he became a member of it in 1823, when it met in Crispin Street, Spitalfields.

Mr. Page was a man of retiring disposition, only seeking enjoyment in his books, his conic sections, and his lathe. He had acquired a large fund of knowledge, which he was always ready to impart to those who sought for it. He was an acknowledged authority on Exchange and Foreign Bills, and wrote much in conjunction with his father on Peel's Bank Act, and also on the Corn Laws. One of the last subjects that he was interested in was paper currency, and his views were published, with those of others, in a volume by the late Lord Overstone.

Sir EDWARD SABINE was the son of Mr. Joseph Sabine of Lewin, and was born in Dublin, on October 14, 1788. The family to which he belonged, said to be of Italian origin, early settled in Normandy, and removed thence to this country. He received his early education at the Royal Military Colleges of Marlow and Woolwich, obtaining a commission as second lieutenant in the Royal Artillery when but fifteen years of age, on December 22, 1803, and receiving his captaincy in 1813. He served in the American War, 1813–1816, and was present in the campaign of 1814 on the Niagara frontier. He commanded the batteries at the siege of Fort Erie, and was favourably mentioned in despatches. On the conclusion of the war he was appointed, on the recommendation of the President and Council of the Royal Society, astronomer of the first expedition in search of the North-West Passage, commanded by Sir John Ross, in 1818. On the return of that expedition, he accompanied, in the same capacity, the second expedition, 1819–1820, commanded by Sir Edward Parry. As the result of his observations he made two communications to the Royal Society, which were published in the *Philosophical Transactions*, one relating to the irregularities observed in the direction of the compass needle consequent upon the attraction of the iron of the ships, and the other to the variations of the magnetic needle and the intensity of the magnetic force during the voyage. In the latter he pointed out the importance of founding a widely-extended series of observations of magnetic disturbances.

In 1821 and 1822 he conducted a series of pendulum experiments for determining the figure of the earth at several stations at or near the Equator, on the coasts of Africa and America in H.M.S. *Pheasant*, and in 1823 he extended the series to Greenland, Spitzbergen, and Norway, in H.M.S. *Griper*. In these voyages he also paid attention to various other questions, such as deep-sea temperature, ocean currents, the measurement of heights barometrically, the influence of the Gulf Stream on the coasts of Europe, &c. His papers on these and other subjects were published in the *Philosophical Transactions*, the *Edinburgh Journal of Science*, and the *Quarterly Journal of Science*.

In 1825 he and Sir John Herschel were appointed the

British members of a joint commission between the French and English Governments to determine the difference of longitude between the Observatories of Paris and Greenwich by means of rocket signals. In 1827 he was employed in determining by direct observation the difference in the length of the seconds pendulum at Paris and Greenwich; and at the same time he made a series of experiments in order to determine the ratio of the magnetic forces acting on a needle horizontally suspended at these two places. The results of the experiments appeared in the *Philosophical Transactions*, when he also published other papers relating to pendulum observations.

From this time onwards his energies were mainly devoted to researches on terrestrial magnetism, which is the subject with which his name will always be chiefly connected. Numerous memoirs of his, representing an immense amount of work, were published in the *Philosophical Transactions*, the British Association *Reports*, Quetelet's *Correspondance Mathématique*, &c.; in fact, during the forty years from 1830 to 1870 he laboured earnestly and persistently to extend our knowledge of the magnetic condition of the globe, and the present state of this science is mainly due to his untiring efforts. In the British Association *Reports* from 1835 to 1838 he published memoirs relating to the magnetic intensity in the British Isles and over the Earth's surface. By 1838 he had so completely demonstrated the importance of magnetic observations being carried out in all parts of the world, that Capt. James Ross was sent with the *Erebus* and *Terror* to make a magnetical survey of the Antarctic regions, and Sabine accompanied the expedition. He had induced the Admiralty to promote the establishment of observatories in the Colonies, and on the voyage out, magnetical and meteorological observatories were founded at St. Helena, the Cape, and Hobarton (Van Diemen's Land). These observatories were placed under his superintendence, and at this time a general magnetic survey was commenced by him under the direction of the Admiralty. The observatories remained under his control for many years, and the magnetic survey of the globe continued to occupy his chief attention so long as he was capable of work. The results were communicated to the Royal Society in a series of elaborate papers. His last paper appeared in 1872, when he gave a magnetical survey of the North Polar regions. The infirmities of age were then stealing upon him, and he would scarcely have been able to complete it without the assistance of Sir Frederick Evans, the present Hydrographer of the Admiralty. As one of the results of the observations made at the Colonial Observatories, Sabine was led to notice the connection between the number of spots on the Sun and magnetic disturbances. He contributed altogether nearly forty papers to the *Philosophical Transactions*.

In 1826 he married Elizabeth Juliana, daughter of Mr. W. Leeves; she was the companion of his labours, and assisted him in all his work. She died in 1879. He had a great admiration

of Humboldt, and edited an English translation of his *Cosmos* made by Mrs. Sabine. In 1830, in consequence of the disturbed state of Ireland, where his company of artillery was then stationed, he was required to join it; and he also served there, partly with his regiment and partly on the general staff of the army in Ireland, from 1833 to 1837.

He was elected a Fellow of the Royal Society on April 16, 1818, so that for the long period of sixty-five years he was a Fellow of that Society. His first paper, on the birds of Greenland, was communicated to the Linnean Society in the same year (1818); his contributions to science, therefore, cover no less than fifty-four years. He was Secretary of the Royal Society in 1827, in 1846 Foreign Secretary, in 1850 Vice-President and Treasurer. In 1861 he succeeded Sir Benjamin Brodie as President, and held the office until 1871. He was General Secretary of the British Association from 1839 to 1858, and was President at the meeting in Belfast in 1852. He was elected a Fellow of this Society on November 8, 1839.

He was awarded the Copley medal of the Royal Society in 1821, and a Royal medal in 1849; he also received the Lalande medal of the French Academy. He became lieutenant-colonel in 1851, and major-general in 1859. He was made a K.C.B. in 1869. He was an honorary member or associate of almost every foreign academy and scientific society of note. He died at his residence at London on June 26, 1883, in his ninety-fifth year, and was buried at Tewin beside his wife on June 30. For some time before his death his faculties had failed him. He leaves no family. J. W. L. G.

Henry John Stephen Smith was born on November 2, 1826, and was the fourth child of his parents. His father, John Smith, was a barrister-at-law, and graduated at Trinity College, Dublin, and afterwards at Brasenose College, Oxford, in order to shorten the residence at the Inns of Court that was requisite before he could be called to the bar. At the Temple he was the law pupil of Henry John Stephen, serjeant-at-law, the editor of "Blackstone's Commentaries," and the pupil gave the master's name to the younger of his two sons.

When Henry Smith was just two years old his father died. There were four children, two sons and two daughters, of whom the eldest, a girl, was but nine years of age; and to their education the widow thenceforth devoted herself. Chiefly in order to give her children the better opportunity of education which England afforded, Mrs. Smith left Ireland, and after spending some time in the Isle of Man, at Harborne near Birmingham, and at Leamington, she moved in 1831 to Ryde, in the Isle of Wight, where she remained for nearly ten years. Mrs. Smith was a most accomplished lady, and an intense delight in learning was one of the ruling impulses of her life. She taught her children herself, and until Henry was over eleven he remained