

TWO MEN OF INDUSTRY, MANY BUSINESSES: THE SOHO FIRMS OF MATTHEW BOULTON AND JAMES WATT, AS REVEALED BY THE ARCHIVES OF SOHO

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National Railway Museum, York

The Archives of Soho are perhaps the best-known collections held by Birmingham City Archives. Put simply, they are the surviving papers of the 18th century industrialist and entrepreneur Matthew Boulton and the engineer James Watt, their businesses, families and households. The collections take their name from Soho, an area of heathland to the west of Birmingham where Boulton built his world-famous manufactory, and a mile away in neighbouring Smethwick, the world's first dedicated steam engine factory took shape.

The Archives of Soho have been described by the American economic historian Professor Eric Robinson as the most important source in the world for the history of the Industrial Revolution. Yet for many decades they were poorly understood and even more poorly catalogued, and only a small percentage of this vast treasure trove was ever properly tapped into by historians. For a long time the impression of the Archives was as a source of information on Boulton & Watt's steam engines, and the beautiful, intricate coloured drawings of Watt's stationary steam engines became almost iconic symbols of one man's genius and Birmingham's industrial past. Yet for as long as the collections have been in the care of the City of Birmingham, their custodians have been aware that they had much more to offer. As early as 1963 the City's Archivist, Alfred Andrew, could be found expressing his frustration at the lack of adequate indexing. The problem was always one of resources: together the collections occupy approximately 320 linear metres of shelving, and range from 18th century farm labourers' wage notes to late 19th century blueprint drawings. Clearly, the Archives of Soho were only going to reveal their true depth if dealt with by a dedicated cataloguing and conservation team, to uniform standards, over a reasonable length of time. Between 1998 and 2004 a team of archivists, assistants, conservators and technicians did just that, recataloguing the collections, repackaging and renumbering them, and repairing the most valuable and fragile items.

The Archives of Soho are so vast that to try and cover all their themes is impossible since they contain something on literally every aspect of 18th and 19th century life. This article briefly introduces Matthew Boulton and James Watt, and their sons, who are often overlooked in terms of the businesses, and then outlines the intricate web of partnerships and firms that lay at the heart of this powerhouse of the Industrial Revolution.

Matthew Boulton and James Watt

Matthew Boulton (1728-1809) is often described as one of the great heroes of the Industrial Revolution and one of Britain's great entrepreneurs, yet the scale of his activities and his pioneering spirit is not celebrated enough. Boulton entered Birmingham's expanding metal trade when he joined the family firm in 1742, becoming sole proprietor on his father's death in 1759. In 1762 he began construction of Soho

Manufactory, then the world's largest factory, which became a mecca for what Professor Peter Jones of Birmingham University calls 'industrial tourism', the late 18th century fashion for the wealthy and the curious to visit significant manufacturing sites. At Soho, Boulton made buttons, buckles, sword hilts, chatelaines, latchets and other small items. He collaborated with Josiah Wedgwood on the mounting of Blue John and Wedgwood vases, and with the Swiss inventor Aime Argand on the manufacture of his patent lamps. With the world's first steam-powered mint, Soho Mint, built in 1789, Boulton effectively industrialised coinage production.

In 1775 Boulton went into partnership with James Watt (1736-1819), a Scottish engineer and inventor who had made a career from making and repairing scientific and mathematical instruments in Glasgow between 1757 and 1763, and then subsequently as a canal surveyor. From 1763 Watt had conducted experiments to improve Thomas Newcomen's stationary steam engine and had patented his separate condenser in 1769. These experiments were conducted under the patronage of a Scot, Dr. John Roebuck, a mine and metal works owner. Boulton and Watt first met in 1768, through their mutual friend Dr. William Small. Boulton was drawn to Watt's work on the steam engine and could see the potential, but nothing came of their initial contact. This was partly because of Boulton's oft-quoted desire to make engines for the whole world, although Watt was too strongly bound to Roebuck and the engine was at too experimental a stage to allow that to happen.

Roebuck's bankruptcy in 1774 allowed Boulton to buy his share of Watt's engine, and Watt moved to Birmingham. His partnership with Boulton was a fruitful one. He took out three more patents for steam engine improvements, including the famous 'sun and planet' rotative gear, and a patent for a smokeless furnace. He also developed and patented his copying machine. The two men built the steam engine business from fairly shaky beginnings, in which they were effectively consulting engineers, to a large-scale manufacturing concern whose products were sold around the world. Both men are also remembered for their wide social and correspondence circles, in particular the Lunar Society, of which Boulton was a founder member. Between them they had contacts with nearly every leading scientist in Europe. Boulton introduced one of the earliest employee insurance schemes at Soho Manufactory and was widely involved in civic matters, including Birmingham's theatre and hospital. Watt pioneered the use of chlorine for bleaching cloth and coined the term 'horsepower' to describe units of work performed by engines. Their activities and achievements are simply too numerous to mention.

The next generation: their sons and heirs

Boulton and Watt have been treated historically very much in the Victorian tradition of heroic engineers, self-educated, self-made men who led lives of inventive genius without the help of others. Both feature in Samuel Smiles' *Lives of the Engineers*, the work which typifies the hagiographic approach to industrial and business history. Consequently their sons have received little attention, and what research has been done has focused on their early lives and their sometimes turbulent relationships with their fathers. Yet the Archives of Soho hold more documents relating to the business dealings of the younger generation than of their more illustrious parents. They show how well-established and well-regarded 18th century businesses fared in the hands of the men who took them through the first half of the 19th century, against a background

of ever-increasing competition and accelerating technological change, as the Industrial Revolution became the Machine Age.

Matthew Boulton had one son, Matthew Robinson Boulton. His father always intended him to take the reins of the Soho businesses, indeed his nickname as a child was 'the General of Soho', and he first entered the Soho business world in 1794, after extensive schooling in Europe. He has traditionally been decried for neglecting Soho to live the life of a country gentleman on the estate he purchased in 1815, at Great Tew in Oxfordshire. The archives show that while M. R. Boulton did spend a large amount of time at Great Tew, he was by no means idle in business. He assisted in the steam engine firm's entry into the lucrative steamboat engine market, and he sold more steam-powered coin mints around the world than his father. Moreover his time at Tew was not entirely spent at leisure. He used the estate to experiment with farming practices and he had a large experimental bone-crushing mill and seed drills made for him by the steam engine firm at Soho. He retired from business in 1840, dissolving his partnerships with James Watt's son James Watt Jr., and passing his Soho Manufactory businesses to his surviving son, Matthew Piers Watt Boulton.

James Watt's sons have also been treated dismissively in terms of business, but for different reasons. His youngest son Gregory (1777-1804) received a university education at Glasgow College, where he won prizes for his skills in oratory and translation. He developed an interest in geology, then a new science, where he displayed no little talent. Gregory died young from tuberculosis in 1804, and his artistic promise and poetic and philosophical leanings, in contrast to his father and older brother, have naturally attracted much study. Yet the archives reveal that Gregory was fast becoming part of the Soho business world before his illness prevented him from working. He was a partner in various Soho concerns and he was actively engaged in pursuing accounts owing to the engine firm, even when he was allegedly convalescing in Cornwall.

By contrast James Watt Jr. (1769-1848) was always Watt's intended heir. He was deliberately schooled for business, first at the Bersham Iron Works in Shropshire, then, like Matthew Robinson Boulton, in Europe, to learn languages and mercantile skills. Placements with the Manchester textile houses of Taylor & Maxwell and Thomas & Richard Walker followed. However, it is his radical political views at this period, his time in France during the Revolution, the fact that his return to England was made difficult by the government because of his actions in Paris, and his tempestuous relationship with his father that have attracted study so far. After considering emigrating to America to join Joseph Priestly's son, in 1794 he returned home and entered the Soho businesses. Watt Jr. was active in the steam engine firm for over 55 years, until his death in 1848. During the time he and Matthew Robinson Boulton ran the firm, it won - and gradually began to lose - large parts of the steamboat engine market. It lost many traditional areas of business, including the Cornish mining industry and the North West textile market, but it entered new areas such as sugar grinding engines for the Caribbean.

The Soho businesses

Matthew Boulton's businesses

The various partnerships and concerns that Matthew Boulton ran at Soho Manufactory are complicated. This is due, in part, to Boulton's tendency to form new partnerships with

people whose products he wanted to manufacture, and also to the very imperfect and haphazard survival of the records of many of them, particularly those formed in the 1760s and 1770s. For example, no records survive of the partnership between Boulton and his father, Matthew Boulton & Son, beyond a few copy letters. When his father died in 1759, Boulton continued on his own until he went into partnership with John Fothergill in 1762, the same year that he constructed Soho Manufactory. Boulton & Fothergill was the main firm at Soho. Among the items they made were buttons, buckles, ‘toys’ (small items of decorative metal ware for which Birmingham was particularly noted), silver and plated ware, ormolu ware, clocks, and the ‘mechanical paintings’ of the artist Francis Eginton. The partnership lasted until Fothergill’s death in June 1782. Boulton has usually been portrayed as the inspiration, driving force and business genius behind Soho’s success; John Fothergill has been described as ineffectual and paralysed with financial worry. Yet while Boulton undoubtedly possessed more energy and ambition, Fothergill did make some significant contributions. His European contacts helped to get Soho’s products known on the continent and he made an arduous journey to Russia on what was effectively a sales tour. Nor was the partnership always a simple two-man effort. For much of the 1760s Boulton & Fothergill had a silent third partner, John Hermann Ebbinghaus. Also Boulton was prepared to hive off certain products to new partnerships if he particularly wanted to develop them. For example, in 1776 the main button trade was carried on in partnership with Charles Wyatt. Then for a few months it continued in Boulton’s own name until another partnership, consisting of Boulton, Fothergill, and John Scale, was formed in 1777 after single-handedly supervising button production proved too much for Boulton alone. Boulton & Fothergill also operated at two sites; Soho Manufactory; and a warehouse in the centre of Birmingham where some manufacturing was carried out at the latter in the 1760s.

For much of the late 1770s and early 1780s Boulton’s finances were extremely unstable and on more than one occasion he came perilously close to bankruptcy. This worried Fothergill, particularly when Boulton appeared to be diverting money into the newly-formed steam engine business. The last months of their partnership were rancorous, with the two men barely speaking, and Fothergill seeking to extract himself from the partnership and recover funds that he felt Boulton had misappropriated for his other ventures. An independent group of mutual friends, including the Birmingham Quaker industrialist Samuel Garbett, examined the case and found no wrongdoing on the part of Boulton, but the damage had been done. For some time after Fothergill’s death, his family and Boulton were embroiled in a messy legal dispute. Perhaps not surprisingly, Boulton & Fothergill was replaced as the principal Soho business by a firm simply bearing Matthew Boulton’s name, usually referred to as ‘Matthew Boulton (firm)’ in the financial records. Button manufacture was carried on by a partnership of Boulton and John Scale.

Boulton constructed his steam-powered mint for the manufacture of coins, medals and tokens in 1789, but at first it was kept under the auspices of his main firm. The mint was constituted as a separate business in February 1791, Boulton having taken out a patent for coining apparatus the previous year. Boulton achieved his goal of supplying copper coinage to the Government in 1797 and he lived to see two sets of his mint machinery exported to St. Petersburg and Copenhagen, as well as the new Royal Mint at Tower Hill in London being equipped with his coining apparatus.

The other major firm at Soho was Boulton & Smiths, more commonly known as The Latchet Company. Boulton formed this partnership to manufacture the patent latches of Benjamin and James Smith in May 1793. Around November 1801 this partnership was dissolved and a new one was begun under the style of Boulton & Smith. This firm appears to have been closed by the end of the decade.

On his father's death in 1809, Matthew Robinson Boulton inherited the extant Soho firms and during his lifetime increased the number of Soho businesses. He hived metal rolling mill operations off from the mint, set up a steel business, and by 1815 he was also running a plated wares business, which may have been born out of the operations of the main Soho firm, which was now called 'M. R. Boulton (firm)'. One of M. R. Boulton's great achievements was the expansion of the export of mint machinery, to Portugal, India and Mexico, as well as a near complete reconstruction of the Soho Mint in 1824.

The steam engine business

Matthew Boulton and James Watt went into partnership in 1775. One of their first actions was to have Watt's patent of 1769 extended by Act of Parliament in May 1775 for a further 25 years, and this was the term of years that they agreed their partnership would run. Boulton held two thirds, and James Watt one third. From reciprocating pumping engines they turned to rotative engines in the mid-1780s. The basis of these was the subsequent patents relating to steam engines that Watt took out, and profits on rotative engines were split half and half between them. Like John Fothergill, Watt, a naturally cautious businessman, was frequently worried by the precarious state of Boulton's finances in the early 1780s, but Boulton bore the difficulties and Watt's fears with good grace, and the two men remained friends.

At first, Boulton & Watt had no manufacturing facilities. A few workshops at Soho Manufactory made specialist parts such as nozzles, but heavy castings such as cylinders and condensers were sub-contracted out to iron founders, either those with a reputation for good workmanship or firms conveniently local to the customer. The most important iron founder that Boulton & Watt used was the Shropshire iron master John Wilkinson, whose boring mill at Bersham was the only one capable of producing cylinders to the degree of accuracy that Watt's engine required. Wilkinson undertook almost all of Boulton & Watt's cylinder work until the early 1790s. Boulton & Watt supplied their clients with drawings, technical expertise and, increasingly from the late 1770s, an engineer or 'engine erector' to assemble the engine. The partnership of Boulton & Watt lasted until 1800 when Watt's extended patent for the separate condenser expired. Watt subsequently retired from an active business life, although he did continue to give occasional advice on projects such as steam heating. However the name 'Boulton & Watt' had passed into common currency and continued to be used by customers, suppliers and so on to address the firm long after the original partnership had ceased.

In 1794, Boulton & Watt decided to bring their sons into the business, forming a new partnership, Boulton Watt & Sons. The exact nature of this partnership requires further research, but it appears to have existed mainly for the distribution of the profits of the business and it was dissolved in 1799, the year before the expiration of Watt's patent. In the mid-1790s Boulton & Watt realised that they had to have their own engine manufacturing facilities. When Watt's patent expired, the iron founders that they

had so far monopolised would be free either to deal with customers directly or make and sell engines themselves. Moreover Boulton & Watt were engaged in legal actions against engineers in Cornwall and the North West, whom they accused of infringing Watt's separate condenser patent, and the outcome of these cases depended on a legal decision about the validity of the original 1769 patent. To further exacerbate the situation, a bitter dispute arose between the iron founder John Wilkinson and his brother William, resulting in the closure of Bersham works. This forced Boulton & Watt to use other, less accurate foundries, and led to the revelation that Wilkinson had made several 'pirate' engines during the years that he had been making cylinders for Boulton & Watt.

These pressures led to the construction of Soho Foundry, the world's first dedicated steam engine works, on land in Smethwick, about a mile away from Soho Manufactory (the two distinct sites are still often confused). Watt purchased the land, but he took no active part in the new partnership, Boulton & Watt Juniors, that ran the Foundry. This partnership comprised Matthew Boulton, James Watt Jr., Gregory Watt and Matthew Robinson Boulton. The Soho Foundry's most famous employee was William Murdock, pioneer of gas lighting, who moved to Birmingham from Cornwall at the turn of the century. Murdock was later offered a partnership, but declined and opted instead for a salary of £1000 per annum. The Foundry partnership did not deal directly with customers but sold its engines to the firm of Boulton Watt & Co., from whom the customers purchased them. Therefore the accounts of Boulton & Watt Juniors were with the main engine firm, the suppliers of raw materials, tradesmen and so on, but not with customers. The partnership of Boulton & Watt Juniors appears to have continued to operate Soho Foundry until Matthew Robinson Boulton and James Watt Jr. dissolved their partnerships in 1840.

In September 1799, the partnership which had first brought the sons into the business, Boulton Watt & Sons, came to an end and the following year the expiration of Watt's extended patent brought the original partnership of Boulton & Watt to a close, as had been agreed in 1775. The two former partnerships were replaced by a new one, Boulton Watt & Co. The partners in this firm were the same as those in the Soho Foundry partnership, namely Matthew Boulton, James Watt Jr., Gregory Watt and Matthew Robinson Boulton. The deaths of Gregory Watt in 1804 and Matthew Boulton in 1809 necessitated the drawing up of a new partnership between James Watt Jr. and Matthew Robinson Boulton. In 1810 one of the firm's longest-serving employees, John Southern, who was then Head of the Drawing Office and who had given Matthew Boulton vital assistance in the construction of his mint machinery, was taken into partnership. Southern received a sixth of the profits from engines made at Soho Manufactory only, and held no interest in the buildings or land, nor did his executors or heirs benefit. At this time William Murdock was offered a partnership in the Foundry concern, but declined. Southern's death in 1815 left Matthew Robinson Boulton and James Watt Jr. as the sole remaining partners in Boulton Watt & Co.

The partnership of Boulton Watt & Co. lasted until 1840. Boulton began to consider withdrawing from his partnerships with Watt in 1839 and on 21 October 1840 the two men signed a deed of dissolution. Watt Jr. bought out Boulton for £61,500, making him the sole owner of Soho Foundry. The deed also gave Watt the right to carry on using the name 'Boulton Watt & Co' provided that he signed an indemnity saying

that Boulton was no longer involved in the firm. The name would have to be revised once Watt either died or retired. This deed also dissolved their other partnerships, namely James Watt & Co., the copying press business, and M. R. Boulton & James Watt, the London cash agency. Boulton's withdrawal prompted something of a financial crisis. Watt sent circulars to previous customers asking for orders and looked for new partners. He took into partnership the firm's London agent, James Brown, the head of the Drawing Office, Gilbert Hamilton, who had joined the firm in 1821, and Henry Wollaston Blake, a London-based engineer and businessman who had connections with the Bank of England. Matthew Robinson Boulton conveyed the engine workshops at Soho Manufactory to Watt Jr., who now took a far more passive role, merely giving advice as he saw fit. The firm of Boulton Watt & Co. was brought to an end by James Watt Jr.'s death on 2 June 1848.

The steam engine firm actually manufactured many of the other products that made Soho, as a whole, famous. For example, William Murdock's gas lighting apparatus was made at Soho Foundry and most of their lighting clients had already bought steam engines. James Watt's 'pneumatic apparatus' for treating tuberculosis patients by helping them to breathe oxygen was also made by the steam engine firm at the Foundry. The mint machinery that made the Boulton name famous was almost entirely made by the engine firm, acting as subcontractors to the Bouldons' mint business.

Under the Articles of Co-partnership of 1841, the remaining partners had to decide on a new name. Some debate about the name took place, with the partners and senior employees favouring the retention of 'Boulton Watt & Co.'. However Boulton's son, Matthew Piers Watt Boulton, refused to let them use the old name. Eventually, and somewhat confusingly, 'James Watt & Co.' was selected, despite the absence of a Watt descendant. In the guise of James Watt & Co., the firm continued until 1895 when the remaining premises at Soho Foundry and the goodwill were bought by the weighing machine makers, W. & T. Avery. Avery's continued to use the James Watt & Co. name until around 1906.

The copying press business

In the late 1770s, the increasingly tedious and time-consuming task of making copies of letters and drawings by hand inspired James Watt to devise a mechanical method of doing the work. After much experimentation he developed a system which would remain in use well into the 20th century. Watt invented an ink which remained moist for much longer than normal inks. When a sheet of paper bearing writing in this ink was squeezed in a press with a blank sheet of paper on top, some of the ink transferred to the blank sheet, thus creating a reverse copy. If unsized transparent paper was used, then the copy could be viewed through the sheet and thus seen the right way round. Watt was granted a patent for his invention on 14 February 1780. His patent covered two types of press - a screw press and roller press - but it was the roller press that was manufactured and sold at Soho. Watt, Boulton and the chemist James Keir went into partnership in March 1780 to manufacture and sell the presses, or 'copying machines' as they were usually called. This firm was called James Watt & Co., but it was also frequently referred to as 'The Copying Company'. Confusion almost immediately arose with the steam engine firm of Boulton & Watt, as Watt had to instruct one correspondent in August 1780 to 'address your letters and open your account in name

of James Watt & Co. as a quite different business is carried on under the firm of Boulton & Watt'. The firm had a sales agent in London, James Woodmason, while the Glasgow merchant Gilbert Hamilton, who married Ann Watt's sister, acted as Scottish agent. The copying machines were made in a workshop at Matthew Boulton's Soho Manufactory. The firm also supplied the ink, paper (which it purchased from paper mills) and other accessories such as drying books. Different sizes of machine were offered, including a large model for copying drawings.

In 1794, James Keir retired from the partnership. Boulton and Watt passed the business on to their sons, Matthew Robinson Boulton and James Watt Jr., who retained the name James Watt & Co. One of their major innovations was the introduction of a portable copying machine. In 1840, when Boulton and Watt Jr. dissolved their partnerships, the copying machine business was absorbed into the steam engine business, becoming the Boulton Watt & Co. Copying Department. In 1848, with the death of Watt Jr., the steam engine business was re-named James Watt & Co., but no mention was made that this name had been used before for the copying press business. It continued to make copying machines, but it was not a significant part of their business.

Beyond Birmingham: the London bank and engine agency

Like any other businessman based outside London, Matthew Boulton needed financial representation in the capital as many banking houses refused to deal with 'country concerns'. Boulton and the firms at Soho used William Matthews of 6 Green Lettice Lane, Cannon Street, as a banker and agent. Matthews died in 1792, but his wife Charlotte carried on the business. In July 1795 Charlotte moved to new premises at 13 London Street, near Fenchurch Street. She died in 1802, and after much discussion about how to proceed in securing financial services in London, Matthew Boulton, Matthew Robinson Boulton, James Watt Jr. and Gregory Watt decided to establish their own banking house, a concern whose existence was barely known until the Archives of Soho project. The new firm was titled M. & R. Boulton J. & G. Watt & Co. Two-thirds of this concern were held by Matthew Boulton and his son, and the remaining third by James Watt Jr. and Gregory Watt in equal parts. The new firm continued to lease Mrs. Matthews' premises at 13 London Street, and it appointed her two clerks, John Woodward and John Mosley, to act as agents in London, but the accounts were to be checked at Soho. When Gregory Watt died in 1804, his share devolved to his brother. However, Gregory's initial was retained in the firm's name for several months after his death, at least till early 1805, when the firm became M. & R. Boulton J. Watt & Co. Upon the death of Matthew Boulton in 1809, his share fell to his son and the name of the firm was altered to M. R. Boulton J. Watt, & Co., Matthew Robinson Boulton holding two-thirds and James Watt Jr. a third part. In June 1832 the business of the banking house was brought to an end. Matthew Robinson Boulton and James Watt Jr. began a new firm, M. R. Boulton & J. Watt, which operated an account with the Bank of England. This agency dealt with the business of the steam engine firm Boulton Watt & Co., the copying machine firm James Watt and Co., Matthew Robinson Boulton's other Soho businesses, and his and James Watt Jr.'s private accounts. The firm of M. R. Boulton & J. Watt was dissolved on 30 September 1840, when Boulton withdrew from his partnerships with Watt Jr.

As early as the 1780s, Matthew Boulton had realised that the steam engine firm

also needed a presence in the capital. Early schemes, including plans for a depot run by their senior London engine erector, an office alongside those of their lawyer Ambrose Weston, and a site on the Thames at the Albion Mill, the ill-fated steam-powered corn mill in which Boulton and Watt had invested considerably, came to nothing. Work in London continued to be carried out by London-based engine erectors, with a more senior man acting as agent and receiving commission on engines and gas lighting apparatus sold in London and the South East. The agents of the Soho firms' London banker, Charlotte Matthews, and later the London banking house of M. R. Boulton J. & G. Watt & Co. also did various duties for the engine firm, such as arranging shipping, and settling of accounts.

In 1818 a new London agent was appointed. James Brown had worked for the Tyne Steam Packet Co. before joining the Drawing Office at Soho and working on the engines of the firm's experimental steamboat *Caledonia*. Brown's appointment marked the foundation of the London office of Boulton Watt & Co., and it quickly expanded its activities beyond the daily duties of engine erection. The office liaised directly with customers, especially the steamboat companies, Brown's particular area of expertise. He developed a close working relationship with the Post Office, the Admiralty and the various companies that operated boats from the Thames to the South Coast resorts. Brown organised the firm's employees who were based in London, and also those who were sent down from Soho, and he organised carriage and shipping of parts and various other duties. The office staff also grew during the first decades of the 19th century, with Brown gaining a permanent assistant in 1824 as well as an increased pool of engine erectors.

The London office assumed an ever-increasing importance in the affairs of the firm. When Matthew Robinson Boulton withdrew from the firm in 1840, James Watt Jr. took James Brown on as a partner, along with Gilbert Hamilton, then head of the Drawing Office at Soho, and the London engineer and businessman Henry Wollaston Blake. That meant that two partners were now based in London and Blake did a great deal of business from the London office. Following Watt Jr.'s death in 1848, emphasis shifted even more to the London office, especially following the closure of the premises at Soho Manufactory in 1851, and in the 1860s and 1870s the office became the administrative centre of the firm.

James Brown's appointment in 1818 may have marked the creation of a formal London agency, but dedicated premises were less forthcoming. Brown was given office space at 13 London Street alongside the banking agents, but he also worked from his private addresses: 1 Haydon Square, Minorities between 1818 and 1824; 25 Jewry Street from 1824 to 1832. The latter in particular being furnished for business as well as domestic affairs. By 1830 the Jewry Street house was proving a considerable drain on Brown's finances and in 1832 he united his home and offices by moving into 13 London Street, following the death of the banking agent John Mosley. The engine office remained at 13 London Street until 1841 when the development of the Blackwall Railway necessitated a move to 18 London Street. Further extension of the railway occasioned another move to 90 Leadenhall Street in the 1870s.

From the late 1810s to the 1840s, much of the London engine erectors' work was dedicated to steamboats and facilities on the Thames were a necessity. The firm originally used a 'hulk' ship owned by the Navy as a floating workshop and store. However in 1826, after the Navy Board withdrew the use of the naval hulk, the firm bought their own,

the *Pallas*. The *Pallas* appears to have been an American vessel captured in 1812 and used as a merchant vessel until damaged by a storm off Mauritius. She was sailed to London, registered as a 'sheer hulk', and anchored in the City Canal. The City Canal was sold to the West India Dock Co. in 1829 after which laid-up ships and businesses on the north bank were cleared out, and presumably the *Pallas* was also re-located. *Pallas* faithfully served the steam engine business until she sank at her moorings circa 1868, probably due to water seepage through the seams between the planking of the hull. Her sinking appears to have prompted the firm to hire stores and a workshop at Thames Place, although one George Reeve was paid £50 for raising the hulk.

Conclusion

The Victorian tradition of business history played down partnerships and firms in order to emphasise the heroic personal traits of the men in question. This was very much the case with Boulton and Watt, indeed it was a tradition that began with the eulogies of their sons. Yet the various businesses at Soho formed a complex web, one which took a great deal of untangling. This was not helped by the disordered nature of many of the records before the Archives of Soho Project started, and indeed during the course of the project some hitherto little known elements, such as the London bank, were properly revealed. That Boulton was involved in so many concerns takes nothing away from his entrepreneurial skills. Indeed, the sheer number of Soho businesses makes his achievement in keeping them all going even more impressive. Watt, naturally cautious in business, was active in only two of the Soho firms, the steam engine business and the copying press business, both with Boulton, who took the business lead. Yet Watt effectively bankrolled the construction of Soho Foundry, giving the steam engine business a factory when it most needed one.

The Soho firms have much more to reveal about 18th and 19th century manufacturing and business. They are remarkable because there are so many surviving records under one roof and because they are all centred around two generations of two families. The Archives of Soho project has only the first steps in unlocking this incredible treasure trove; hopefully the men and businesses of Soho will provide inspiration for historians for many years to come.

Appendix: The Collections

The three principal collections are arranged as follows:

MS 3147 Boulton & Watt – contains records of:

- Boulton & Watt (& Successors, Steam Engine Manufacturers & Engineers)
- Boulton Watt & Co. (London Office)
- James Watt & Co. (Copying Press Manufacturers, Soho Manufactory)
- French Walls (Iron Works, Smethwick, owned by James Watt Jr.)
- M. R. Boulton J. Watt & Co. (London Banking Agency)
- Later Additions

MS 3219 Papers of James Watt and Family - contains records of:

- Thomas Watt
- John Watt Sr.

James Watt of Greenock
James Watt
John Watt Jr.
James Watt Jr
Gregory Watt
Miscellaneous records
Later Additions

MS 3782 Matthew Boulton Papers – contains records of:

Boulton & Fothergill
Firm of M. Boulton
Soho Mint
London banking agency
Other firms - Boulton & Smith, rolling mill, M. Boulton & Plate Co., M. R.
Boulton (Button Co.)
Household Books and Documents
Housekeeper's Books and Documents
Private Books and Documents
Great Tew Books and Documents
Miscellaneous Cashiers' Records
Charles James Chubb, Chief Cashier & Bookkeeper
Matthew Boulton
Matthew Robinson Boulton
Miss Ann Boulton
Mrs. Mary Anne Boulton
Other Personal Records
Legal Documents
1st Battalion, Loyal Birmingham Volunteers
Committee at Verdun for the Relief of British Prisoners in France
Miscellaneous Documents
Additions

Birmingham City Archives

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