

Oxford Dictionary of National Biography

Gordon, James Edward Henry (1852–1893),
electrical engineer
by Brian Bowers

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Gordon, James Edward Henry (1852–1893), electrical engineer, was born at Mickleham, near Dorking, Surrey, on 26 June 1852, the son of James Alexander Gordon FRS (1793–1872), physician to the London Hospital, and his wife, Elizabeth Catharine, *née* Brandreth. After attending a private school in Brighton and Eton College, he studied physics under Professor W. G. Adams at King's College, London. While there he invented an electrical anemometer. He then went to Caius College, Cambridge, where he graduated BA in mathematics in 1875, and stayed in Cambridge to carry out research under James Clerk Maxwell at the Cavendish Laboratory on the electromagnetic rotation of the plane of polarized light. He continued this work in a laboratory in what had been his father's house, at Pixholme, near Dorking. This work, and his studies of the specific inductive capacity of dielectrics, was published in the *Philosophical Transactions* for 1877 and 1879. In 1880 he published the first edition of *A Physical Treatise on Electricity and Magnetism*, which was very successful, running to several English editions and being published in America and, in translation, in France.

In 1878 Gordon married Alice May (c.1855–1929), daughter of Joseph Edward Lyall Brandreth of the Indian Civil Service, and became assistant secretary of the British Association, a post he held for two years. About this time he became interested in electric lighting, and experimented with an incandescent lamp using a platinum–iridium filament, but this was soon superseded by the carbon filament lamps developed by Swan, Edison, and others. The first large-scale demonstration of electric lighting by filament lamps was at the International Electrical Exhibition in Paris in August 1881, which Gordon attended as one of the British delegation.

Thereafter, Gordon concentrated on the design and construction of power stations for electric lighting. In 1882 he built the largest generator then known, which was exhibited at the Greenwich works of the Telegraph Construction and Maintenance Company, and the following year he became manager of the company's electric lighting department. His best-known project was the lighting for Paddington Station, London, in April 1886. He was responsible for both the electrical arrangements and the steam plant, and for some years it was one of the largest electric lighting installations in the world. The Telegraph Construction and Maintenance Company, however, gave up the electric lighting business after a few years, and in July 1887 Gordon formed the Whitehall Electric Supply Company, which later became the nucleus of the Metropolitan Electric Supply Company, launched in August 1888 with a capital of £500,000. Gordon was engineer to the Metropolitan company, as well as being a director; Sir John Pender was chairman.

In late 1889 Gordon ceased to be a paid employee of the Metropolitan company, although he remained a director, and he set up as a consulting engineer and contractor for power-station work in partnership with W. J. Rivington. He was elected a member of the Institution of Civil Engineers in March 1890, and a member

of the Society of Telegraph Engineers and Electricians (later the Institution of Electrical Engineers) in November 1881.

Gordon was an experienced horseman and fond of riding, but on 3 February 1893 his horse bolted, throwing him onto an asphalt pavement and causing head injuries from which he died an hour later in Croydon Hospital. He was survived by his wife, who in 1898 married John George Butcher, later first Baron Danesfort, and at least one son, James Geoffrey Gordon (1882–1938), who became bishop of Jarrow.

BRIAN BOWERS

Sources *The Electrician* (10 Feb 1893), 70 · *Electrical Trades Directory* (1891), xxxviii–xxxix · *DNB* · R. H. Parsons, *The early days of the power station industry* (1939) · b. cert.

Archives CUL, letters to Sir George Stokes

Wealth at death £9216 17s. od.: resworn probate, June 1893, *CGPLA Eng. & Wales*

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