

four instrument makers in this century so full of scientific development. Their names are not so well known to the general public as those of Dolland, Herschel, and Ramsden. Nevertheless, the men whose work I have briefly described did an immense amount to popularise science, and to raise the standard of scientific instrument craftsmanship. How world-wide this reputation for good work became is best seen by the number of

instruments of English eighteenth century workmanship treasured in the Continental museums.

¹ "Two Microscopes made by G. Adams for King George III." By R. S. Clay and T. H. Court. *Jour. R. Micr. Soc.*, pp. 268-273; 1926; and Supplementary Note. *Jour. R. Micr. Soc.*, p. 255; 1927.

² "An Old Catalogue and what it tells us of the scientific instruments and curios collected by Queen Charlotte and King George III." By R. S. Whipple. *Proc. of the Optical Convention*, Part II., 1926.

³ "Mathematical Elements of Natural Philosophy, confirmed by Experiments: or an Introduction to Sir Isaac Newton's Philosophy." Written in Latin by the late W. James's Gravesande, LL.D., Professor of Mathematics at Leyden and F.R.S. Translated into English by the late J. T. Desaguliers, LL.D., F.R.S., and Published by his son J. T. Desaguliers. Sixth Edition 1747.

Obituary.

MR. A. E. SEATON.

THE death of Mr. Albert Edward Seaton, which occurred at Hemel Hempstead on Aug. 8, robs British shipbuilding and marine engineering circles of one of its oldest and best known representatives. For nearly half a century Seaton's "Manual of Marine Engineering"—now in its twentieth edition—has been familiar to marine engineers, while his "Pocket Book," compiled in collaboration with Mr. H. M. Rounthwaite, is to be found in every drawing office. His "Manual" would alone cause his name to be remembered, but he had an almost lifelong association with the Institution of Naval Architects, and during the course of his long career enjoyed the friendship of many of the most distinguished members of his profession.

Born at Padstow, Cornwall, in 1848, Seaton entered Devonport Dockyard in 1864 as an engineer student with the object of following a naval career, and four years later, as a result of his success in a severe competitive examination, he gained a scholarship to the once well known Royal School of Naval Architecture and Marine Engineering at South Kensington, which had been established by the Admiralty in 1864. During its existence of nine years, the School occupied a unique position in Great Britain, and from it came not only future chief constructors and engineers-in-chief of the Navy, but also men who rose to important positions in private firms. In Seaton's time, Woolley, Merrifield, Cotterill, and Unwin were members of the staff; the occasional lecturers included Airy, Froude, Rankine, and Scott Russell, while among the students were Elgar, White, Watts, Biles, Sennett, Durston, Pratten, Corner, and others, whose important work during the last decades of the nineteenth century and the first of this century were of the greatest value to the country in building up our great naval and mercantile fleets.

Passing out in 1872, Seaton immediately left the public service and became technical secretary to Reed (afterwards Sir Edward Reed), who in 1870 at the age of forty had resigned his position as Chief Constructor at the Admiralty. Through Reed, Seaton became associated with Earle's Shipbuilding and Engineering Co., Hull, and during the next twenty-nine years was responsible for the design and construction of not only the machinery of many vessels but also of the ships themselves.

Leaving Hull in 1901, Seaton set up in Westminster as a consulting engineer, and in 1905 succeeded his former fellow-student and lifelong friend,

Alfred Morcom, as chairman of the well-known Birmingham engineering firm, Messrs. Belliss and Morcom. But much of Seaton's best work was done in connexion with the Institution of Naval Architects and other societies. He was elected a member of Council of the Institution in 1888, a vice-president in 1919, and represented it on various important committees. His knowledge of the progress of marine engineering design was probably unique, and for some years he was chairman of the British Marine Engineering Design and Construction Committee. He also took part in public life, served as a County Councillor for Hertfordshire, and was made a Justice of the Peace. His funeral took place on Aug. 12, at St. Marylebone Cemetery, East Finchley.

THE issue of the *Physikalische Zeitschrift* for June 1 contains a short account by Prof. F. A. Schulze of the work of Prof. Wilhelm Feussner, who died in 1928 at the advanced age of eighty-five years. He was born in Hanau in 1843, and studied at Heidelberg under Kirchhoff and at Marburg under Gerling. He took his doctor's degree in 1867 and became lecturer, in 1880 additional professor, and in 1908 honorary professor of theoretical physics at Marburg. He retired in 1918, but still kept in touch with modern research, and contributed to the section on interference in the new "Handbuch der physikalischen Optik".

WE regret to announce the following deaths:

Prof. A. R. Crook, for many years chief of the Illinois State Museum at Springfield, Illinois, known for his work on Cretaceous fossil fishes and geology generally, on May 30, aged sixty-five years.

Dr. J. Walter Fewkes, fellow of the U.S. National Academy of Sciences, who was chief of the Bureau of American Ethnology from 1918 until his retirement in 1928, on May 31, aged seventy-nine years.

Dr. W. S. Franklin, who retired last year from the professorship of physics and electrical engineering at the Massachusetts Institute of Technology, vice-president (Section B) of the American Association for the Advancement of Science in 1902, on June 6, aged sixty-six years.

Capt. J. T. Ainslie Walker, widely known by his work on disinfectants, who was associated with the late Dr. Samuel Rideal in perfecting the Rideal-Walker test for potency, on July 27.

Sir William Walker, C.B.E., late Director of Health and Safety in Mines Department, Board of Trade, and formerly Chief Inspector of Mines at Home Office, on Aug. 17, aged sixty-six years.