

kiln, the characteristic feature of the process¹ being that the material was burned in a state of powder, and that it emerged from the furnace in this condition, the object being to reduce the final grinding from a tedious and expensive process to a very simple and rapid operation.

Mr. Ransome spent the last few years of his life in retirement. He died on the 19th of April, 1893, at the age of seventy-five. His geniality and kindness of heart gained him many friends. In middle life he was a frequent attendant at the meetings of the Institution, of which he was elected an Associate on the 7th of March, 1848, and served as an Associate of Council in 1868–69.

COLONEL JOHN BARNES SPARKS, of the Bengal Staff Corps, was born at sea—off Sierra-Leone, West Africa—on the 19th July, 1841, his mother being on her way to join her husband, then Captain and afterwards Colonel George Mitchell Sparks, who was serving with his regiment, the 12th Foot, in China, and afterwards fell in India.

Educated in India, John Barnes Sparks early attained prominence in his studies at Mussouri, and then proceeded to the Thomason Civil Engineering College at Roorkee, where he highly distinguished himself in mathematics and engineering subjects, obtaining a gold medal and other distinctions. On the outbreak of the Mutiny, in 1857, he was enrolled among the volunteers, but did not take any part in the actual warfare. On the 5th of August, 1859, he received his first commission as Ensign in the 38th Foot Regiment; from which he was appointed to the Bengal Staff Corps, joining the Public Works Department in August, 1863. After being employed on surveying, road construction, and other work for some time, he was transferred to Gwalior, where, besides the construction of government works, he was engaged in the reparation of the Fortress which has been recently restored to Scindia. In 1868 he married Eliza Jane, widow of Frederick Kitchen Buist, of Cawnpore, and in 1870 visited England on furlough. In the following year he was promoted to the rank of Captain.

On returning to India towards the end of 1871, Captain Sparks was posted to Karachi as Assistant Engineer, 1st Grade, and was engaged on the construction of the Indus Valley State Railway, and in the management of the stores of that line. On promotion to Executive Engineer, 4th Grade, in 1872, he was moved to

¹ "Engineering," vol. xlii. p. 156.

Mooltan, still on the same railway. While engaged on this and the Kandahar Railways under Mr. J. R. Bell, he took part in the construction and opening of the Empress bridge over the Sutlej¹ at Adamwahan, which at that time was one of the most important engineering works in India. During his residence at Mooltan he established, among numerous undertakings of local interest, co-operative stores for the railway servants which, under his management, resulted in great benefit both to the employees and to the Railway Servants' Fund. He was promoted to the rank of Major on the 5th of August, 1879.

In the following year Major Sparks again visited England on furlough and shortly after his return was appointed to Bombay to the important post of port storekeeper to the State Railways Department. In this position, which he held for seven years, he showed great business capability and capacity for management. In August, 1885, he was promoted to Lieutenant-Colonel and four years later to full Colonel. After another brief visit home, and return to his post at Bombay, he spent two years in England, from May, 1889, at Sydenham. Here he speedily became known as an active helper in all charitable and philanthropic undertakings, and gained great popularity during his short residence.

In May, 1891, Colonel Sparks again returned to India, and was appointed Chief Engineer to the East Coast Railway of Madras. After a short time he undertook the management of the stores of that line, but had hardly entered upon these duties when his health broke down and under urgent medical advice he was forced to proceed home. He reached England in August, 1892, but he gradually declined and passed peacefully away on the 6th of March, 1893, at Addison Mansions, Kensington, at the age of fifty-two years.

During his thirty-two years of service in India in various positions, Colonel Sparks' industry and ability obtained for him a high reputation among his superior officers and companions. In private life he was held in the highest estimation by all who knew him. Especially in Mooltan and Bombay he took more than a mere interest in all works, whether of a social, general, or charitable character, and his aid and advice were always sought. He was also connected with the University of Bombay; and the Byculla schools of that city owe much of their success to his careful and able management as honorary secretary and treasurer.

Colonel Sparks was elected an Associate of the Institution on the 21st of May, 1867.

¹ Minutes of Proceedings Inst. C.E., vol. lxx. p. 242.