

of liberal and scientific knowledge were pursued in common. In his annual report of June last, speaking of Mr. Beyer, he observes that "his munificent gifts towards the Extension Fund were not more conspicuous than the warm personal interest which he always showed in the growth and prosperity of the College; and by those who enjoyed his friendship his loss will long be severely felt."

For some time before his death, Mr. Beyer's health showed symptoms of failure, which however did not assume a serious character until the early part of 1876. It was then found that he was suffering from great prostration of the nervous system, arising, as is now frequently the case, from too close an application to business, and which would probably have disappeared if he could have yielded to the wishes of his medical advisers, and rested from his labours for a time. Like too many of the members of the profession, he did not find it an easy matter to follow this advice, and he gradually became worse till the time of his death. He was an earnest inquirer after truth, both in science and in religion. He was not unfamiliar with some of the most important aspects of modern religious controversy; but he lived and died a sincere and enlightened Christian, reposing with child-like confidence upon the merits of his Saviour.

Mr. Beyer became a Member of this Institution on the 7th of March, 1854. He was one of the founders of the Institution of Mechanical Engineers, one of the Governors of Owens College, Manchester, and of the Manchester Grammar School, and a member of several scientific and charitable institutions, and shortly before his death was appointed a magistrate.

This brief sketch of Charles Frederick Beyer will have gained its end, if it serves to keep alive the memory of a man of singular purity and simplicity of character; whose history shows what great results may be achieved under circumstances the most unpromising, when great parts are united to untiring industry, and are directed by high principles and noble and unselfish aims.

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MR. RICHARD SMITH CLAYTON, son of Mr. Thomas Clayton, woolstapler, of Bradford, Yorkshire, was born on the 14th of September, 1838. He was educated at the Priory, South Lincolnshire, and at Rugby School. In 1855 he was articled to Mr. (now Sir John) Hawkshaw, Past-President Inst. C.E., with whom he remained four years, during part of which time he was employed

on the works of the Holyhead Breakwater. From 1860 to 1867 he was engaged under Mr. John Fraser, M. Inst. C.E., in the construction of railways in the West Riding of Yorkshire, and as Resident Engineer on the West Riding and Grimsby railway (Wakefield to Doncaster). During the latter part of 1867 and the beginning of 1868 he represented the late Mr. Seymour Clarke on the "Railways (Ireland) Commission." In 1869 and 1870 he was engaged in Hungary, under Messrs. Waring Brothers, and afterwards went to Buenos Ayres for that firm, returning in 1871. From this time to June 1876 he was connected with Mr. Fraser in surveys for and in the construction of the Newark and Melton railways (now Great Northern and London and North-Western joint lines), and assisted that gentleman on the surveys of the railways from Melton to Leicester, and other lines in that district. In 1876, the state of his health necessitating his abstention from business, he was recommended by his medical advisers to go abroad. In June he went to North America, where he died on the 5th of July.

He was elected a Member of the Institution of Civil Engineers on the 7th of April 1868.

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Mr. ROBERT MILLIGAN was born in the year 1827 at Castle Douglas, Kirkcudbrightshire, and was educated at the Academy of that town. He served a regular pupilage to Mr. John A. Brine, C.E., at Birkenhead, and was afterwards engaged for a year in laying out highways in Scotland. In 1851 he was appointed Second Engineer to the projected gasworks at Rio de Janeiro, and in connection with that enterprise prepared the surveys and sections of the city. On their completion Mr. Milligan was employed by H.E. the "Commendador" Ireneo Evangelista da Souza (now Visconde de Mauá) to survey and lay out the Mauá railway (the first constructed in South America), through a most insalubrious district lying between the north end of the Bay of Rio de Janeiro and the base of the great "Serra" of Petropolis. About the end of 1852 Mr. Milligan was sent by the Visconde de Mauá to examine the province of San Paulo as to the feasibility of connecting the great coffee-producing districts of the interior of the province of San Paulo by railway communication with the port of Santos, when he laid out a line from the top of the Serra do Mar to Jundiahy, which scarcely differed from that ultimately adopted when the railway was constructed. On his return to Rio