

It should not be omitted to be mentioned that Mr. McClean took an active interest in ocean telegraphy, and was for some time Chairman of the Anglo-American Telegraph Company. He was a Fellow of the Royal, the Geological, the Astronomical, and other scientific societies.

Mr. McClean was elected a Graduate of the Institution of Civil Engineers on the 12th of February, 1839; in June 1844 he became a Member by transfer; in 1848 he was elected a Member of Council, in 1858 one of the Vice-Presidents, and in the years 1864 and 1865 he occupied the Presidential Chair. In his able inaugural address, which attracted considerable attention, he demonstrated very forcibly the direct bearing of Engineering work upon the general prosperity of the country. He was warmly attached to the Institution, and never omitted any opportunity of being useful to it, or of impressing upon the world the benefits which it was calculated to confer upon society. He also took great interest in the creation of the Benevolent Fund of the Institution of Civil Engineers, and employed his influence as President to secure the adoption of that admirable project.

For more than thirty years Mr. McClean occupied a prominent position in the profession of which he was an ornament, not only from his talents, but from his uniformly upright, conscientious conduct. His decease occurred at Stonehouse, Isle of Thanet, on the 13th of July, 1873. Esteemed as a public man and beloved as a friend, his loss was deplored by a wide circle, whilst there are many who will miss the kindly, generous acts so unostentatiously and so delicately performed by him.

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Mr. CHARLES NIXON was born in London, on the 2nd of June, 1814, and was educated at a private school at Brighton. His father, Mr. William Nixon, an architect and surveyor, was engaged in superintending the erection of the Royal Pavilion at Brighton, and of Buckingham Palace, up to the time of his death. Mr. Charles Nixon commenced his professional studies in the year 1832, under Mr. John Nash, the architect, upon whose death, in 1835, he was engaged as an assistant to Mr. William Ranger, a contractor for several extensive engineering works. Among other duties he was intrusted with the superintendence of the new graving docks then building in Her Majesty's Dockyards at Chatham and at Woolwich, and afterwards of a length of 7 miles of the Great Western railway, which comprised a stone bridge over the floating harbour at Bristol, a bridge over the River Avon, five tunnels, and a stone viaduct of forty arches. The contract for the latter works

having been abandoned by Mr. Ranger, it was taken up by Mr. McIntosh, by whom Mr. Nixon was retained, and he continued to have charge of the whole of the works of this portion of the Great Western line. On their completion he further superintended for Mr. McIntosh the construction of that portion of the London and Greenwich railway between Deptford and Greenwich, the entire length of which is a viaduct, and includes the large lifting bridge over the River Ravensbourne. In the year 1841, on the completion of these works, he obtained an engagement with Messrs. Walker and Burges, and superintended for them the widening and securing of the foundations of old Westminster Bridge, a work of great engineering difficulty. He was also intrusted with special surveys and inspections of works, including among others the new harbour and docks at Jersey, old Blackfriars Bridge, &c. From long practical experience, and under the advice of the late Mr. James Walker (Past-President Inst. C.E.), he was induced to enter into business as a Civil Engineer in 1845, and immediately became engaged by the Directors of the Boston and Midland Counties Junction Railway Company to make the surveys for that line.

In 1846 the Chairman of the Cork and Bandon Railway Company was deputed to consult the late Mr. Brunel (V.P. Inst. C.E.) and Mr. Walker as to the appointment of an Engineer in Chief to the Company, when they recommended Mr. Nixon in the strongest terms, as a man of experience in railway construction. Under engagement with the Company, he constructed the first railway tunnel in Ireland, and at the same time he built skew bridges of large span of ordinary rubble masonry. These new and difficult works were executed economically, although exclusively by miners, masons, and excavators from the locality, who were almost entirely trained by himself with the aid of his principal assistant, Mr. Ronayne, M.P., M. Inst. C.E.

He was also appointed Engineer in Chief to carry out the Waterford and Kilkenny railway; and among other matters he was engaged in making the surveys and obtaining an Act for constructing what is now called the Kilkenny Junction railway, from Kilkenny to Maryborough, where it joins the Great Southern and Western (Ireland) railway; in preparing plans and designs for the reclamation of about 10,000 acres of land in Castlemaine Estuary, in the county of Kerry, for which he obtained an Act in 1852; in laying out lines of railway to the harbours of Crookhaven and of Bantry Bay, and in reporting upon those harbours as ports of call, and upon the communications with them.

During the time he lived and worked in Ireland, although an Englishman and a stranger, he was trusted and respected by all who knew him, but particularly by the working men, and whatever might be their complaint, on an appeal, his decision always settled any dispute. He returned to London in the year 1853, and was engaged upon a large number of arbitration cases.

In 1858 he entered into partnership with Mr. William Dennis (M. Inst. C.E.), who had been his chief assistant for some time, when they became jointly engaged in many undertakings, among which may be mentioned the Faversham Water-works, the Tunbridge Wells Water-works, the Parsonstown and Portumna Bridge railway, the Cwmorthin Wharf and tramways, &c. This partnership was terminated in 1869, after which his professional career was pursued alone. One of the last matters that engaged his attention was the better supply of water to the town of Bridgwater, for which he obtained an Act in 1871, but he did not live to see the works carried out.

He was elected an Associate of the Institution on the 1st of February, 1842, and in the same year contributed a Paper on the tunnels situated between Bristol and Bath, on the Great Western railway,<sup>1</sup> for which he received a premium of books. On the 6th of March, 1855, he was transferred to the class of Members, and for many years he attended the Meetings, and took part in the discussions. He suffered from delicate health almost throughout life; but, notwithstanding this, he was a most indefatigable worker. He died on the 22nd of July, 1873, after a lingering illness, at Clapham, Surrey, in the sixtieth year of his age; and his remains were interred in Kensal Green Cemetery.

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MR. DANIEL BADDELEY PRITCHARD was born in July 1827, at Edgbaston, near Birmingham. His father, Mr. Daniel Pritchard, was a contractor for public works, and one of the first railways in England—that from Wigan to Parkside—was made by him. The elder Pritchard was also engaged on the Harecastle Tunnel, under Telford; and subsequently undertook No. 3 general contract on the London and Birmingham railway, and various other contracts in different parts of the kingdom. On these different works the younger Pritchard underwent a regular system of training as an engineer. To acquire further experience, he was afterwards placed for about twelve months with Messrs. James Horne and Co., who were then carrying out the Crown Street Tunnel

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<sup>1</sup> *Vide Minutes of Proceedings Inst. C. E., vol. ii., Session 1842, p. 138.*