in 1884. While at Oxford he studied Astronomy with Professor Pritchard and Mr. Plummer.

In 1884 Mr. Seward obtained a post in H.M. Patent Office as Deputy Examiner, which he held till his death. Apart from his work at the Patent Office, in which he was thoroughly interested, Mr. Seward's special interests were orchestral music and astronomy. He joined the Society in December 1884, immediately after his appointment at the Patent Office, and was a regular attendant at the meetings. He joined the British Astronomical Association soon after its foundation, and was for several years on the Council of that body. He contributed to the Society, in January 1896, a "Note on the Indexing of Scientific Papers." In this note, written at a time when the importance of indexing was strongly felt, and the methods to be adopted widely discussed, Mr. Seward offered some suggestions based on his wide experience at the Patent Office. It is interesting to note that the *International Catalogue of Scientific Literature* is being carried out on lines very similar to those indicated by Mr. Seward.

Mr. Seward married Florence, daughter of Mr. Borders, of 10 Balham Park Road. He died on October 14, 1903, after a year's suffering from a painful illness.

WASHINGTON TEASDALE was born at Leeds, Yorkshire, on the 8th of August 1830. His father died whilst Washington was still a youth, and in consequence his younger brother, his sister and himself were brought up under the chief guardianship of his maternal grandfather, the late Mr. Christopher Heaps, one of the most prominent citizens of Leeds in the middle of the last century. He was educated at Mr. Richard Hiley's Academy, then a well-known school standing near the junction of Queen Square and Woodhouse Lane, and even in boyhood displayed a special interest in scientific pursuits. This appears to have been further fostered by his later training, the profession for which he was designed being that of a civil engineer. When the railway system of India was being constructed, he went out to that country to take part in its development. Here he remained for several years, acquiring such a complete mastery over the native language that it is said he preserved the habit of thinking in Hindustani till the very close of his life. On his return to England he settled in Leeds, and possessing the means, and having ample leisure, he devoted himself to the cultivation of his scientific tastes. These were many and varied, and there was hardly any local scientific society with which he was not connected. In particular he actively interested himself in the Leeds Astronomical Society, the Leeds Naturalist Club, the Scientific Association, the Philosophical and Literary Society, and the Institute of Science, Art, and Literature, throwing himself into whatever subject he took up with most delightful enthusiasm. Photography was an art in which he took especial interest; indeed, he was amongst the earliest workers

in this field, and in conjunction with a few friends, he founded a photographic society before he went to India, when the art was quite in its infancy, and he continued his active connection to the very last with the organisation which had succeeded the original society. He watched the development of the art with the most lively attention, and familiarised himself with every new process as it was introduced. He hardly ever went on a journey, or took a holiday, without his camera, and was continually adding to his rich collection of views. He was one of the first to use the lantern for lecture purposes, and was skilful in the design and preparation of slides for this work. He lectured hundreds of times in connection with various scientific and literary societies; his unaffected delight and interest in the subjects of which he was speaking rendering him in public, as in private, always most attractive.

Astronomy had, however, the chief fascination for him. He was elected a Fellow of this Society in 1886; he was an original member of the British Astronomical Association; and in his native town he had a large share in the resuscitation and the development of the Leeds Astronomical Society, of which he was President from 1893 to 1897. He contributed frequently to its *Journal*, and his services to it cannot be over-estimated.

His love of science amounted to a passion. It had for him an absorbing interest, and for the greater part of his life it was almost his sole occupation, and a hobby which gave a joy to existence. His house in Hyde Park Road, Leeds, was quite a treasury of scientific apparatus, works of art, and interesting curios, and other subjects which denoted the wide range of his studies and sympathies. Outside his more serious pursuits he had many scientific hobbies that afforded himself and his friends amusement. Amongst these may be mentioned, his pendulum writing, an ingenious method of procuring peculiar curved designs of which he claimed to be the originator; then it was the collection of finger prints of eminent men; more recently it was the mixing of inks by which through the medium of a few splashes he obtained the most curious gradations of colour. At one time he made a series of experiments on the problem of the cultivation of trees in large towns; at another he devoted a good deal of study to the monoliths at Stonehenge.

Mr. Teasdale married and had one child, but he survived both his wife and child by many years.

His death took place during the meeting of the British Association at Southport. He had gone thither to attend the meetings, and was visiting a friend, when he was seized with illness, and remained in a state of coma for some time. Hopes were, however, entertained of his recovery, but a second attack followed the next day, and he died on Saturday, the 19th of September 1903, at the age of 72. E. W. M.

Major-General WILLIAM HENRY WARDELL, R.A., was the eldest son of Major W. H. Wardell, of the 66th (Berkshire) Regiment and the 93rd Highlanders. He was born in 1838 at Halifax, Nova Scotia. In 1855 he obtained a commission in the Royal Artillery. While a subaltern he served with a detachment of Royal Artillery, which landed Colonel M'Crea for the protection of Europeans at Port au Prince during the revolution in Hayti in January 1859, which ended the reign of the Emperor Faustin. He was for some time an instructor in mathematics at the Royal Military Academy, Woolwich. Later he held the post of assistant-superintendent of the Royal Gunpowder Factory at Waltham Abbey. In 1882, while colonel commanding the artillery in the Windward Islands, he was wrecked with some troops off Barbados. For his coolness and courage on this occasion, which materially assisted in the safe landing of all on board, he received the thanks of the Commander-in-Chief. In 1886 he retired from the service with the honorary rank of Major-General.

General Wardell was the author of *Notes on Gunpowder* and of the article on "Gunpowder" in the *Encyclopædia Britannica*, where he gave an interesting historical account as well as a technical treatment of the subject. He occasionally contributed articles on kindred subjects to scientific reviews. In 1874 he was chosen to observe the transit of *Venus* from the island of Rodriguez, but was prevented from doing so by his military duties. He became a Fellow of the Society on the 14th of January 1876.

General Wardell died on the 24th of July 1903, at his residence, Sparkford Lodge, Winchester, leaving a widow and several children.

WILLIAM LIVINGSTONE WATSON was born at Kinross in 1835, and was educated at the Universities of Edinburgh and Glasgow. He entered on a mercantile career in Glasgow in 1855, joining Messrs. James Finlay & Co., a firm of East India merchants. He was a partner in this firm for twenty years, retiring in 1890. From 1876 to 1890 he represented the firm in London. He was for fifteen years chairman of the London Board of the Royal Insurance Company, for some time the Merchants' Marine Insurance Company, and of the Agra Bank, a director of the Indo-China Steam Navigation Company, the Assam-Bengal Railway, the Clan Line of Steamers, and several Indian Sea Companies.

Mr. Watson was a man of very varied interests, and was a Fellow of the Royal Geographical Society and the Society of Antiquaries, as well as of the Royal Astronomical Society. He had at his Scottish residence at Ayton, Abernethy, Perthshire, a 12-inch refractor. This instrument was exhibited at the Great Exhibition in 1851, and was then one of the largest in Great Britain.

Mr. Watson also found time to take an active part in the local