry was his "Essay on Elective Attractions", that is, on chemical affinity. For many years he endeavoured to determine the numerical values for the relative affinities of the elements, bases and acids, but his results were of little significance, since no account was taken of such factors as mass action and the volatility, insolubility, etc. of some of the products of chemical reactions. In the course of his investigations, Bergman discovered the elements molybdenum and tungsten, but it was said of him that "his greatest discovery was Scheele".

**Medal Awards of the Institution of Chemical Engineers**

At the thirteenth annual corporate meeting of the Institution of Chemical Engineers held on February 22, the Moulton Medal, the Junior Moulton Medal and Prize of books, and the Osborne Reynolds Medal were presented. These awards were instituted in 1929. The Moulton Medal, which commemorates the chemical engineering work of the late Lord Moulton at the Department of Explosives Supply, is in gold and bears on the obverse a portrait of Lord Moulton, and on the reverse, the seal of the Institution. It is awarded for the best paper of each year presented before the Institution. Papers by non-members are eligible for this Medal. The award for 1934 was made for a paper by Mr. J. Davidson Pratt and Mr. G. S. W. Marlow, entitled "Legal Pitfalls for the Chemical Engineer". The Junior Moulton Medal is in silver, and is a duplicate of the senior award. It is given for the best paper of the year read before the Graduates' and Students' Section of the Institution. Only papers by graduates and students of the Institution are eligible for this Medal and Prize. The 1934 award was made for the paper "Determination of the Efficiency of a Multi-Stage Washer", by Mr. D. Gordon Bagg. The Osborne Reynolds Medal, in silver, commemorates the fundamental investigations of the late Prof. Osborne Reynolds, and is the gift to the Institution of Mr. F. A. Greene, the honorary treasurer. It bears on the obverse the seal of the Institution, and is awarded for meritorious service for the advancement of the Institution. For 1934 the award was made to Mr. H. J. Pooley, in recognition of his work as honorary director of the Appointments Bureau of the Institution since the inception of this office in 1925.

**New President of the Society of Chemical Industry**

MR. W. A. S. CALDER, delegate director of the General Chemicals Group of Imperial Chemical Industries, Ltd., has been elected president of the Society of Chemical Industry for the year 1935-36. Mr. Calder's lifelong association with the chemical

industry commenced after he left the Royal College of Science and joined the staff of Messrs. F. C. Hills and Co., of Deptford. In 1899 he became head chemist and manager of Messrs. Chance and Hunt at Oldbury, of which firm (now part of Imperial Chemical Industries, Ltd.) he became managing director in 1917. When the works were taken over by the Ministry of Munitions during the War, in addition to an increased output of acids and heavy chemicals, an important installation for the manufacture of T.N.T. was developed under Mr. Calder's direction. Mr. Calder is a former president of the Institution of Chemical Engineers, and has always taken an active part in the administration of that organisation and is a member of the executive board of the Chemical and Allied Employers Federation. He is the co-inventor with Dr. C. C. Fox of the Calder-Fox scrubber for the removal of liquid and solid particles from gases.

**Malthus Commemoration**

THOMAS ROBERT MALTHUS, the economist, author of the "Essay on the Principle of Population", died a hundred years ago on December 23, 1834, and the centenary was celebrated in Cambridge on March 2. Many distinguished economists and statisticians met in King's College, along with a few biologists who came to mark the influence of Malthus upon Darwin and his 'struggle for existence'. Prof. A. C. Pigou presided, and addresses were delivered by Mr. C. R. Fay, Mr. J. M. Keynes, and by Dr. James Bonar, whose book on "Malthus and his Work", written just fifty years ago, remains our chief authority. The same company met again at dinner in Jesus College, of which Malthus was undergraduate and fellow. The Master, Mr. Arthur Gray, spoke to the memory of Malthus, and beside him sat the one surviving kinsman of the philosopher. Dr. Gray coupled the toast with Dr. James Bonar's name, and charmed all his hearers with a simple, intimate account of Malthus and his friends, of the influence which Malthus exercised, and the events and circumstances which influenced him. Malthus became professor of political economy at Haileybury, and was the first of all professors of that science; he was one of the early members of the Political Economy Club, together with Tooke, Ricardo and James Mill; and at the very end of his life he was one of the founders of the Statistical Society. Mr. Gray had many interesting things to say of David Hartley the philosopher, also a member of his College, whose "Observations on Man" and other writings had great influence on the political philosophy of the latter half of the eighteenth century. Malthus and Coleridge (yet another Jesus man), both born after Hartley died, were in their several ways both deeply indebted to him. Coleridge wrote of him as "Hartley, of mortal kind Wisest", and called his son after his name. Hartley Coleridge was born all but fifty years after David Hartley died, and just two years before the "Essay on Population" appeared. Samuel Taylor Coleridge and Thomas Robert Malthus died in the same year, 1834.