Chance Brothers – Lighting the World

Toby Chance

September 2013

Travelling along the M5 in either direction, one of the landmark structures visible as you drive through Smethwick is the imposing Seven Storey warehouse and offices and beside it a series of long slate-roofed brick buildings, all semi-derelict. The Seven Storey, built in 1847, now a Grade II listed building, was the nerve centre of the firm of Chance Brothers for well over a century. These, along with the nearby chapel and school room, are all that remain of what was one of the West Midlands' premier industrial enterprises, at its peak employing some 3,500 people and exporting its products to over 80 countries.

The past ten years have seen a revival of interest in recording and preserving the history and heritage of this famous firm. The restoration of the Sir James Chance monument in West Smethwick Park, Sandwell Library's acquisition of the Chance Brothers archive from Pilkington's, the Revolutionary Players website which was the first piece of detailed published research on the firm's history, my book on the firm's lighthouse business and David Encill's on the tableware range, and lately the proposed restoration of the Seven Storey, all contribute to a better appreciation of the firm's achievements during its 157 year occupation of the Smethwick works.

The Smethwick Heritage Centre holds a collection of records and artefacts which displays the remarkable variety of the firm's output, from lighthouse lenses and cast iron towers to underground pumps and cathode ray tubes, indicative of its predilection for engineering beyond just glass. It was perhaps this straying from glassmaking that gave Chance Brothers its distinctive character but also led to its takeover by Pilkington's in 1952. Maintaining so many product lines diverted capital from the more profitable parts of the business, and took management's eye off the ball.

Three recurring themes stand out when considering the firm's history: the role of entrepreneurship, adoption of new technology, and the firm's impact on the social fabric of the community it both drew from and served. Its early success can be ascribed to the entrepreneurial talents of founder Robert Lucas Chance, who cut his teeth in business as manager of the family glassworks in Nailsea near Bristol aged just 14. His prodigious energy soon acquired him the moniker "the little master in the jacket" as he set about his job with a seriousness beyond his years. Sensing bigger things ahead he left Nailsea in 1815 and started a glass trading business in London and later Birmingham. He acquired the British Crown Glass Company's Spon Lane works in 1824 to secure a supply of glass for his business, which from then on focussed increasingly on manufacture as well as sales. Lucas was joined in 1832 by his brother William when the firm needed extra cash. The Chance brothers were the perfect foil for each other. Lucas was impulsive, driven, idealistic. William, a lawyer, brought a steadying hand and over the next twenty years the firm outpaced its rivals to become the biggest glassmaker in Britain.

William's son James Chance's entry into the business in 1839 had an immediate impact, though his preferred career after leaving Cambridge was the Church. Lucas and William leant on his family loyalties, and James's mathematics and engineering skills soon led him to invent of a method of cutting and polishing blown glass into what he called Patent Plate. This was the innovation Lucas needed to set the firm on a new growth path. The lifting of excise on glass in 1845 created a surge in demand for this new glass, and Lucas Chance expanded operations drawing vital technical expertise from France to expand capacity. Patent Plate enabled Joseph Paxton to design the Crystal Palace

with larger panes of glass because it was thinner and lighter than standard plate glass made by the firm's competitors. The Great Exhibition of 1851 not only positioned Chance Brothers at the forefront of glassmaking in the Empire, but also saw its entry into lighthouse lens manufacture which it continued for over a century.

Lucas Chance's stewardship of the firm until his retirement in the late 1850s illustrates the intertwining of the three themes in one man. He possessed a keen eye for opportunities, understood the importance of staying ahead in the technological race yet exhibited a strong social conscience which led to the firm being a pioneer in providing for the education, recreation and welfare of its employees and their families. Lucas was a non-conformist Unitarian who held religious meetings with his co-workers and fellow merchants. His business ethic was guided by a passion for self-improvement and the betterment of others. He and brother William created the firm's culture which endured, and is oft referred to in Laura Brett's blog http://chancearchive.blogspot.com/ written as she worked on the Chance archive in the Sandwell library. James Chance, who succeeded Lucas, was driven more by the thrill of invention and enlightening the world – literally – in his obsession with lighthouse optics, though Lucas was more of an evangelical in the religious sense. In a letter to his mother written in 1861, James revealed his priorities: "*We must all receive the Truth, even although it may not coincide with our previous ideas. I deem it to be a first duty, besides a high privilege & pleasure, to accept simple Truth: – it argues a want of faith in God to shrink from the Light.*"

JF Chance's (James' son) *History of the Firm of Chance Brothers* relates the heated debates over strategy between the firm's management. Glassmaking, as with all industrial processes, takes advantage of technological advances and in Chance Brothers' case these created threats as well as opportunities. The prevarication over whether to adopt the Siemens tank furnace process in the 1870s perhaps more than anything else allowed Pilkington's to steal a march on Chance Brothers from which it never recovered its lead position. Had Lucas still been at the helm, his drive and proclivity for risk-taking might have trumped his colleagues' caution. However, Chance's dominance in lighthouse lens manufacture shows the firm could retain its leadership through engineering and technical excellence, relying first on James Chance then Dr John Hopkinson FRS and his successors. Expertise in glass lenses evolved from the firm's venture into optical glass in the 1840s, never a very profitable line and more an attempt to beat German competition. The British Government relied almost entirely on Chance's optical glass output in World War I when supplies from the only other source – Germany – were cut off. The firm's patriotic spirit led it to turning many of its furnaces and workshops over to optical glass, sold at rock bottom prices to the detriment of the firm's balance sheet.

The decision in 1921 not to license Corning's Pyrex heat-resistant glass was later regretted, for obvious reasons. Innovation in the laboratory and factory led to the introduction of pressed, heat-resistant and variants of coloured and globular glass which were all successfully shown at the British Empire Exhibition in 1924. The firm enjoyed something of a renaissance. Tentative production of 'glass silk' began in 1929 at the Firhill works in Glasgow, from where the fibreglass business thrived before it was transferred to St Helens. There followed the purchase of the Austinlite business for making automatic lighting gear for lighthouses and other uses, and the joint venture with German inventor Alfred Götzl who had perfected a submersible pump and found Chance Brothers willing to make them. The Sumo (submersible motor) business was formed in 1941 and contributed significantly to Chance Brothers' profits. The mainstay of the business was the Rolled Plate Department which produced cast, figured and cathedral glass, while the Pressed Glass Department produced the popular styles of tableware that have become collector's items, including the famous Spiderweb range.

From 1945 when Pilkington's acquired a 50% interest in Chance Brothers, though the firm retained the name it effectively passed into another family's hands and the Chance influence gradually

waned. Perhaps the firm's greatest legacy are the hundreds of lighthouses which stand on every continent, all of which emerged from Spon Lane when the West Midlands was an industrial powerhouse, and whose brass plates, polished and conserved by their modern day keepers, bear the name "Chance Brothers, Birmingham, England." It was this that led to a Baronetcy for James Chance in 1900, for his services to seafarers. Forty four years later the last Chance family chairman of the firm, Hugh Chance, was knighted for his work in the field of education. British industrial families have been criticised for abandoning unfashionable 'trade' for more gentlemanly pursuits, to the detriment of their business prospects. These citations say much about British high society's condescension towards business which arguably persisted until the Thatcher years. But they also, importantly, illustrate how Chance Brothers saw themselves not as a company purely for profit but part of the social fabric of their community, in their case Smethwick, West Midlands, the world. Now, there are signs Britain is recapturing its industrial mojo, essential for it to maintain its leading nation status.

Chance Brothers

Significant Dates & Achievements

An article of this length on the history of Chance Brothers must of necessity be selective. The chronology below (compiled by David Encill) summarises some of the significant dates and achievements in this history.

- 1824: Operation starts – company retains the name of **British Crown Glass Co.**
- 1828: **John Hartley** joins from Nailsea
- 1831: Financial difficulties …
- 1832: … **William Chance** bails out the company and becomes a partner
- 1834: **Hartley brothers** become partners – firm now known as **Chances & Hartleys**
- 1836: Hartley brothers leave Chance – firm becomes **Chance Brothers & Co.**
- 1839: (1 Jan) **James Timmins Chance** joins the company
- 1845: School opens for employee's children
- 1848: **George Bontemps** leaves France to join CBs
- 1850–51: Glazing of Crystal Palace
- 1850: Lighthouse Division established
- 1851: First lighthouse optics exhibited and demonstrated at the Great Exhibition
- 1860: Houses of Parliament re-opened. Glazing by CBs
- 1860: **W E Chance & Co Ltd** starts operation in Oldbury. Started by William Edward Chance
- 1880–90: The time when **Pilkington's** finally reached equal status with CBs (turnover/profit/output, etc.)
- 1889: Incorporated as public limited company – **Chance Brothers & Co. Ltd** (CB)
- 1907: Glasgow Plate Glass Co. purchased
- 1914: World War I optical glass crisis: CB steps in at some cost to the company
- 1914: **WHS Chance (later Sir Hugh)** starts work at CBs before joining the Royal Flying Corps
- 1915: Heat-resistant glass production started – later used for Orlak tableware, laboratory ware, lighting globes, etc. 1920: Lighting for airports undertaken
- 1923: W E Chance dies at age of 99 (born when CBs started). Company absorbed into CBs but continues with its own identity. Fiesta glassware, for example, was produced by WEC not CBs
- 1929: Pressed glass operation starts, the start of the tableware business
- 1930: Firhill Glasgow plant converted to handle 'glass fibre' production

- 1932: Parsons Optical Glass Company purchased
- 1930s: Pilkington Brothers (PB) start secretly buying CB's shares – tied in with St Gobain of Paris
- 1935: Preference shares issued and company become **Chance Brothers Ltd**
- c.1936: Cathode Ray Tubes (for television) were produced
- 1938: **Glass Fibres Ltd** formed at the Glasgow plant, with CBs as main shareholder. PBs assume control later this year
- 1938: The Chance historian, James Frederick Chance, dies aged 82.
- 1939: Umbroc shadow plant opened at St Helens to produce optical glass
- 1940: CB factory bombed, justifying the Government's original suggestion for the Umbroc plant
- 1945: PBs accumulate 50% shareholding
- 1946: Malvern starts production
- 1948: First interchangeable glass syringe/barrel produced at Malvern
- 1950–51: Production of Fiestaware started
- 1952: PBs take over CBs
- 1953: Domestic pressed glass production is stopped
- 1955: Lighthouse business sold to Stone Platt of Crawley, Sussex
- 1976: Rolled plate glass production is stopped – the mainstay of the company
- 1976: Fiesta and micro production continues for 5 more years
- 1981: Company closed after 157 years of continuous glass production
- Today: Chance name preserved by Chance Glass of Malvern, producing test tubes and precision glass instruments; and Chance Brothers of Melbourne, Australia, specialising in restoring and preserving Chance lighthouse lenses worldwide

Further reading

Websites

Revolutionary Players website
http://www.search.revolutionaryplayers.org.uk/engine/search/default_hndlr.asp?txtKeywords=chance&x=17&y=4

Laura Brett's blog on the Chance archive, Sandwell Library
http://chancearchive.blogspot.com/

Black Country History Online
http://blackcountryhistory.org/collections/getrecord/GB146_BS6/

Taking Chances project
http://www.chancesglass.co.uk/

Books

Armstong, Isobel (2009) *Victorian Glassworlds: Glass Culture and the Imagination 1830-1880*, Oxford University Press

Chance, R.W.T., Williams, P (2008) *Lighthouses: The Race to Illuminate the World*. London, New Holland Publishers

Chance, J. F. (1919) *A History of the Firm of Chance Brothers & Co., Glass and Alkali Manufacturers*. London: Printed for private circulation by Spottiswoode, Ballantyne & Co. (a postscript was added in 1926)

Chance, J,F. (1902) *The Lighthouses Works of Sir James Chance*, Baronet. London, Smith, Elder & Co

Chance, Sir Hugh (1975) *Notes on the History of Chance Brothers 1920 – 1975*, unpublished manuscript, available from the Chance Archive at the Sandwell Library

Marsden, Ben, and Smith, Crosbie (2007) *Engineering Empires: A Cultural History of Technology in Nineteenth-Century Britain*, London, Palgrave Macmillan