Industrial Archaeology
Notes

Edited by
Mark Bennet

Stamp End Railway Bridge, Lincoln

B. M. J. Barton

Until fairly recently it had been thought that Torksey Railway Bridge, completed in 1850 but not opened until 1851 after a prolonged public dispute with the Commissioners of Railways inspecting engineer, was the oldest box girder bridge in Britain.

The importance of the wrought iron box girder has to be seen in the context of the evolution of bridge design. The earliest railways used either the masonry arch or, where clearances were limited, the cast iron beam. Neither was suitable for spans of any great length, a deficiency which became increasingly serious as the national railway network burgeoned during the 1840s. Engineers initially attempted to overcome the problem posed by the inherent weakness in tension of cast iron by introducing a composite design - a cast iron beam braced by wrought iron rods. The concept was sound but, as always, the devil was in the detail. In this case the problem was ensuring that the distribution of load between the cast iron (compression) and wrought iron (tension) components of the beam remained as the engineer intended. It did not, and this weakness was cruelly exposed when Robert Stephenson’s Dee Bridge at Chester collapsed catastrophically as a train crossed it on the 24 May 1847.

The effect of the Dee Bridge collapse on the British engineering establishment was traumatic. The limitations of cast iron as a structural material and the need for a major rethink on bridge design were now inescapable. Steel was not yet on the horizon and foundries had difficulties in producing wrought iron of a consistent quality. Engineers had no option but to turn to wrought iron available only in sheet or bar form. Nevertheless they rose to the occasion, and the result was a series of engineering masterpieces; Stephenson’s Britannia Bridge (1850) and Brunel’s Chepstow (1852) and Saltash (1859) Bridges being the most notable. These were, however, all essentially ‘one off’ designs. John Fowler’s Torksey Bridge across the Trent was a much more utilitarian design and demonstrated how the iron box girder could be employed economically on more modest, albeit still major structures.

What is perhaps not generally appreciated is that Fowler’s design for Torksey utilised a wholly new concept in structural design, that of the continuous-span beam in place of the hitherto universally employed simply-supported beam. It was this new concept, with its more efficient use of materials (less ironwork needed to carry a given load) that was at the root of Fowler’s epic battle to get his new bridge approved and which, to the engineer, gives Torksey its significant place in engineering history. Fowler later went on to design what was to become the crowning glory of his career, the Firth Railway Bridge (1890).

The problems associated with the early use of wrought iron have already been referred to and one name crops up time and time again in the context of the wrought iron box girder – that of William Fairbairn. An ironfounder and shipbuilder, Fairbairn not only mastered the manufacture of high quality iron plate but also played a not inconsiderable role in the design and development of the box girder itself. He fabricated the girders for Stephenson’s Britannia Bridge and those for Fowler at Torksey but, as a businessman, Fairbairn also saw the potential for a much wider use of the box girder for bridgework and he produced a range of ‘off the shelf’ designs for more modest, but far more numerous, applications. Over a thousand such bridges were built between 1846 and 1870.

John Fowler, as Engineer to the Manchester, Sheffield and Lincolnshire Railway, was responsible for the design of what was to be the branch line from Barnetby Junction to connect with the Midland Railway at Lincoln. The Barnetby-Lincoln line ran along the foot of the Lincolnshire Wolds to Market Rasen, then turned to cross the Clay Vale to Lincoln. No major engineering works were involved and the only bridge of any significance on the line was that over the River Witham at Stamp End, an industrial area on the eastern outskirts of Lincoln. The line was built in 1847-48 and opened to traffic on 18 December 1848.

Neither the line nor Stamp End Bridge had ever been regarded as anything out of the ordinary. In 1996, in correspondence with Keith Horne of Ross-on-Wye and John Rapley of Honiton on the Torksey Railway Bridge, my attention was drawn to the bridge at Stamp End and it was suggested that, given Fowler’s association with Fairbairn at Torksey, it could originally have been built as a box girder bridge. Closer investigation of this previously overlooked structure has confirmed this, and it now seems very likely that Stamp End Bridge is Britain’s, and therefore possibly the world’s, oldest remaining box girder bridge, and one of the first.

For his bridge across the Witham at Stamp End (Bridge...
No. 38 numbering from Barneby). Fowler designed a straightforward, four span structure, as follows:

- a) 44 ft. 11 in. (skew), 40 ft. (square) side span over the road along the north bank.
- b) 74 ft. (skew), 60 ft. 6 in. (square) main span across the River Witham.
- c) 29 ft. 2 in. (skew), 26 ft. (square) side span over Clayton's sidings.
- d) 29 ft. 2 in. (skew), 26 ft. (square) side span over a cart road along the south bank.

All the side spans were renewed with steel beams in 1903 and details of the original 1847-48 side spans are not known. For his main span Fowler utilised a pair of Fairbairn wrought iron box girders as its principal structural members. These were placed as edge beams and connected by underslung wrought iron cross-members at three foot centres which supported the timber deck. In 1903 the bridge was reconstructed and, although the side spans were renewed, the main box girders were retained and the river span strengthened by the addition of a central steel plate girder from which the existing cross-members were supported at mid-point by steel hangers.

The box girders have a uniform depth of five foot eight inches giving a span/depth ratio of thirteen. The upper flanges are cellular, in order to resist buckling in compression, characteristic of Fairbairn's standard design. The box girders side (web) plates are about twenty inches apart, with vertical internal stiffeners riveted to them at twenty-seven inch centres, surprisingly not corresponding to the spacing of the cross-members. These are riveted to the base of the inner side plates of the girders, although partially supported on the protruding edge of the bottom flange, which itself appears to have stiffening plates riveted to it in alternate spaces between cross-members.

The detailed design of the Stamp End box girders appears to correspond closely with that used at Torksey and is illustrated in Fairbairn's 1850 paper to the Institution of Civil Engineers, although their overall scale is, of course, significantly less. Stamp End predates Torksey by about two years and Torksey is not therefore, as hitherto believed, the oldest surviving box girder bridge in Britain. (There may also be an earlier one in Ireland but this has yet to be verified.) This does not however detract from Torksey's historical importance which, apart from being a more impressive structure, is probably the first bridge to be designed with its main beams continuous over a central support, rather than as a pair of independent, simply-supported beams in series, merely sharing a common pier. Even today, Torksey with its slender, continuous, uniform beams (with the same span/depth ratio as Stamp End) still has a remarkably modern appearance.

With the closure of the East Lincolnshire line, the Lincoln-Barnby line has become part of the main railway route to Grimsby and is used by bulk oil trains to and from the refineries at Immingham. It is significant that the original Fairbairn box girders are still capable of taking such heavy loads, although it is believed that Stamp End Bridge may be scheduled for reconstruction under Railtrack's current medium-term programme of bridge renewal. Even though it is at present disused, Torksey's future is therefore probably more secure than that of Stamp End.

Railtrack's Record Centre at York state that they have no drawings of Stamp End Bridge. An attempt was made in April 1997 by members of the Society's Industrial Archaeology Committee to carry out a site survey, but access proved difficult and it became clear that a detailed dimensional survey could not be undertaken without the consent and co-operation of Railtrack. It is hoped that a more successful attempt can be made within the next year or so.

Notes

William Howden & Son
Engineers of Boston

Neil R. Wright

It was in the early years of the nineteenth century that some of the small iron working premises in Lincolnshire began to develop into real engineering works, and the first of these was the Boston Foundry of William Howden (1774-1860). The business lasted some seventy-five years under Howden and his successors and among its various products were the first steam engines to be made in Lincolnshire, but it never reached the size of Horsey's of Grantham, Tuxford's of Boston and Skibbeck or Clayton and Shuttleworth's great enterprise in Lincoln. Howden's house on the site still remains and part of the property is used for light engineering so it can still evoke some feeling of the atmosphere of those distant days.

Howden's foundry was on the bank of the river Witham north of the Grand Sluice bridge in Boston, and Ronald H. Clark in his book Steam Engine Builders of Lincolnshire says that it was founded in 1803. Clark says it was called the Phoenix Foundry, which suggests it occupied a site or buildings previously damaged by fire, but directories and other sources do not give the foundry a name until 1856, after it had passed to William Howden's son of the same name, when it was called the Boston Foundry. In 1861 after Wilkinson, Wright and Company had taken over it was called the Grand Sluice Ironworks and that name was still being applied to the site in 1891 even though the works had closed by then. Like many early works it started as little more than a blacksmith's shop but over the next fifty years Howden undertook more skilled work, including the production of steam engines, and gained a considerable reputation. William Howden senior ran the business until a few years before his death in 1860 (aged eighty-six) and, although his son did take over for a short period and other partners ran it successfully for another twenty years, it finally closed about 1880.

William Howden was born in Scotland, and his parents appear to have been Robert and Henrietta Howden who had a son called William christened on 10 May 1774 at Cleish in Kinross-shire. That village is north of the Firth of Forth, about twenty miles from Edinburgh, via Queensferry. Eighty-one years later, in an autobiographical note in the Lincolnshire Chronicle of 28 September 1855, William wrote about his early years as an apprentice, and referred in particular to his involvement with an early inventor and developer of the portable threshing machine. Part of it reads as follows:

About the year 1784 or 5 a Mr Andrew Meikle of Knowes Mill, near Dunbar, engineer and millwright, constructed a machine for threshing corn. He made the burn-floor to revolve with the corn spread upon it and having fixed a number of flails in a horizontal shaft, it was driven with considerable velocity, and beat out the corn upon the floor, but from the great speed at which it was driven, the joints of the flails were frequently deraigned and it was dangerous to be near them; consequently the scheme was abandoned. Shortly after this trial, Sir Francis Kinloch, of Gilmerton, near Ashfaltenford, in East Lothian, a very ingenious gentleman, made a working model, with drum, feeding rollers, and concave, as is now [1855] used, and as yet has not been surpassed. He sent to Mr Meikle to have his opinion upon the invention . . . [words of one line illegible] . . . would answer the purpose; and he was ordered to make one on a larger scale, which, when finished, was attached to a water wheel at . . . Mill and gave great satisfaction. A Mr Alashby, millwright, of Dousie, came to see the machine, and proposed to Mr Meikle that they should take out a patent for it, without acquainting Sir Francis of their intention. Sir Francis set forth for them their conduct, and said no patent should be granted, but that it should be open to the public, and any person who chose might make them.

In the year 1790, when I was an apprentice to Mr Joseph Conacher, engineer and millwright, of Edinburgh, Sir Francis ordered a working model to be made, of one inch to the foot, and I was to execute it according to instructions to be given by him; the woodwork was of mahogany and the wheels of brass, and it
It is evident that William Howden had arrived in the Boston area by 1802 because that year he married 18-year-old Ann Cecil at Wyberton church, just outside the town. If Clark is right and Howden was working for Remnie, then his employer's various activities in and around Boston at that time would seem a possible explanation for Howden's arrival there. Boston was then a boom town, with expanding commerce and industry and an increasing population, and it provided lots of opportunities for enterprising young men.

The river Witham north of Boston had followed a very meandering route until the 1760s when it was diverted into the present straight channel and the Grand Sluice was built just north of the town as a barrier between the new river and the tidal Haven. By 1800 a community of industrial premises and workers' housing called Witham Town was being established on the river bank from the Grand Sluice northwards. Part of Tattershall Road next to Witham Town was diverted in 1850.

This account shows that Howden served his apprenticeship in Edinburgh. So how did he get from there to Boston? Clark says in *Steam Engine Builders of Lincolnshire* that Howden had been an apprentice in the works of the celebrated John Rennie, Senior, F.R.S., at Blackfriars, London. Howden himself said he started his apprenticeship in Edinburgh but Clark's account could mean that in the late 1790s Howden went to work for John Rennie (1761-1821) in London as that would offer an explanation of how Howden got to Lincolnshire. Rennie was a mechanical and civil engineer whose first major work was the machinery for the Albion Mills, built in 1784-88 in Blackfriars, London and he greatly extended the use of iron for gears and other parts of machinery. Rennie had worked under Andrew Meikle in his early days and so the apprentice Howden would probably be well aware of Rennie through his interest in Meikle's threshing machine.

In the late 1790s John Rennie was engaged to undertake the draining of the extensive fens north of Boston and this occupied him well into the opening years of the next century. At the same time Rennie undertook various other projects in Boston, including the construction of the new Town Bridge which was the first bridge he built in England and the first he built of cast iron. The decision to rebuild the bridge was taken by Boston Corporation in August 1800 and work started in 1802; the bridge was opened on 2 May 1807. Remnie later recommended improvements to Boston Harbour, having had it surveyed in 1811. The drainage of the fens included the widening of the Maud Foster Drain adjoining Boston and three new cast-iron foot-bridges were built over the Drain in 1811 as well as various stone and brick road bridges.

Fig. 3. Location Plan - Howden's works in Boston.

Fig. 4. Property Divisions in Witham Town in early nineteenth century.

1. Site of Hartley's Brewery
2. Harvey's Passage
2a. 2/3 Witham Town; Howden lived here in 1817
3. Site of Witham Bank House, with garden
4. Area owned by T. B. Burrell 1809-38
   A - First part of Howden's works
   B - Extension to Howden's works
   C - Malthill site
5a. Keighley's Row
5b. Lamb's Row
6. Sacking Factory, later Tannery and finally Borough Iron Works
when a railway embankment was built, and the old part of the road became a cul-de-sac which is still called Witham Town as shown in Fig.9. The river bank is about 40 feet wide and Tattershall Road was about 160 feet to the east. The land between the river bank and the road was divided into blocks shown in Fig.4 and it was on part of one of these that Howden's foundry was built in the opening years of the nineteenth century.

The position of the Grand Sluice Iron Works is marked on the Ordnance Survey twenty-five inch map of 1887, and John Wood's Plan of Boston in 1829 shows the buildings of Howden's foundry on part of the 1887 site. The title deeds of adjoining property indicate that the foundry was here by at least 1867 and it may have been on this site since 1803 when Clark says it was established near the Grand Sluice, but as yet there is no conclusive proof of this.

The title deeds for Howden's foundry are no longer available, but the deeds of adjoining properties have been of some help. On 31 May 1809 Thomas Burrowes Burrowes, an innkeeper of Husbands Bosworth, Leicester, purchased some land near the Grand Sluice in Boston from Thomas Whiteman. This plot (No. 4 on Fig.4) was approximately square, extending about 160 feet from the bank of the Witham to Tattershall Road, and about 170 feet from north to south. It was later divided into three strips which are shown on Fig.4 and marked A, B and C. North of this piece of land was a strip on which Witham Bank House was later built, and to the south was another strip on which two rows of cottages called Keightley's Row and Lamb's Row were built facing each other. Beyond Witham Bank House was Harvey's Passage and beyond that Hartley's Brewery before open country and, a little further out, a Woad Mill and worker's cottages. We do not know who occupied the land which Burrowes bought in 1809.

On 13 October 1817 Burrowes raised a mortgage on sites B and C and on a house (site 2a on Fig.4) which is now 2/3 Witham Town. This mortgage referred to the land to the north of B and C, that is site A, as 'lands lately sold by . . . Burrowes to W. Howden'. Therefore, William Howden owned this part of the site by 1817 at least. The same document also reveals that between 1809 and 1817 'a malt kiln, malting offices and other buildings' had been built on site C and in 1817 they were leased from Burrowes by George Beechard Colley, who from other sources we know to be a maltster and brewer. If Howden was on site A from 1803 then for the first fourteen years or so he was evidently renting it first from Thomas Whiteman and later from Thomas Burrowes.

The mortgage of 13 October 1817 also tells us that the house which is now 2/3 Witham Town (2a on Fig.4) was at that time occupied by William Howden, fairly conclusive proof that he was living there at that date. By 1829 an elegant three-storey brick house (see Fig.7) had been built at the west end of site A and in the 1841 and 1851 censuses William Howden is recorded as living there. In the 1851 census the house is actually called "Foundry House". The present owner of this house has told me that the date '1820' is written in the roof space, which suggests that the house was built soon after Howden had bought the site. The County Directory published in 1826 by William Howden, engineer and ironfounder, as living on Witham Bank as well as having his foundry there, so this further corroborates the thesis that Howden built Foundry House in 1820 and lived there until a year or two before his death in 1860. Howden encroached on the river bank in front of his house to form a garden, and he apparently also used the bank in front of the rest of this works for landing and storing raw materials brought down the river.

On census night in 1841 William Howden shared his house with his wife Ann, son William and grandson Robert and two female servants. Earlier newspaper reports reveal that young William's father had died on 23 May 1839, aged twenty-two, after a severe illness. By 1851 William junior had married again and moved out but grandson Robert was still there; there was now just one female servant. In 1851 William junior, now aged forty-four, lived in Spain Lane, Boston, with his new wife, Sarah aged twenty-eight, born in Stepney, London, and a female servant also lived in the house. Spain Lane is close to the centre of Boston, about a mile from the Grand Sluice. Clark suggests that in 1849 the father and son partnership had split up and the son had a small business of his own in Spain Lane, but if that had happened they were back together by 1851 because the son's census entry states his occupation as 'Millwright, Engineer, Iron Founder in partnership with Father employing 21 men and three boys'. The father's occupation was given as 'Engineer and Iron Founder employing 21 men and 3 boys'. As well as indicating that they were still in business together, these entries also show that is was probably the son who was the millwright in the business.

County directories published during the nineteenth century provide evidence for the development of the firm. The 1826 Directory described William Howden as an engineer and an iron and brass founder. By the time the next directory was published in 1830 William senior had been joined by his son, William aged about twenty-three at this time, and the firm were also described as millwrights. Because the Howden family's
involvement in the foundry finished over a hundred and thirty years ago there are not many examples of their products about. They were a local foundry meeting local needs and the surviving items I have seen include a cast-iron mile post beside the old turnpike road at Drayton in Swineshead, a cast-iron frame to support the peel of bells in the tower of Wigtoft church, and, most noticeably, the garden fence and gate and decorative ironwork in front of Howden’s own house at 11 Witham Bank East in Boston. They also made cast-iron ship carriages for three seventeenth-century cannons which have belonged to Boston Corporation (now the Borough Council) for the past 355 years and are on display in the Guildhall Museum (Fig.8) The date cast into the carriages seems to be ‘1848’ but it might be ‘1843’ which was the 200th anniversary of two of the cannons being purchased by the Corporation. As the museum has several thousand visitors each year these carriages are probably seen by more people than any other Howden product. It is also known that Howden’s foundry made the cast-iron pillars for Centenary Methodist Church in Boston in 1839-40 but that burnt down in 1909.

The author would be very pleased to hear from anyone who knows of other Howden products which still survive.

It may be a coincidence but it is about the time that Howden’s son entered the firm that it started its most interesting period, and produced the first steam engines to be made in Lincolnshire. Their first engines were small marine ones for the river boats steaming along the Witham between Boston and Lincoln. Clark says that Howden had probably started construction of the first engine sometime in 1826 and the completed unit made a trial trip towards the end of 1827, whilst a longer voyage was made from Boston to Lincoln on 14 December of that year. The boat was twenty-four feet long and the engine rated at two and a quarter horse power. Engines for other river boats were made in succeeding years and in this connection Howden would have known Nathaniel Clayton, a steam boat captain who in 1842 joined with Joseph Shuttleworth to found the greatest Lincolnshire engineering firm of the nineteenth century. Several of the engines made by Howden for Witham river craft eventually ended up at Isaac Watt Boult’s yard in Ashton-under-Lyne.

In the late 1830s, when William senior was aged sixty-five, they started to produce portable steam engines that could be used in agriculture. William Howden’s autobiographical account published on 28 September 1855 in the ‘Lincolnshire Chronicle’ reports that

In 1839, I and my son made a Portable Engine of two horse power fixed on a frame with four carriage wheels, so that it was easily removed from one place to another by horses, and employed in thrashing and other purposes; this was the first of the kind, and we claim the invention. In 1841, we made one of six horses’ power, which was shown at the Agricultural Meeting at Wrangle, and for which we were awarded the prize of two pounds; since which time a great many have been manufactured both for home and foreign orders.

William Wedd Tuxford, a local miller and baker, had started his own engineering business in Skirbeck (just outside Boston) in 1826 and this was eventually to exceed Howden’s in size and ingenuity, but it is said that both Tuxford and Nathaniel Clayton got the ideas for their own portable engines from the one made by the two William Howdens in 1839.

Sometime before 1839 William Howden doubled the size of his site, although it appears that for several years the extra space was used just for storage. T. B. Burrows died on 28 November 1838 and on 4 December 1839 his heirs sold the Maitkin site (site C on Fig.4) to Holliday William Hartley, a substantial brewer who had been tenant of the site since at least 1833. When this sale took place the conveyance referred to the site to the north (site B) as ‘lands belonging to W. Howden lately belonging to said T. B. Burrows’, implying that site B had been sold to Howden sometime before Burrows death.

In the railway mania of the mid 1840s several railway schemes were proposed which would affect Boston, and a number planned to cross the river Witham in the vicinity of the Grand Sluice. The surveys drawn up for these schemes show Witham Town, including Howden’s foundry site. Although the quality of the draughtsmanship varies there is a consistency about them which allows an accurate plan to be drawn of the outline of the buildings at that time. The surveys had to be deposited at the Palace of Westminster by November each year in time for the next session of Parliament and they were prepared in the months before then. One plan was presented in 1844, three in 1845, two in 1846, and others in 1847 and 1848.

The 1844 plan and two of the 1845 plans appear to show that site B was still unused (and in the Books of Reference it is referred to as a garden), and that a range of buildings along the southern boundary of site A prevented access between the two sites. However, the third plan of 1845, and all of the subsequent plans, show that the building at the eastern end of that dividing row had been demolished, and that a new building had been erected at the eastern end of site B. These plans suggest that this change occurred during 1845, after two of the surveys had been done and before the third. The layouts before and after this change are shown in Figs 5 and 6 which are composite plans.
based on the various surveys. When John Woods 1829 Plan of Boston is compared with the 1844 and early 1845 surveys there appear to be no noticeable differences, so by 1829 the foundry had probably already reached the extent shown in Fig.5. All of the Books of Reference to accompany the surveys in the 1840s confirm that the whole of the property was owned jointly by ‘William Howden the Elder and William Howden the Younger’. In the 1849 Directory their entry is at its most elaborate, describing them as:

Howden & Son, iron and brass founders, engineers and millwrights, steam engine boiler manufacturers, and inventors and makers of the portable steam threshing machines.

The 1856 Directory shows that William the Elder had at last retired, although he apparently still lived in the Foundry House. The entries for the business refer to William Howden junior as Iron and Brass Founder, Machine Maker and Millwright. William senior died on 7 May 1860 aged eighty-six and the cause of death was said to be ‘semile decay’. By that date the family were no longer involved in the foundry and William senior died in a house in Red Lion Street, Boston, which is closer to the town centre and about half a mile from the Grand Sluice.

William junior might have been an active partner with his father in earlier years but he did not last long on his own. The lack of dynamism in the last days of the Howdens’ ownership during the 1850s is indicated by the fact that no railway siding was built into the works. Nearly all ironworks which developed into major engineering concerns in the nineteenth century had such a railway link and Howden’s was close enough to the junction of the Great Northern Railway’s Lincolnshire Loop Line with the East Lincolnshire Railway for a siding to have been provided.

Before 1859 William Howden had entered into a partnership with William Wilkinson (b.1817) who was born in Lincoln and was apparently captain of a steamship and a trader on the Witham before joining this business. For a time the firm traded as Howden, Wilkinson and Company until Howden left in March 1859 when it became Wilkinson, Wright and Company. We do not yet know what happened to young William Howden after he left the Foundry; at that time he would be about fifty-two so he could have continued an active career for some years longer. The new partner was Henry Thompson Wright (1826-c.1880), the youngest son of Charles Wright whose family were ironmongers and nail makers in Boston for several generations. Charles Wright’s sister-in-law was married to Pithey Thompson, the local historian of Boston, and Henry’s middle name reflects this family connection. This new blood evidently brought fresh vigour to the business and in the 1861 County Directory the firm is described as:

Wilkinson, Wright & Co., engineers, millwrights, iron and brass founders, and manufacturers of portable and fixed steam engines, threshing machines, straw elevators, brick and tile machines, saw tables, & hydraulic machinery of every description, Grand Sluice Ironworks.

At the time of the 1861 census William Wilkinson was living in Foundry House with his wife, three daughters and two female servants, and was described as ‘engineer employing 50 men and 20 boys’. This workforce was twice that employed by Howden ten years earlier and the future probably seemed bright. In 1862 the firm exhibited a good design of portable engine at the Great Exhibition but by the end of the year their short-lived partnership had ended. When they split they divided the premises between them and each carried on trading as a separate enterprise: Wilkinson continued to live in Foundry House which he now called Witham House so he presumably had an area equivalent to site A, which would leave Henry Wright with site B. In 1863 their Directory entries were as follows:

Wilkinson, William, engineer, millwright, and iron and brass founder, Witham Iron Works, Grand Sluice, h. Witham House

Wright Henry, ironfounder and engineer, Grand Sluice Iron Works (see Advert.)

However, later that year Wilkinson left Boston and in December 1863 bought the Poole Foundry in Dorset. Wright took over the whole site again and in 1871 was living in Foundry House with his wife, four young children and three female servants. In 1872 his Directory entry was as follows:

Wright, Henry Thompson, ironmonger [C. & T. & H. T. Wright] and ironfounder, engineer, millwright, &c., Grand Sluice and Witham Town ironworks.

This indicates that he had combined both works, and also appears to show that his involvement in the family ironmongery firm might have been more important to him than his own ironfoundry and related businesses. Henry Wright continued to operate the Grand Sluice Ironworks until shortly after 1876 and though a young relative, Charles Wright junior, moved into the house by 1882 it appears that the works closed and it was not listed in any subsequent Directories. The Grand Sluice Ironworks was marked on the 1887 OS twenty-five inch map but with the indication that it was disused, and there was a similar reference in the 1891 census. The 1887 map (Fig.9) shows that there had been a major development of the site since 1845, and the fact that Wilkinson and Wright could split it into two separate works in 1862 suggests that the development had occurred by that date. A few years after 1887 the part of the site immediately behind the house was demolished and to this day it has stayed as a garden. Site B was sold off separately and has continued in light industrial use to the present, occupied for over sixty years from 1905 by the Meek family as a wood turning workshop, and in recent years by W. S. Barrett and Son Ltd.

Both of the major buildings shown on the 1887 plan, and

Fig.9. Witham Town in 1887, showing 1850 diversion of Tattershall Road which left Witham Town as a cul-de-sac.
most of the subsidiary buildings, were demolished several years ago. Howden’s house still stands at the north-west corner of the site, and next to it is a small two-storey extension. The 1887 plan shows this extension with an archway underneath, and this is evidently the surviving building (see Fig.7) which has an iron beam to support the first floor room that might have been the office or counting-house for the works. The original archway would allow access from the works to the river bank, though with limited headroom. Most of the archway has been bricked up to form another room but there is still a narrow passageway from front to back. In 1964 there was a single storey brick and pantile building south of the counting house, partially visible in Fig.7 but that has since been demolished. At the east end of site B there are two single storey brick buildings, north and south of the entrance to the site. The southern one has a pantile roof and this might possibly be the building erected in 1843. Both buildings seem to match those shown on the 1887 plan to the east and south of the southern courtyard shown in Fig.9.

Witham Town was once an area with many small businesses as well as Howden’s, but now the area is predominantly residential with small cottages and mobile homes, and Barrett’s business is the last piece of light industry remaining in Witham Town. Few people visiting the area today would realise the significant part which this works once played in the development of mechanical engineering in Lincolnshire, if not further afield.