

KENDALL & SON, STRATFORD-UPON-AVON: THE BUSINESS OF A BREWERS' CHEMIST IN THE NINETEENTH AND TWENTIETH CENTURIES

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An article published at the end of the 1990s in *Warwickshire History* drew attention to a neglected aspect of Stratford's industrial past, namely the role of the town's brewers, Flower & Sons, in the history of the English brewing industry in the nineteenth century.¹ Besides being the town's largest employer for more than a century, and Warwickshire's only brewers of any significance, the firm is of further interest in being closely tied to other economic activities in the region during its existence. For most of the nineteenth and twentieth centuries, trade for Stratford's other firms also hinged on the brewer's continued success. For example, local timber merchants, Cox & Son, provided the business with wood for brewery expansions and casks in which Flower's pale ale was shipped to the Far East, and constructed the tents in which the firm's employees celebrated their annual picnics each summer over many years.² Numerous small businesses, including local grocers, builders, engineers, butchers and veterinarians also profited from the brewery's prosperity. Another firm's performance, that of Kendall & Son brewers' chemists, was, perhaps not surprisingly, especially closely tied to that of the brewery, though it was also the only other firm in the town to aspire beyond the local economy and establish an international reputation. Not only is this article an attempt to uncover aspects of this firm's history, but, by documenting certain episodes contained in the records of a local chemist, to develop further a more comprehensive understanding of Stratford's neglected industrial past.

Although Kendall & Son has not been the subject of any in-depth historical study, certain biographical details of

the firm's founder are familiar. For example, a guide to records of the pharmaceutical industry tells us Frederic Kendall came to Stratford-upon-Avon from Abingdon, Oxfordshire, in 1836, only five years after Edward Flower founded his brewery.³ Two years later, after purchasing the business of S. Price on the town's High Street, Kendall moved to larger premises only three doors along the same thoroughfare. Although he must have seemed no different from any provincial chemist who manufactured drugs and chemicals on a small scale, he certainly set himself apart from many of his local rivals when, in 1841, he became a founding member of the Pharmaceutical Society of Great Britain. This provided British chemists with the first forum in which to debate and discuss their ideas and concerns and the society's membership largely comprised men who ran successful businesses in the capital as well as the provinces.⁴ Locally, Kendall was elected to Stratford's town council in 1846, serving as mayor in 1852, 1853 and 1860. He was elected to Stratford's Board of Health after it was established in 1850 and provided it with his administrative and analytical expertise for 18 years.⁵ These numerous civic duties, however, do not appear to have distracted him from his primary occupation.

By 1866, Kendall was manufacturing, among other things, bisulphite of lime, primarily for brewing use, at the rear of his shop at 33 High Street. Five years later, he leased additional premises from the Stratford Corporation along the Birmingham Road, on the northern periphery of the town, which, besides providing considerable space for expansion, gave the firm access to the region's canal network. In 1873, presumably

anticipating a growth in sales, Kendall handed over the management of the High Street business to his assistant, Richard Hawkes, who had registered as a chemist in the same year, and began to specialise production. He retained and concentrated on the brewing chemicals side of the business until his death in 1883, leaving an estate worth more than £16,000, though the business was valued at less than half that sum. Hawkes, on the other hand, went on to purchase the pharmacy at 33 High Street, while Kendall's son, George Frederic, took over the brewing chemicals business from his father. Styled F. Kendall & Son from 1880, it continued to trade into the 1970s. It is the brewing side of the business with which the remainder of this article is concerned.

The accounts of the firm, Flower & Sons, reveal it frequently relied on materials supplied by Kendall & Son. Although not all of Frederic Kendall's customers were brewers, the firm's growth closely followed events in the brewing industry, and particularly developments at Flower & Sons in its early years. For example, research conducted by Louis Pasteur and Emil Hansen, among other eminent scientists, made cleanliness a primary concern of brewers in the 1860s and '70s. As a result, Kendall & Son was almost entirely concerned with the production of sulphites and bisulphites of lime in these years.⁶ Whether Kendall decided to manufacture these materials or was requested for alkalis by a particular brewer, such as Flower, is not known. Nevertheless, it proved to be a growth industry, and the decision to concentrate on the production of brewing products was both rational and well rewarded.

In the 1880s, as government control over brewing ingredients gradually relaxed, other articles, notably flaked malt, caramels and other black sugars and, later, non-fermentable copper sugars and primings, were added to the list of materials the firm produced and distributed, as were some more dubious products. For example, in 1887, the *Brewers' Journal* advertised Kendall & Son's Permanent Heading Powder, which, besides allowing brewers to retain a head on their ales, was claimed to restore sour beers.⁷ Although brewers, as well as consumers, may have doubted such claims, the existence of such products was always publicised widely. A year earlier, the firm had already become the first business to take out a full-page advertisement in the trade's leading periodical.⁸ While subsequent campaigns

were less bold, the firm's advertisements continued to appear regularly in the journal for decades.⁹ Moreover, after attending the Brewers' Exhibition in 1888, its list of products was said to 'grow longer and longer each year.'¹⁰ Together with its own popular range of products, Kendall & Son extended its appeal by becoming agents for other manufacturers and their goods, such as T.H. White & Company's flaked malt and Bloch Brothers, the German hop merchants.¹¹

From 1890, the business, which was then valued at approximately £7,000, began to grow more rapidly.¹² Naturally, as Flower's trade grew, so did Kendall's. Within two years, the value of the firm had leapt to £11,000, an increase of more than 60%.¹³ Yearly profits were roughly £5,000, much of which was reinvested in the business.¹⁴ Significantly, in 1910, a few decades after Flower & Sons built its new brewery, some of the buildings on its old site were purchased by Kendall. Interestingly, Kendall's had also brewed non-alcoholic beer a decade earlier.¹⁵ From 1894 to 1898 it had an interest in the Beck Brewing Company Ltd of Liverpool.¹⁶ Not long afterwards, Kendall's trade in chemicals grew to include that of breweries located throughout England (see Table 1). In 1890, the firm began to solicit orders more widely and opened London offices at 59 Mark Lane, near the Corn Exchange. Two years later, it had its own agent in Australia.¹⁷ In 1894, the same year the firm became an associate of the Institute of Chemists, it also opened an office in Lille, many years before its largest rival, A. Boake & Company of Stratford, Essex, established its own continental branch.¹⁸ While analytical work was an important component of the brewers' chemist's business, it became even more lucrative, especially after an arsenic scare which affected the brewing trade in 1900.¹⁹ The firm had always analysed the water sources of many foreign breweries, and a handful of domestic ones, but, in the first years of the twentieth century, its list of customers grew to include a number of important midland breweries: its value also grew, to surpass £15,000.²⁰ Besides testing the purity of water samples, Kendall & Son advised brewers on, and sold to them, the salts necessary either to harden or soften a supply, thus permitting them to brew the paler ales that had become so popular by this time.²¹ This naturally added substantially to the firm's permanent trade. By 1902, further growth seemed ensured when the firm was registered as a limited liability company with a

potential capital of £50,000.²² Greater recognition came soon after when, in 1904, Kendall's was awarded two gold and two silver medals for its products at the St. Louis Exhibition. Its successful display was presented to the Massachusetts Institute of Technology with the intention that it be installed in the Industrial Museum in Boston for permanent exhibition.²³

Besides travelling great distances to display its products at international exhibitions, the firm occasionally sent representatives to breweries to suggest ways in which brewing plants could be run more scientifically. Moreover, despite the general belief that brewers had largely modernised their production facilities by mid-century, evidence in surviving reports demonstrates, in fact, that many breweries had failed to update brewing methods even by the last decades of the nineteenth century. Wooden vessels, both tuns and casks, were still used until nearly rotten, wild yeasts were prevalent in ale samples and the simplest rules of cleanliness were often overlooked in many small firms.²⁴ Consequently, chemists' most popular products remained those which they first manufactured. With the help of sulphites, introduced to finished beer in order to kill any bacteria, even the most negligent of Kendall's clients could continue to brew in run-down plants. Marketed under such carefully-protected brand names as Universal Preservative, Kalissaline, or Phylax, these products were developed by numerous chemists and purchased by hundreds of brewers. London's A. Boake & Company, for example, besides being Kendall's greatest rival, sold its preservative, Kalium Meta Sulphite, generally known in the trade as K.M.S., to many firms, including Ratcliffe, Ind Coope, Lewis and Saville Bros.²⁵ Kendall & Son supplied as many, if not more, renowned breweries.

Nevertheless, as already mentioned, these chemists also provided brewers with advice on how developments in science could influence the way they ran their businesses. For example, in 1884, the *Brewers' Journal* eagerly announced that Kendall & Son was to publish a pamphlet, *The Presence of Bacteria in Water*, which contained articles by Dr Edward Moritz, Lawrence Briant and Frank Faulkner, some of the most respected chemists to have written on science as it related to brewing in this period. Furthermore, in 1892, Kendall & Son became instrumental in the distribution to the nation's brewers of C.H. Tripp's *Brewery Management*, the first practical guide on the subject.²⁶ Finally, in 1905, Kendall's was

involved in a very interesting cultural exchange when it hosted a visit of 58 French brewers (including five women) on a tour of English breweries, an event organised by Monsieur Savoye-Godin, Kendall's manager at Lille. While French brewers may, on this occasion, have greatly increased their knowledge of English brewing methods, English brewers learned as much about French methods from a lecture delivered in 1905 before the Institute of Brewing by Kendall's manager, Reginald Evans, soon after his return from a lengthy tour of breweries in northern France.²⁷

Although Kendall's archives contain important information relevant to the history of international trade, records dealing with its local activities are far more detailed and complete. For example, the company's archives shed considerable light on the working conditions of its employees, not all of whom were chemists. While Kendall & Son's core workforce comprised several highly-trained chemists and laboratory assistants, many more of its workers were manual labourers, who received, stored and shipped the firm's goods. In this respect, their daily routine was no different from that of labourers at other work sites where raw materials came packaged in heavy wooden casks and coarse sacks. Moreover, according to one of the firm's accident books, acids and other dangerous chemicals were not the most common hazards associated with the work of a manufacturing chemist. For example, in the first years of the twentieth century, most injuries involved cuts and bruises when fingers or toes became trapped between casks, containing perhaps sugar, sales of which exceeded 3,000 tons in 1914.²⁸ Occasionally, a labourer 'lost [a] finger joint' or 'strained [his] back' while unloading sugar or barley, missing, on average, between ten days and five weeks of work.²⁹ Not all of the work in the firm's warehouse, however, was laborious: much of it was delicate, requiring a different 'type' of worker. Over the years, Kendall & Son hired many of its male employees' wives, who were primarily engaged in packaging samples of the goods the firm produced, or repackaging those which they merely distributed.³⁰ Furthermore, although oral evidence from Stratford residents suggests that employers agreed informally not to poach each other's workers,³¹ Kendall & Son did, in fact, acquire many workers from other local firms. Throughout the last decades of the nineteenth century, given the reluctance of many businesses to train staff, workers were often recruited from other firms where

Alton Court Brewery Co. Ltd, Ross-on-Wye, Herefordshire
 Ansell's Brewery Ltd, Aston, Birmingham
 Ashton Gate Brewery Co. Ltd, Bedminster
 Bath Brewery (Oakhill Brewery Co. Ltd?)
 W. H. Brakespear & Sons Ltd, Henley, Oxfordshire
 Bristol United Breweries Ltd
 Brown & Co., Shakespeare Brewery, Redditch
 Cheltenham Original Brewery Co. Ltd
 City Brewery, Lichfield
 Courage & Co. Brewery
 J. Davenport & Sons Brewery Ltd, Birmingham
 J. Elworthy Ltd, Steam Brewery, Kettering
 Flower & Sons Brewery, Stratford
 E. K. & H. Fordham, Ashwell Brewery, Nr. Baldock, Hertfordshire
 Frome United Breweries
 Gibbs, Mew & Co. Ltd, Salisbury, Wiltshire
 Duncan Gilmour & Co., Ladybridge Brewery, Sheffield
 Hickman & Pullen Brewery, Wednesbury
 Highgate-Walsall Brewery Co. Ltd, Walsall
 Holt Bros Brewery, Burnham-on-Sea, Somerset
 Hook Norton Brewery Co. Ltd
 Hunt Edmonds & Co. Ltd, Banbury
 Lichfield Brewery Co. Ltd
 Lion Brewery Ltd, Chippenham, Wiltshire
 Lockwoods Brewery Co., Northfield, Birmingham
 Mitchells & Butlers Ltd, Birmingham
 E. E. Palmer, Donnington Brewery, Newbury, Berkshire
 P. Phipps & Co. Ltd, Northampton
 Portsmouth United Breweries
 Rock Brewery Ltd, Brighton
 Royal Well Brewery Co., Malvern
 Smithers & Sons Ltd, North St Brewery, Brighton

Table 1. Kendall & Son's Customers, 1900-14
Source. (SBTRO, DR 197/12-3)

they had already learned basic rules of accounting or practical managerial skills. One of those forsaking his office post at Flower & Sons during these years included a clerk who went to Kendall's.³² A.W. Evett, one of the chemist's half dozen salesmen, or travellers, came from the Great Wyrley Colliery Company Ltd in Cannock. Usually, any vacancies among the sales and laboratory staff attracted numerous applications from brewers, and, at least once during these years, Kendall's even appointed an operative brewer to its laboratory.³³

Although having frequently played the role of the poacher, Kendall & Son also lost several employees to other local firms. Workers who left the firm, but remained in Stratford, often went to Flower & Sons, the town gas works, the police force or one of the local brickyards.³⁴ For example, in 1874, Charles Flower wrote to Frederic Kendall regarding the employment of

a Mr Parker as a subordinate accounting clerk.³⁵ The brewery received a favourable reply; Kendall attested to his employee's good character, behaviour and employment record, but, as was usual in such cases, his letter expressed disappointment that the applicant had not informed his employers that he was seeking a new post. On other occasions, Kendall & Son was less disappointed with the departure of an employee. For example, in 1911, the firm dismissed George Wilson, a cooper who was said to be guilty of 'bad work and keeping bad time'.³⁶ A few months later, another cooper, A. Bailey, was also dismissed for 'bad workmanship', something a company which shipped all its products in wooden casks was naturally unwilling to tolerate.³⁷ Members of the firm's clerical staff, such as William Wilson, made company secretary in 1902, and the work's foreman, Mr New, tended to remain with the firm for longer periods than the dozen or more manual

labourers employed during the late nineteenth and early twentieth centuries.

During the period outlined in this study, the influence of chemists such as Kendall & Son was far from negligible. Over the last decades of the nineteenth century, for example, Kendall's staff had done much to modernise brewers' practices. Perhaps the earliest indicator of the firm's impact appeared shortly after its founder, Frederic Kendall, died in 1883, when an obituary in the *Country Brewers' Gazette* clearly acknowledged his contribution to the brewing industry. He was described as 'one of the first men to make a practical study of chemistry as useful to brewers'.³⁸ All of the journal's readers were presumed to have known 'the success he achieved'.³⁹ In later years, the firm continued to be praised by members of the brewing industry. In 1913, for example, the editors of the *Licensed Trade News* claimed that 'wherever the art of brewing is practised, not only in these Islands, but throughout the civilised world, the name of F. Kendall & Son is known and their products appreciated'.⁴⁰ Equally accomplished was the chief of the firm's laboratory department, Reginald E. Evans, who joined the firm in 1889, after completing his studies at the Finsbury Institute, and who, in 1906, became Kendall & Son's director. He had also been awarded several prizes by the Institute of Brewers and the Distillers Company for attaining the highest results in both of the organisations' examination categories.⁴¹ His performance overshadowed that of another of Kendall's employees, Cecil Henry Desch, but the outstanding results of the firm's analytical staff at examinations during these years suggest it had considerable talent at its disposal and much to offer brewers. In an obituary published soon after Evans's untimely death in 1913 at the age of 42, members of the Institute of Brewing declared that 'few men, in the brief space of about 20 years, have made more useful and suggestive contributions to our knowledge'.⁴² No doubt, Flower & Sons, as well as many other English and foreign breweries, benefited greatly from the work carried out in Stratford under Evans's guidance.

Unfortunately for Kendall's, the death of Reginald Evans also marked the onset of a difficult period for the firm and led to many administrative changes and an almost complete reorganisation of its operations. The outbreak of war naturally affected most other businesses in these years, but in Kendall's case it also led to the

immediate closure of its Lille branch.⁴³ A month later, J. Herbert Foster, a long-time salesman who had become one of the firm's regional managers, died of heart disease.⁴⁴ Finally, less than four years later, George Frederic Kendall also died, thereby ending several years of rapid expansion and growth, and certainly the most dynamic period in the firm's history.

While H.G. Wells's detestable, dynamo attendant, James Holroyd, 'had read Shakespeare and found him weak in chemistry', the archives of the Shakespeare Birthplace Trust shed considerable light on the discipline and its history.⁴⁵ Among other things, the business historian will appreciate Kendall & Son's energetic advertising techniques, and the founder's willingness to diversify early and to recruit capable non-family members to manage his firm certainly seems to challenge critical interpretations of England's industrial performance.⁴⁶ Perhaps more obvious, the historian of science will find abundant material to illuminate not only the development of the chemical industry in the provinces but also the way in which consultant chemists assisted other manufacturers in updating and incorporating the latest scientific advances to industrial pursuits such as brewing.⁴⁷ In terms of Stratford's own history, this study also suggests that, while Flower & Sons may have been the town's largest employer for much of the nineteenth century, the firm's success was certainly the result of great expertise, not all of which existed within its own workforce.

Note

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References

1. Reinarz, J. (1998/9) 'Flowers on Horseback: a Brief Introduction to Brewing in Stratford-upon-Avon in the Nineteenth Century', *Warwickshire History*. X, 6, pp.203-12.
2. For a more lengthy discussion of this business relationship and paternalism at the brewery, see Reinarz, J. (1998) 'A Social History of a Midland Business: Flower & Sons Brewery, 1870-1914', University of Warwick PhD Thesis. Published in *Brewery History*. (2011) 140, pp.87-146; (2011) 143, pp.44-109; (2012) 146 pp.29-81; and (2012) 149, pp.39-67.
3. British Industry Pharmaceutical Database, Wellcome

Library, London. See also Morris, P.J.T. and Russell, C.A. (1988) *Archives of the British Chemical Industry, 1750-1914*. Oxford: British Society for the History of Science, pp.120-1.

4. Morson, A. (1997) *Operative Chymist*. Amsterdam: Brill, pp.92-3, 178 & 187.

5. *Stratford-upon-Avon Herald*, 6 July 1883.

6. Developments in the history of science and technology in the brewing industry are discussed thoroughly in Gourvish, T. and Wilson, R. (1994) *The British Brewing Industry, 1830-1980*. Cambridge: Cambridge University Press 1994. Other important works on the science of brewing include:

Sigsworth, E. (1965) 'Science and the Brewing Industry, 1850-1900', *Economic History Review*. xvii; and Teich, M.

(1983) 'Fermentation theory and practice', *History of Technology*. viii.

7. *Brewers' Journal*, 15 March 1887.

8. *ibid.*, 15 May 1886.

9. Yearly advertising expenditure at the firm fluctuated between £300 and £500: SBTRO, DR 197176.

10. *Brewers' Journal*, 15 November 1888.

11. SBTRO, DR 197/97.

12. SBTRO, DR 197/76.

13. SBTRO, DR 197/76.

14. In this particular year, Kendall & Son built an additional plant for the production of caramel and launched a new yeast food (SBTRO, DR 1971139).

15. According to the *Brewers' Journal*, 15 August 1889, the consumption of non-alcoholic beverages had increased dramatically since 1850, a trend which they attributed to temperance efforts. Despite this trend, the Beck Brewing Company ceased production in 1900.

16. Richmond, L. and Turton, A. (1990) *The British Brewing Industry: A Guide to Historical Records*. Manchester: Manchester University Press, p.62.

17. SBTRO, DR 1971139.

18. *Brewers' Journal*, 15 December 1890. Kendall's offices were moved to 59 and 60 Chancery Lane in May 1896. A. Boake and Company opened its offices in Brussels in 1904 (*Brewers' Journal*, 15 March 1904).

19. *Licensed Trade News*, 8 November 1913. The scare was the result of brewing sugars which had been contaminated with arsenic during the manufacturing process at a Manchester firm.

20. SBTRO, DR 197/76. Profits in this year were nearly £7,000.

21. Having standardised the water supplies of those breweries which consulted them, perhaps these chemists were also largely responsible for standardising the products brewed in England during these years.

22. SBTRO, DR 197/76; *Brewers' Journal*, 15 April 1902.

Of these shares, only £40,000 were immediately issued.

23. *Brewers' Journal*, 15 October 1904; 15 November 1904.

24. SBTRO, DR 1971170-2.

25. *Brewers' Journal*, 15 February 1909.

26. *ibid.*, 15 October 1892. Tripp had managed the Tower Brewery at Tadcaster before becoming the manager of Ind Coope & Company in 1893.

27. Evans, R.E. (1905) 'The Beers and Brewing Systems of Northern France', *Journal of the Federated Institutes of Brewing*. xi, pp.223-38.

28. SBTRO, DR 197/76.

29. SBTRO, DR 315/1/15.

30. SBTRO, DR 197/83.

31. SBTRO, DR 730/25.

32. SBTRO, DR 730/25, DR 227/98-99.

33. SBTRO, DR 197/97; *Brewers' Journal*, 15 December 1914.

34. SBTRO, DR 227/83.

35. SBTRO, DR 2271106.

36. SBTRO, DR 315/1/15.

37. SBTRO, DR 31511/15.

38. *Country Brewers' Gazette*, 4 July 1883.

39. *ibid.*, 4 July 1883.

40. *Licensed Trade News*, 8 November 1913.

41. *Brewers' Journal*, 15 August 1891; 15 September 1892.

By way of comparison, the journal notified its readers that 62% of individuals who wrote the London Institute's examination failed (*Brewers' Journal*, 15 November 1891).

42. See Evans's obituary in the *Journal of the Federated Institutes of Brewing*, xviii, 1913. Evans died of acute Bright's disease.

43. SBTRO, DR 197/76, 146. Prior to the outbreak of war, the firm was valued at £80,232 and enjoyed yearly profits which regularly exceeded £10,000.

44. SBTRO, DR 197/146.

45. Wells, H.G. (1928) 'The Lord of the Dynamos', in *The Short Stories of H.G. Wells*. London Benn, p.322.

46. See, for example, Chandler, A. (1994) *Scale and Scope*. Cambridge, MA: Harvard University Press; Wiener, M.J. (1992) *English Culture and the Decline of the Industrial Spirit, 1850-1980*. Cambridge; Cambridge University Press.

47. Bud, R. and Roberts, G.K. (1984) *Science versus Practice*. Manchester: Manchester University Press; Edgerton, D.E.H. and Horrocks, S. (1994) 'British industrial research and development before 1945', *Economic History Review*. xlvi. While both of these works draw attention to the work of the consultant chemist, they do not describe his actual work. One of the few studies to reveal the details of such chemists' working lives is Weir, R. (1995) *The History of the Distillers Company, 1877-1939*. Oxford: Oxford University Press.