

estate at Eagle Hall, Pateley Bridge, Yorkshire, which post he held until 1858, when he obtained an appointment under Mr. Vignoles, Past-President, as an Assistant Engineer on the Bahia and San Francisco Railway. In June, 1860, he went to Chili in the service of the Copiapo Smelting Company, and after eighteen months was appointed Engineer for the Copiapo Railway extension from Pabellon to Chanarcillo. In October, 1864, he became Manager and Engineer of the Coquimbo Railway, which post he held until 1896, when the line was purchased by the Chilian Government. During his management there occurred a tremendous flood, which swept away a large number of the bridges and viaducts of the railway. The stone piers were entirely demolished, nothing being left but the rails, kept together by the fish-plates. When he reconstructed this portion of the line he used the old rails for some of the piers, and those piers are still standing, although several floods have occurred since, the stone piers erected at the same time being swept away. He returned in 1898 to England, where he remained until his death, which took place at Falmouth on the 25th January, 1904.

Mr. Vivian was elected an Associate of the Institution on the 1st December, 1868, and was subsequently placed in the class of Associate Members.

ROBERT MARTIN BARKLIE, *Colonel R.E. retired*, who died at his residence, Inver, Larne, Ireland, on the 30th August, 1903, was the only son of the late Mr. Thomas Barklie, of Inver. Born on the 30th January, 1846, he was educated at Trinity College, Dublin, the Royal Military Academy, Woolwich, and the School of Military Engineering, Chatham. Gazetted to the corps of Royal Engineers in July, 1867, he was employed from 1872 to 1874 on the construction of sea defences in British Guiana, from 1875 to 1877 on the reconstruction of brigade depot buildings at Ayr and Paisley, in 1878 on the water-supply to Curragh Camp, and from 1879 to 1884 on the Ordnance Survey. In 1884-85 Captain Barklie, as he then was, took part in the Sudan Expedition, for which he received the medal with clasp and bronze star. He was in charge of the construction of Marlborough Barracks, Dublin, from 1889 to 1894, and of Mustapha Pacha Barracks, Alexandria, from 1895 to 1898.

In 1898 he became Colonel on the staff, and Commanding Royal Engineers of the Southern District, and in 1901 was placed in command of the Salisbury Plain District, where he rendered valuable service in connection with the large barracks in course

of erection on the Plain. He was placed on the retired list, under the age regulation, on the 30th January, 1903.

Colonel Barklie was elected an Associate of the Institution on the 3rd December, 1901.

FRANCIS MURRAY NEWTON, born in 1852 at Barton Grange, Taunton, was educated at Eton and at University College, Oxford. Taking up astronomical work, he was attached to the Government expedition to Egypt, to observe the Transit of Venus, which he did from Cairo on the 8th December, 1874. On his return to England he went through the works of Messrs. Easton and Anderson, at Erith, and in 1879 he became a master at Eton, being placed in charge of the Practical Mechanics Department. After two years of this work ill-health compelled him to resign. Ultimately he started electrical works in Taunton, and after a time erected the works close to Taunton Station, now known as the Newton Electrical Works, of which, on the formation of a Limited Company, he was appointed Managing Director. Mr. Newton died suddenly at Lancaster on the 16th August, 1903.

He was elected an Associate of the Institution on the 4th February, 1879.

* * The following deaths have also been made known since the 4th February, 1904:—

Members.

ANDERSON, ARCHIBALD MILES; <i>died</i> 23 March, 1904.	LUFF, JOHN MIDDLEMISS; <i>died</i> 6 March, 1904.
COTTON, CHARLES PHILIP; <i>died</i> 10 March, 1904.	MÉRIE, LEOPOLD DOLLFUS DE; <i>died</i> 15 March, 1904.
DAWSON, ERNEST FREDERICK; <i>died</i> 7 April, 1904.	PEARSON, THOMAS WILLIAM; <i>died</i> 30 March, 1904.
ELSDON, WILLIAM; <i>died</i> 10 March, 1904.	SPALDING, WILLIAM HENRY; <i>died</i> 3 March, 1904.
FIELD, JOSHUA; <i>died</i> 29 April, 1904.	STEWART, HOUSTON STEWART; <i>died</i> 4 May, 1904.
LANGLEY, ALFRED ANDREW; <i>died</i> 18 February, 1904.	WILSON, JAMES; <i>died</i> 13 April, 1904.

Associate Members.

EDEN, JOSEPH; <i>died</i> 25 April, 1904.	MINAMI, KIYOSHI; <i>died</i> 20 January, 1904.
GORMAN, WILLIAM AUGUSTUS; <i>died</i> 4 February, 1904.	

Associates.

FORBES, JAMES STAATS; <i>died</i> 5 April, 1904.	HARGROVE, JAMES SIDNEY; <i>died</i> 9 April, 1904.
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Information as to the career and characteristics of the above is solicited in aid of the preparation of Obituary Notices.—SEC. INST. C.E., 10 May, 1904.