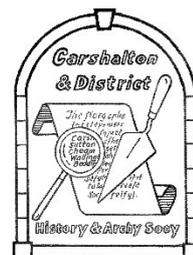


Carshalton & District History & Archaeology Society

Local History Note 11



The man who could weigh fog: John Switzer Owens of North Cheam

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9 December 2021

John Switzer Owens was born in July 1871 at Enniscorthy, Co. Wexford, Ireland.¹ In 1887 he went to Dublin University, where he studied for a B.A. in Experimental Physics (1887—1890) and the medical degrees of M.B., M.D., and B.Ch. (1888–1892), becoming a qualified doctor by the age of 21.² His first job appears to be that of Medical Officer of the Gorey Dispensary District, where he is recorded in 1895 and 1896.³ Gorey was a small market town in the north of Co. Wexford, not far from Enniscorthy. He took part in local social life, ranging from debating in Enniscorthy⁴ to horse-jumping in Gorey.⁵ His resignation “to take up a better position in England” was recorded in November 1896.⁶ This seems to have been a polite fiction, as he became an apprentice in north-east England, first with Hindson Bros. of Gateshead and then with the Wallsend Slipway and Engineering Co., while studying engineering in the evenings at Durham College of Science.⁷ Somehow in the midst of this upheaval, he married Kate Cordelia Brunskill from Cavan, Ireland, on Portsea Island, Hampshire, late in 1896.⁸ I can find no other connection of either of them with Portsea. In 1901 they were recorded in Youghal, a small coastal town near Cork, Ireland.⁹

John’s career developed rapidly. In 1899 he became an assistant to Dr E. Case, who had offices in Westminster, and in 1902 he was appointed chief engineer to the Case Sea Defence Syndicate.¹⁰ In the same year he was elected as an Associate Member of the Institute of Civil Engineers.¹¹ In 1904 he set up business in his own account as a consultant engineer;¹² among his projects was to advise East Sussex County Council on sea defences at Rottingdean near Brighton.¹³ He advocated the use of ferro-concrete groynes to replace the less durable wooden ones to restrict longshore drift and reduce coastal erosion,¹⁴ using a system devised by Francois Hennebique.¹⁵ At the same time, he was writing papers on coastal erosion¹⁶ and giving lectures on the subject.¹⁷ By 1908 he was sufficiently well known to be an examiner at the Crystal Palace School of Practical Engineering,¹⁸ which had been founded in 1872 and was then based in the South Tower of the Crystal Palace.¹⁹ In 1907 he and Kate settled at Hurst Cottage, Hemingford Road, Worcester Park, just off the Malden Road, where they lived until 1925, when they moved four doors along the road to

Daphne Cottage, which became part of Wordsworth Drive in 1937.²⁰ John died in 1941 at St Anthony's Hospital and Kate in 1942.²¹ They were both buried at St Lawrence, Morden.²²

As early as 1910 John had already broadened his research interests. He examined decayed stone from Westminster Abbey, ascribing the cause to sulphuric acid in the atmosphere. He argued that it could not have been in the rain, because some of the stones he examined were from a sheltered location in the west walk of the Abbey cloister. He was said to have "for some years carried out the investigations of the Smoke Abatement Society".²³

Throughout the 1920s and 1930s he worked on problems of smoke and air pollution in his role as Secretary (later Superintendent) of the Advisory Committee on Atmospheric Pollution and Suspended Particles in City Air.²⁴ He lectured widely on the subject, for example at the 1921 meetings of the British Association,²⁵ the Public Works, Roads and Transport Congress,²⁶ and the Royal Sanitary Institute Congress.²⁷ The problem had been recognised since the 13th century,²⁸ and blamed on home hearth smoke since 1880.²⁹ His contribution was to devise instruments for actually measuring the amounts of pollutants, such as soot, in the atmosphere,³⁰ and to transform their dry data into attention-grabbing facts. For example, in just one year (1921) he was reported as saying:

- (i) In creating the smoke nuisance the kitchen range, burning smoky coal, was the worst offender, and should be prohibited. Statistics from 30 stations where deposited matter from the atmosphere was measured gave the following mean monthly deposits, in tons per square mile: Southwark Park, London, 39, . . . Southport, 13.³¹
- (ii) The normal suspended impurity in London air was about one milligram per cubic metre. During a dense fog it rose to four milligrams. During a dense London fog there might be suspended over the whole area approximately 290 tons of soot. That was the quantity emitted by domestic fires in London on a winter morning, between 6 and 9 a.m.³²
- (iii) The number of particles of suspended impurity in the air of London in a moderately clean day was about 30,000 per cubic inch. As a man breathed about 18 cubic feet of air per hour, he would draw into his respiratory passages in 24 hours about 22,400,000,000 particles. It was the very small particles which appeared to have the greatest penetrating power. There was no doubt that the domestic fire for heating and cooking was the chief source of atmospheric pollution, at least in London.³³
- (iv) Fog costs London between £8,000,000 and £10,000,000 in the course of the year, or £1 13s per head of the population. The present fog is a bad fog because of the number of sooty particles in the air. Each hour every man breathes a number of particles of soot which would extend nine miles if put in a row and touching each other. . . .The fog reached the maximum at midday on Monday, when 240 tons of soot were held in suspension over London.³⁴

He was joint author of the book *The Smoke Problem of Great Cities*, published in 1926, and he also presented papers on *The Smoke of Cities*, in 1926, and *Identification of the Source of Deposited Matter*, in 1939.³⁵ He was aware throughout that “so far as the domestic grate is concerned, the smoke nuisance could only be cured by the use of smokeless fuels”,³⁶ but it was not until well after his death that legislation started to tackle the problem of pea-souper smogs,³⁷ which I can remember from my childhood in the 1950s. If he were alive today, he would probably be working on the problems of pollution from motor vehicles.

Despite all this, he continued his career as a consulting engineer. “In 1915 he was appointed consulting engineer to the San Domingo Mines, Portugal. Since 1929 he had held the position of consultant to the Rio Tinto copper mines, and was instrumental in developing a large belt-loading scheme in addition to the design of much new equipment and railway rolling stock. For thirty years he had also been consulting engineer to Messrs. Mason and Barry.”³⁸ (Edward Ogston Barry lived at *The White House* in Cheam from 1901 to about 1914).³⁹ His death in 1941 “removes a most useful and public-spirited man of science”.⁴⁰

¹ gracesguide.co.uk/John_Switser_Owens; 1939 Registration.

² UK, Mechanical Engineer Records, 1847-1938.

³ *Wexford People*, 2 Nov 1895, p.6; 15 Feb 1896, p. 8; 22 Jul 1896, p.5; *Enniscorthy Guardian*, 15 Feb 1896, p.7.

⁴ *Wexford People*, 29 Mar 1893, p.5.

⁵ *Wexford People*, 22 May 1895, p.4.

⁶ *Freeman's Journal*, 10 Nov 1896, p.6.

⁷ *Op cit.* note 2.

⁸ England & Wales, Civil Registration Marriage Index, 1837-1915.

⁹ 1901 Census Ireland.

¹⁰ gracesguide.co.uk/John_Switser_Owens.

¹¹ UK, Civil Engineer Records, 1820-1930.

¹² *Op cit.* note 10.

¹³ *Sussex Agricultural Express*, 14 Apr 1906, p.4.

¹⁴ *Daily Telegraph & Courier (London)*, 8 May 1907, p.7; *Mid Sussex Times*, 14 May 1907, p.8.

¹⁵ *Bournemouth Graphic*, 4 Jul 1907, p.10.

¹⁶ *Belfast News-letter*, 18 Jan 1906, p.4; 22 Mar 1906, p.5; 19 Apr 1906, p.5; 5 Jun 1906; p.8; *Sheffield Daily Telegraph*, 7 Jun 1906, p.6.

¹⁷ *Morning Post*, 2 May 1907, p.7; *Wells Journal*, 8 Apr 1907, p.2; *Kenilworth Advertiser*, 17 Apr 1909, p.2.

¹⁸ *Kentish Mercury*, 17 Apr 1908, p.5; *Norwood News*, 18 Apr 1908, p.5.

¹⁹ crystalpalacefoundation.org.uk/shop/biography-works/crystal-palace-engineering-school.

²⁰ *Pile's Directory*.

²¹ England & Wales, National Probate Calendar (Index of Wills and Administrations), 1858-1995.

²² Surrey, England, Church of England Burials, 1813-1997.

²³ *Sheffield Evening Telegraph*, 22 Jun 1910, p.4.

²⁴ *Daily Herald*, 22 Jun 1921, p.5.

²⁵ *The Scotsman*, 18 Aug 1921, p.7.

²⁶ *Lancashire Evening Post*, 19 Nov 1921, p.6; *Yorkshire Evening Post*, 19 Nov 1921, p.8.

²⁷ *Op cit.* note 24.

²⁸ P. Brimblecombe, “Industrial air pollution in thirteenth century Britain” *Weather* 30:388 (1975).

²⁹ F. A. R. Russell, *London Fogs*. London: Edward Stanford, 1880.

³⁰ *Op cit.* note 24.

³¹ *Ibid.*

³² *Sheffield Evening Telegraph*, 14 Sep 1921, p.6.

³³ *Op cit.* note 26.

³⁴ *Belfast Telegraph*, 29 Nov 1921, p.6; *The Scotsman*, 29 Nov 1921, p.5.

³⁵ *Op cit.* note 10.

³⁶ *Op cit.* note 23.

³⁷ The most lethal incidence of this smog in London occurred in 1952, and resulted in the Clean Air Act 1956 and Clean Air Act 1968, both now repealed and consolidated into the Clean Air Act 1993, which were effective in largely removing sulphur dioxide and coal smoke.

³⁸ *Op cit.* note 10.

³⁹ *Pile's Directory.*

⁴⁰ *Op cit.* note 10.