

STAFF-CAPTAIN WILLIAM EDWIN ARCHDEACON, R.N., born on the 6th of January, 1839, entered the Royal Navy in the year 1854 and first served in the Baltic and Black Seas during the Russian War in the "Dauntless," which took part in the night attack on the forts of Sebastopol, in the capture of Kinburn and in the blockade of Odessa. For these services he was awarded the Baltic medal, the Crimean medal with Sebastopol clasp, and the Turkish medal. In 1857 he was transferred to the Surveying Branch of the service and from that date until 1866 acted as an Assistant Marine Surveyor in the Bay of Fundy, North America, under the late Admiral Shortland. In July, 1865, he obtained a commission as Navigating Lieutenant.

Lieutenant Archdeacon was appointed in May, 1866, to the Cape of Good Hope Survey, of which he was placed in charge in November of the following year. During the period of his command—some five years—he accomplished, with the aid of small parties travelling along the shore, a large amount of surveying. This work, moreover, was performed in the face of great difficulties, from lack of water, want of roads and means of transport—the only way of crossing rivers frequently being by swimming—and amid considerable danger from the hostility of the Kaffirs. At one time he was kept a close prisoner for seven weeks and even when allowed to proceed with his survey was frequently surrounded and threatened with instant death. The charts of about 400 miles of coast-line, from Table Bay to Orange River on the west and of about 600 miles to Natal on the east, are based on the surveys then made.

From 1872 to 1882 Commander Archdeacon (he was promoted to the rank of Staff-Commander in August, 1875) was in charge of the Admiralty survey of the coast of Western Australia, upwards of 1,200 miles of which were triangulated by a small party camping out along the shore for about nine months in each year. This also was arduous service and the heart complaint, to which he eventually succumbed, may be ascribed to the hardships undergone in the course of that work. During the latter part of his service in Western Australia a small schooner was placed at his command, and, altogether, charts of 2,000 miles of that difficult and dangerous coast were prepared by him and his assistants.

On the completion of that work Commander Archdeacon was appointed Chief of the Survey of the West Coast of England, which post he held until his death on the 23rd of January, 1893. Among the principal surveys conducted by him in British waters

may be mentioned Queenstown to Cork, Waterford, Wexford to Rosslare, Dublin Bar (River Liffey), Belfast and Lough Foyle, Milford Haven, all ports on the north coast of the Bristol Channel up to Avonmouth, and from Avonmouth westerly to Newquay; Chichester and Portsmouth Bars, Cardigan Bay and the north coast of Wales, the estuaries of the Dee and Ribble, Morecambe Bay and Solway Firth. He was promoted to the rank of Staff-Captain in September, 1892.

Captain Archdeacon was a man of indefatigable energy and unceasing industry, and the important surveys carried out under his command have added greatly to hydrographical knowledge. He was elected an Associate of the Institution on the 2nd of December, 1890.

ALFRED CARPMAEL, born on the 9th of February, 1835, was the second son of the late Mr. William Carpmael,¹ one of the most prominent patent agents of his time and the compiler of "Law Reports of Patent Cases"² published in 1843. After being educated at the Clapham Grammar School under the late Rev. Dr. Pritchard, Savilian Professor of Astronomy at Oxford, he was admitted a solicitor in the year 1857. Three years later he became a partner in the firm of Wilson, Bristows and Carpmael, solicitors, of which he remained a member to the time of his death. The details of legal cases would be out of place in a notice of this kind, but it may fittingly be said that during his long connection with this firm he gained great experience in actions involving questions relating to all branches of engineering.

Mr. Carpmael was an Associate of the Chartered Institute of Patent Agents, a Member of the British Association, one of the Board of Visitors of the Royal Institution and a Member of Council of the Society of Arts. In the latter capacity he became a member of the Royal Commission for the British Section of the Columbian Exposition and was present at the dedicatory ceremonies at Chicago in October, 1892. Shortly after his return he became seriously ill and a severe attack of dropsy, following other complaints, proved fatal on the 1st of February, 1893.

In addition to a sound legal knowledge and judgment, Mr. Carpmael possessed considerable scientific and mechanical ability.

¹ Minutes of Proceedings Inst. C.E., vol. xxx. p. 430.

² Library Inst. C.E.