

out by Mr. Proctor-Sims:—the High School, the High Court, the Anglo-Vernacular School, the Nilambag Palace, the Samaldas College, and the Takhtsingji Hospital, the last named being designed by Mr. William Emerson. Mr. Proctor-Sims devoted much attention to the harbour works of the State. Having done much to improve the Port of Bhavnagar, he was interesting himself in developing the new Port Albert Victor, and it was during the famine in May, 1900, while organizing relief works at this Port that he fell a victim to cholera which was raging in the district.

As the most trusted European official in the State Mr. Proctor-Sims was constantly consulted by the Maharajah on important measures other than those connected with engineering. The horse-breeding operations of the State and the Bhavnagar Imperial Lancers were practically organized by him; and indeed every matter of importance in the State, including its relations with the Imperial Government, was carried out either by him or under his guidance. Perhaps the department in which his work was most important was that of the Board of Control of the Kathiawar system of State Railways, in which the Bhavnagar State has a large interest.

Mr. Proctor-Sims was a man of great unselfishness, his hospitality was proverbial, and his genial social qualities made him liked everywhere. His untimely death was keenly felt, not only by the Maharajah, but by the people of the State generally, by whom he was universally trusted and respected.

Mr. Proctor-Sims was elected an Associate of the Institution on the 5th May, 1868, and was transferred to the class of Members on the 9th May, 1876.

JOHN BALDRY REDMAN, who died at Virginia Water on the 21st December, 1899, was for some time before his decease the "Father of the Institution," having been elected a Graduate on the 26th February, 1839, from which class he was transferred to that of Members on the 3rd March, 1846. Thus his connection with the Institution lasted upwards of 60 years.

Born in 1816, he outlived nearly all his contemporaries, and considerable difficulty has been experienced in preparing this notice. His engineering training was obtained in the office of Messrs. Walker and Burges, which he entered as a pupil about the year 1834. While with them he was employed on various works on the

Thames, and it was thus that he laid the foundation of that extensive knowledge of the river which characterized him in later life. He used to relate how, as a lad of eighteen, he was deputed, in the absence of Mr. Walker from illness, to show a large party—the Duke of Wellington and Sir Robert Peel among them—over the graving dock of the Surrey Commercial Docks, his senior fellow pupil having disappeared in sheer fright when informed of the unexpected arrival of the party. Young Redman was afterwards thanked by Sir Robert Peel for the clearness of his explanations. While still a pupil he contributed in 1839 the first of many Papers to the Institution, “An Account of the New Stone Bridge over the River Lea at Stratford-le-Bow,¹ for which Mr. Walker was Engineer. For that communication he was awarded a Telford medal in bronze and books to the value of three guineas. After the expiration of his pupilage he remained with Messrs. Walker and Burges as an Assistant until 1841, when he started on his own account, taking an office in Great George Street, Westminster. From that year until 1885 he occupied various offices in Westminster, his practice, however, declining somewhat with advancing age.

His second Paper, contributed to the Institution in 1842, was a “Description of the Maplin Sand Lighthouse at the Mouth of the River Thames,”² on the construction of which he had been engaged under Mr. Walker, who, it will be remembered, was for some years Engineer to the Trinity House. In 1845 he presented an “Account of the New Cast-iron Pier, at Milton-on-Thames, next Gravesend, in the County of Kent; with details of the mode of construction adopted in its erection.”³ This work, known as the “Royal Terrace Pier,” was designed by him and carried out under his superintendence by Messrs. Fox, Henderson & Co., of the London Works, Birmingham. In 1848 appeared a fourth Paper from his pen entitled “Remarks on the Formation of Entrances to Wet and Dry Docks, situated upon a Tideway; illustrated by the principal examples in the Port of London,”⁴ for which he was awarded a Telford Premium.

Mr. Redman’s careful investigation of London dock entrances was followed by an exhaustive study of the South Coast, the outcome of which, in 1852, was a Paper “On the Alluvial Formations

¹ Transactions Inst. C.E., vol. iii. p. 343, and Minutes of Proceedings Inst. C.E., vol. i. (1839), p. 77.

² Minutes of Proceedings Inst. C.E., vol. ii. (1842) p. 150, and vol. vii. p. 146.

³ *Ibid.*, vol. iv. pp. 77 and 222.

⁴ *Ibid.*, vol. vii. p. 159.

and the Local Changes of the South Coast of England.”¹ For this communication, which gave rise to an animated discussion, he was awarded a Council Premium of books. In 1855 he constructed a large wharf and tidal docks at East Greenwich, and executed the repairs of the pier at West Greenwich.² The Paper on the South Coast was followed in 1864 by “The East Coast between the Thames and the Wash Estuaries,”³ for which he obtained a Telford Premium. The object of these valuable communications was to describe the characteristics of ranges of coast within certain limits, to trace the changes produced by constant natural causes, and the resultant influences on various harbours.

In 1877 appeared Mr. Redman’s seventh and last Paper, “The River Thames,”⁴ for which he again obtained a Telford Premium. So far back as 1856 he had contributed, in the course of the discussion on a Paper on the same subject by Mr. Henry Robinson, an historical notice⁵ of the river which was the embodiment of upwards of twenty years’ experience and study of that important waterway. His communication of 1877, the result of more than forty years’ work, comprised a great deal of valuable information, historical and statistical, with regard to the Thames, tracing the causes which had led to the improvement in its navigable channel, and furnishing data as to the comparative action of the tides in the river for eighty years. While setting forth that modern improvements had added, during nearly half a century, about 33 per cent. to the above-bridge tidal volume operating twice every twenty-four hours, he pointed out that the evils arising from the non-embankment of the low-lying portions of the metropolis would be intensified year by year with the development of the tidal improvements until met by some well-considered and comprehensive measure.

In addition to these Papers, Mr. Redman frequently took part in discussions on subjects ranging from rivers, coasts, docks, and harbours, to tramways, railways, and street pavements; indeed, reference can scarcely be made to one of the first seventy volumes of the Proceedings without finding some contribution from his store of knowledge and experience, or some evidence of original thought. For many years before giving up his office in Westminster he was a daily frequenter of the Reading Room of the Institution, and his

¹ Minutes of Proceedings Inst. C.E., vol. xi. p. 162.

² *Ibid*, vol. xv. p. 216.

³ *Ibid*, vol. xxiii. p. 186.

⁴ *Ibid*, vol. xlix. p. 67.

⁵ *Ibid*, vol. xv. p. 211.

short, compactly-built figure and keen, intelligent features were well known there. Of a somewhat masterful and self-assertive disposition, he was, nevertheless, kind and genial to those able to penetrate the hard crust of his outer man.

During the latter years of his life he held the post of District Surveyor for North-east Deptford, to which he was appointed by the late Metropolitan Board of Works on the recommendation of his old friend and fellow pupil, Sir Joseph Bazalgette. He was confirmed in this office when the London County Council was formed, and, in order to be able better to perform his duties, resided in the New Cross Road. Full of energy to the last, he worked until within a month or two of his death, in order that he might meet some fancied obligations which would never have been advanced against him.

Professor CALLCOTT REILLY, who from 1871 to 1897 held the important chair of Engineering Construction at the Royal Indian Engineering College, Coopers Hill, died at the Clergy House, Englefield Green, on the 21st May, 1900.

Born in 1829, his early life was one of adventure. When still a lad, bitten by a longing for the sea, he ran away from Chester, made his way to the Liverpool Docks, and was about to sail on board a small coasting-vessel as cabin boy when he was found by his father and brought home again. About a year later he ran away a second time, and was again found on a ship in the Liverpool Docks by his father, who this time did not bring him back, but bound him apprentice to a shipowner. He made two voyages to the East Indies and one to North America on a timber ship, but, although he always strove to be first in the performance of duty, the hard life of an ordinary seaman in the merchant service of that day cured him of his longing for the sea, and, as soon as he could get free, he turned his attention to engineering, and became an apprentice of Messrs. Edward and Bryan Johnson, millwrights, of Chester.

After the expiration of his engineering apprenticeship, Callcott Reilly was for two years (1852-54) foreman of pattern-makers at the works of Messrs. Knight and Woods, of Bolton, and was subsequently for twelve months chief foreman at the works of Mr. Joseph Clayton, millwright and engineer, of Preston. His next employment was as draughtsman in the office of Mr. James Hodgson, of Liverpool, one of the pioneers of iron-shipbuilding.