MR. AUGUSTUS SIEBE was born in Saxony in the year 1788, but was taken by his parents at an early age to Berlin, in which city he was educated. There he was apprenticed to a fine-caster, and early evinced great taste in modelling and chasing and in mechanical work. In 1812 he had to join the army, and fought as lieutenant in the artillery at the battle of Leipsic, where he was wounded. Peace being signed, he went to Kiel, and obtained a situation with a watch and clock manufacturer. In 1814 he came to England, and, while perfecting himself in the language, obtained employment in chasing, gun-making, &c. Eventually he became foreman and manager to an engineering firm, where his mechanical abilities brought him into note. At this period he invented a breech-loading rifle and a dial weighing-machine, and received a silver medal from the Society of Arts for improvements in taps. He eventually commenced business on his own account. As a proof of his efforts, it may be mentioned that several of the lathes and tools in his workshop were made by himself during his leisure hours at the time he was manager. He now invented a rotary pump, which brought his name before the engineering world, and his business rapidly increased. About 1829 he was introduced to Mr. A. Deane, who had invented an apparatus for entering into houses or buildings on fire, and suggested to him the practicability of working under water with a similar apparatus, and eventually constructed an air-pump and diving-dress, known as the open dress. With this apparatus much valuable property was recovered, and diving became a remunerative speculation. In 1837 he invented the close diving-helmet, which is hermetically fastened to the india-rubber dress, also the segmental neck-ring, by which the head-piece was removed from the collar by one-eighth of a turn. This helmet was further fitted with the inlet and outlet valve, and he also added the water apparatus to keep the cylinders cool, the pressure-gauge, &c. At this date the Royal Engineers commenced diving operations at the wreck of the 'Royal George,' and, at the request of the late Major-General Pasley, C.B. (then Colonel Pasley), he carried out a series of experiments with the Sappers and Miners; and the practical experience thus obtained led him to adopt the profession of a submarine engineer. He was appointed contractor to the Admiralty, his invention being used for the Navy and Dock Yards. He was also the manufacturer of the ice-making machinery.

For his various inventions he received prizes on the occasion of the Exhibitions—in London, in 1851; in Paris, 1855; London, 1862; and Dublin, in 1865. He carried on business up to his

eightieth year, when failing health induced him to retire in favour of his son and son-in-law.

Mr. Siebe was elected an Associate of the Institution on the 2nd of December, 1856. In manner he was retiring, kind of heart, and upright and honourable in his dealings. He died on the 15th of April, 1872, in his eighty-fourth year.

DR. GERRIT SIMONS was born at Thamen aan den Amstel, not far from Amsterdam, in 1802. He was the youngest son of Mr. Adam Simons, a popular poet, and a distinguished professor of Dutch literature, at the University of Utrecht. At the age of seventeen Mr. Gerrit Simons attended the courses of lectures on medicine at that university; but some time afterwards his personal preference for the science of geometry and natural philosophy induced him to discontinue them. In the new branch of science to which he devoted himself he began very early to show superior attainments; and, while yet a student, he was awarded a gold medal for a Paper upon the chemical composition of aqueous vapour in the atmosphere. About the same time he was appointed Observer at the Observatory of Utrecht. After having published a dissertation upon the expansion of liquids by heat, he received the degree, in 1828, of Doctor of Philosophy. Two years later his scientific researches were stopped for some time in consequence of political events; and he served as a volunteer in the civic guards during the war with Belgium. In 1832 he was appointed Consulting Chemist and Mechanician to the Ministry of the Interior at the Hague. During a residence of about thirteen years there Mr. Simons distinguished himself by a series of useful labours.

In 1838 he was appointed a member of the committee nominated for reporting upon the best means of draining the lake called Haarlemmermeer, with an area of about 45,000 acres; and he prepared a valuable memoir upon the subject, which was published and presented to the King in 1839. In those days it was a question whether the motor to be adopted for the pumping machinery should be wind or steam. Very many water-mills, driven by the action of the wind, were in existence, while steam-mills were almost unknown. A few experiments with steam-mills had given no favourable results, when looked at from an economical point of view. In the designs for the drainage of the Haarlemmermeer, made in 1838, a combination of seventy-