

## JOHN JAMES WALKER. 1825-1900.

JOHN JAMES WALKER was born at Kennington, Surrey, on the 2nd October, 1825, and received his early education partly at the London High School and partly at the Plymouth New Grammar School. His father, John Walker, was successively Head-master of those schools during this period. The family on the father's side was originally derived from Yorkshire, but had been settled in Ireland for several generations. Matthias Walker, the great-grandfather, John Walker, the grandfather, and John Walker, the father of the subject of this notice, were graduates of the University of Dublin. On his mother's side, Mr. J. J. Walker was mainly of English descent.

John Walker, the grandfather, was in orders of the Church of Ireland, and held a distinguished position as fellow of Trinity College, Dublin. He edited several classical text-books, formerly much in vogue among the students of the College, and also published works on elementary mathematics and logic.

As a natural consequence of the long connection of his family with the University of Dublin, Mr. J. J. Walker proceeded to Trinity College, and graduated at the Associated University of Dublin, B.A. in 1849, and M.A. in 1857. But he entered the College labouring under serious drawbacks, for it appears that owing to a notable evangelical movement which disturbed the official theology of the College and University, the representatives of Mr. Walker's family ceased to be conformists.

In the Book of Trinity College, published at the tercentenary (1591—1891), it is recorded of Kearny, the last Provost of the eighteenth century, "his only notable act was to refuse, with tears in his eyes, the resignation offered him, on the ground of religious difficulties, by the pious John Walker, and to expel him publicly on the next day."

Mr. J. J. Walker therefore was debarred from competition for scholarship or fellowship, and lay under other discouraging disabilities. The early death of his father hampered his resources, and made it desirable that he should, while still an undergraduate, take pupils when the opportunity offered. Nevertheless, he passed through the usual undergraduate course with great credit. After obtaining intermediate honours, he was Gold Medallist and Senior Moderator in Mathematics and Physics at the degree examination, and the year after (1850) obtained the second Bishop Law's prize, an honour highly esteemed in the College.

On the completion of his academical career, Mr. Walker engaged permanently in educational work. From 1853 to 1862 he was private tutor in the Guinness family. Soon after the close of this engagement he migrated to London, and in 1865 was appointed Afternoon Lecturer on Applied Mathematics and Natural Philosophy at University College School. In the same year he became a member of the London Mathematical Society, then recently formed. He was President of that Society 1888-90, and later on he became a member of the Physical Society. In 1883 he was elected Fellow of the Royal Society of London. His connection with University College School terminated in 1888, and his extended leisure was afterwards devoted to original research.

From 1868 to 1882 he was Vice-Principal of University Hall, and from 1871 to 1883 acted as examiner on Mathematics for the Hibbert Scholarships.

Mr. Walker was of a reserved temperament, marked by a somewhat precise courtesy of manner which seemed to belong to a bygone generation. His real kindness was shown by genial estimates of character and liberal appreciation of the labours of others engaged in kindred studies. He died on the 15th February, 1900, at Hampstead, where he had resided for some years. In 1874 he married Emma (youngest daughter of the late Mr. William Turner, of Newcastle), who survives him.

Numerous communications to leading scientific journals are due to Mr. Walker's diligence. They range from brief papers relating to particular problems of theoretical mechanics to elaborate memoirs on the higher algebra and geometry. Several papers show practical skill in the application of Hamilton's Quaternions to special and elementary problems, and he held the opinion that this method had been too much neglected as an instrument of research. Mr. Walker's most valuable work, however, was on the lines of the higher algebra as set forth in Dr. Salmon's famous text-books. Thus in the Proceedings of the London Mathematical Society we find three connected papers on a method in the Analysis of Plane Curves and Curved Lines. In these are developed the methods employed in the 9th Chapter of the Treatise on the Higher Plane Curves (2nd edition). In other papers particular attention is given to cubic curves. This study led up to the memoir, "On the Diameters of Cubic Curves," printed in the Transactions of the Royal Society in 1889. In fact, Mr. Walker fully appreciated the modern operational methods, and his papers merit the attention of all who apply themselves hereafter to the advancement of the higher algebra and its application to geometry.

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