

Chapter 13

The Sheffield Plant base by around 1800

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THE LIKELY SIGNIFICANCE AND FATE OF EARLY SHEFFIELD PLANT PROPERTIES

As indicated in Chapter 12, ‘Benjamin Plant of Sheffield Moor’ (*i.e.* the 18th century bellows maker *Ben(bellows)* 1742-1806) can be associated with some mainstream events of Sheffield’s progression from being a small town towards becoming a major industrial city. The *Plant’s Yard* base of this bellows maker and his bricklayer brother (Chapter 10) was predated by Benjamin’s 1770’s base in Coal-pit Lane, near central Sheffield — this may well be the site of the 1779 ‘*Late Plant yard*’ which appears in rate books, as well as the site of now listed buildings, which were rebuilt around 1870 and which were subsequently renamed *Leah’s Yard*. Examining the property records of the late 18th century *Plant’s Yard* Plants provides clues, for example, about their likely activities through the times of the Industrial Revolution and shows, in particular, an apparent connection with the introduction of steam-age technology to blow Sheffield’s developing forges.

13.1 Late eighteenth century Plants and Industry

Various associations can be made between the Sheffield bellows maker Benjamin Plant and some recorded events in local history. Such associations are known partly as a result of surviving property records (Chapter 11) as well as various published histories, such as the history of the so-called ‘Company of Cutlers’. A particularly relevant published history is that of *Ben(bellows)’s* wife’s family, the Wards (Chapter 12).

Recorded events involving the *Plant’s Yard* Plants include the tumultuous beginnings to Parliamentary Enclosure around Sheffield, with the 1779-88 Ecclesall Act (Chapter 11), which made way for Sheffield’s expansion through into the so-called Industrial Age.

13.1.1 Sheffield’s cutlers and Water Power

It seems that Sheffield’s industrial roots date back at least to the 14th century. The English poet Geoffrey Chaucer wrote of the implements carried by the Miller of Trumpington with:

“A *Sheffeld thwitel baar he in his hose*¹”.

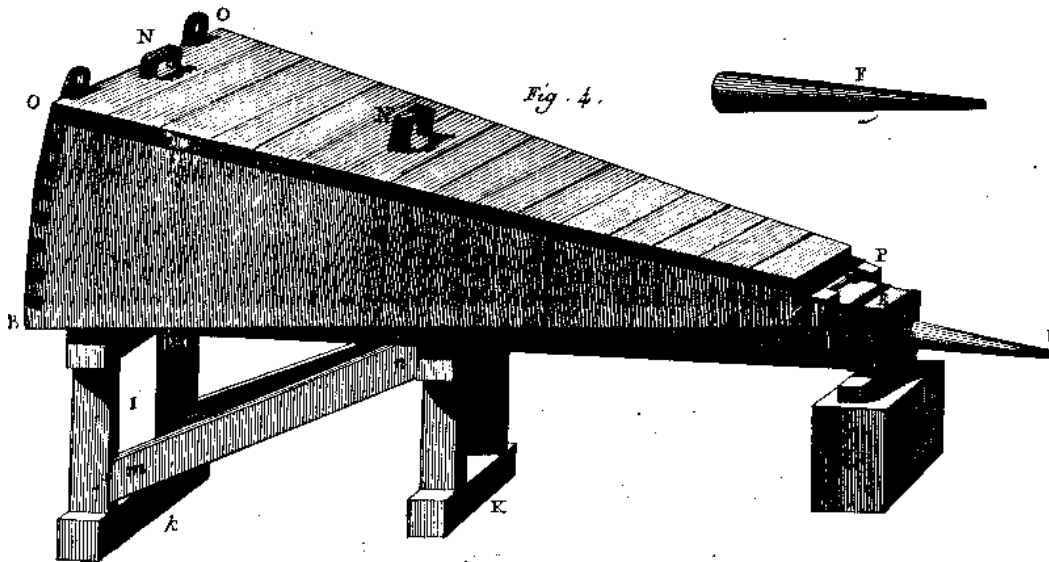
It is clear that it was the adoption of the water wheel, with grindstones from local quarries, that made possible the concentration of cutlery and edge-tool manufacturers in Sheffield². All Sheffield’s little rivers have good falls of water and they are small enough to be easily diverted into goits and dams³. The Sheffield cutlers’ use of water power reached its peak in the century after 1680. Most of Sheffield’s Wheels are listed with troughs, indicating that they were used for grinding metal. The evidence for a major increase in water-powered grinding capacity, in 18th century Sheffield, raises

¹In modern English this becomes ‘*He had a Sheffield knife in his stocking*’.

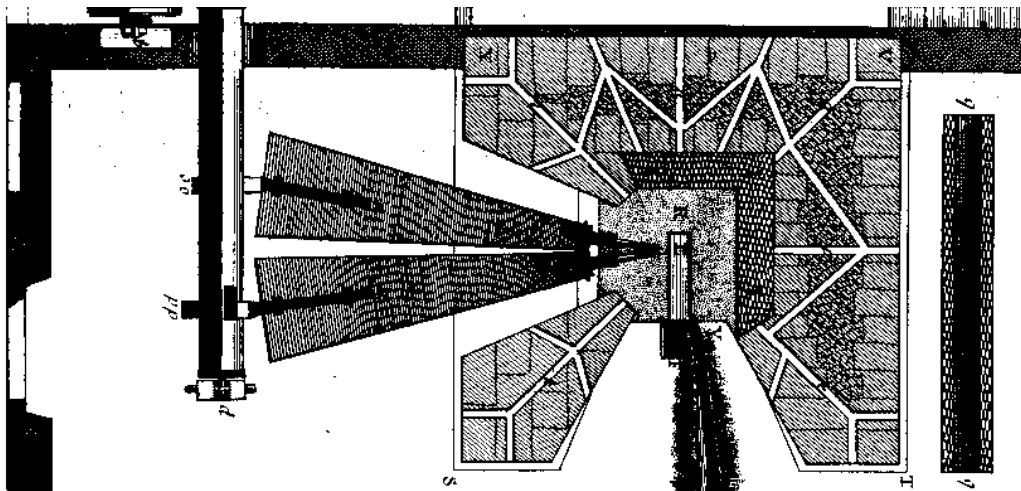
²*Sheffield: Its Story and Its Achievements*, Second Edition, Mary Walton, 1949, p38.

³In Sheffield, the term *dam* meant the whole reservoir.

(a)



(b)



(c)

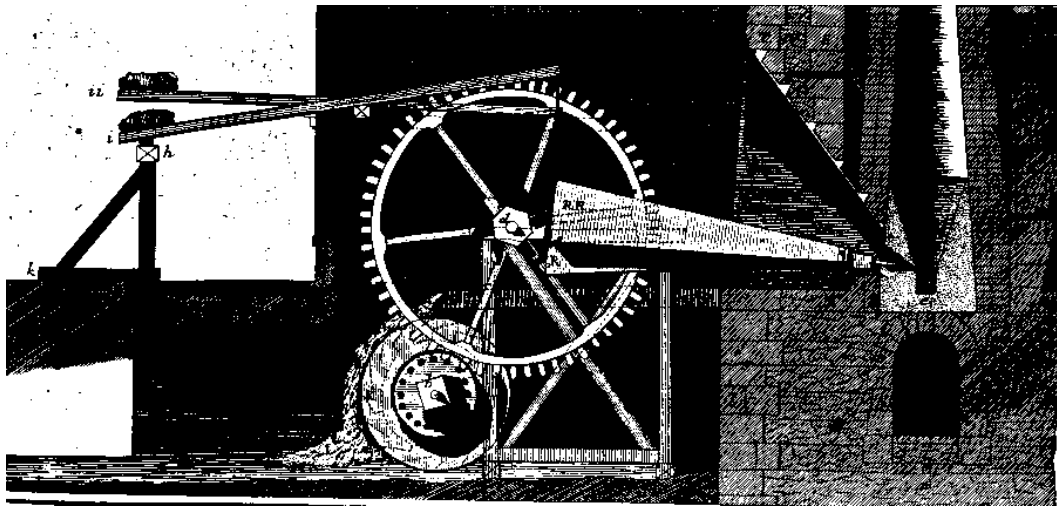


Figure 13.1: An 18th century iron forge: (a) bellows (approx 20ft long); (b) plan view of 2 bellows besides furnace; (c) spur-wheel drive for compressing each bellows in turn and counter-weights for raising bellows between compressions

the wider question of how the plant and equipment for forging and steel making were expanded to match. It is perhaps not surprising that, late in the 18th century, new water-powered *forges* appear in Sheffi eld and, in a few cases, these were conversions of Cutlers Grinding Wheels⁴.

13.1.2 Bellows for Iron and Steel

In the eighth edition of his 1755 Dictionary, Samuel Johnson defi nes bellows as *the instrument used to blow the fi re* and illustrates this with a quotation from Dryden (1631-1700):-

*The smith prepares his hammer for the stroke,
While the lung'd bellows hissing fi re provoke.*

It is clear however that, by *Ben(bellows)'s* times, metal working was carried out on a large scale in Sheffi eld, with water-powered bellows and tilt hammers replacing the smith's muscle-powered equivalents.

There is a separate heading *Bellows Makers* by 1797 in the Sheffi eld Directories, though the sole entries in this and the other two 18th century Directories are:-

John Linley bellows maker, Darnall, near Sheffi eld (1774); John Lindley, Norfolk Street (1787); Lindley, Widow & Son, 71, Broad Street, Park (1797); and

Benjamin Plant bellows maker, Coal-pit Lane (1774); Little Sheffi eld (1787 and 1797).

Figure 13.1 shows a spur-wheel mechanism for driving bellows, in one of several similar schemes for an 18th century iron forge⁵. In these illustrations, from a 1773 French Encyclopaedia, it can be seen that the water wheel drives a large spur-wheel which has, near its axle, rotating 'feet'. Each 'foot' depresses the upper box of a bellows over its inner snugly-fi tting lower box. Each upper box is raised between exhalations by the leverage of a counter-weight, with air being taken back into the bellows through a valve in the base of its shallow lower box.

13.1.3 Contemporary Iron and Steel production

By the second half of the 17th century, the Sitwell family of Renishaw (8 miles SE of Sheffi eld) had come to prominence as the iron masters of NE Derbyshire (the region to Sheffi eld's south). A High-Sheriff of Derbyshire, George Sitwell (1600-67), played a notably active role and the Sitwells have been associated with the early adoption of water power for iron forging⁶. It was subsequently George Sitwell's great great grandson, Francis Hurt Sitwell (1728-93), who built the substantial Mount Pleasant home of *Ben(bellows)'s* nephew, S.B.Ward, near the site of Plant's Yard in Little Sheffi eld.

Sheffi eld gradually took over from Newcastle, 130 miles to the north, as the main centre for steel production after Huntsman's 1741 invention of crucible steel. By 1751, Benjamin Huntsman had set up the fi rst *crucible* steel works at Attercliffe (2 miles NE of central Sheffi eld). After perfecting crucible steel, the Quaker Huntsman turned his main interest to steel buttons, in preference to pursuing his ready opportunities for further wealth and honours. A century later, by around 1840, 90% of Britain's and some 50% of the world's steel production came from Sheffi eld.

The Plants' association with Huntsman can be explained by the fact that the uncle of *Ben(bellows)'s* sister-in-law was the Robert Asline who was Huntsman's partner. Huntsman and Asline were purveyors of steel at 84/0d per cwt in 1761. In 1771/2 a property in Attercliffe (Barn, Smithy and garden) was leased to Robert Asline, with Huntsman being a third party, and it is just possible that this

⁴David Crossley (1989) *Water Power on the Sheffield Rivers*, *ibid*.

⁵*Recueil de Planches, sur les Sciences, les Arts Liberaux, et les Arts Mécaniques, avec les explications*, Vol 4, 3rd Edition, 1773, *Forges* 2^{me} Section *Fourneaux á Fer* Fig 4 of Pl V; also 3^{me} Section *Un Fourneau en Marchandise*, parts of Pl I and 2. I am grateful to Martin Phillips of Keele Information Services for access to this rare archived 1773 French Encyclopaedia.

⁶John Heath (1993) *An illustrated History of Derbyshire*, Breedon Books.

was Huntsman's earlier Attercliffe works⁷. In the 1774 Sheffield Directory, the entries for Huntsman are (a) *Huntsman, Benjamin, cast steel maker, Attercliffe, near Sheffield* and (b) *Huntsman and Asline, button makers, John Street*. By 1797 the Sheffield Directory lists *Huntsman, William, steel refiner, Attercliffe* and this son and successor of the famous inventor of cast steel was at least an indirect associate of *Ben(bellows)*, at least in so far as their wives were known associates by 1805⁸.

13.1.4 Ben(bellows) and the advent of steam power

It may be relevant that *Ben(bellows)* came from Duckmanton (10 miles south of Sheffield) where the company Eb Smith & Co were the largest producers of iron in late 18th century Derbyshire. Eb Smith & Co owned the Calow iron works, the Griffin Foundry and the Adelphi Works at Duckmanton — amongst other things they manufactured steam pumping engines to the design of Boulton and Watt⁹.

History records that Huntsman was a friend of James Watt¹⁰. It is known moreover that, in 1782, Huntsman's traditionally-supposed rival, Samuel Walker, acquired a Boulton and Watt beam engine as a dry weather back-up to the water-powered blowing of his iron furnace at Holmes near Rotherham (5 miles NE of central Sheffield)¹¹.

There appears to be better documentation around 1800 for Sheffield's water-powered premises than for the adoption of steam power for the blowing of forges and furnaces. This is perhaps partly because steam power did not appear in rate books, as it escaped the specific assessments that were legally required for Water Wheels. There is in general a lack of evidence for the introduction of steam power at local Water Wheels until around the 1830's, apart from its *known* introduction at Sheffield's *Pond Forge* by 1805. An apparent connection between Benjamin Plant and the Pond Forge will be discussed later and, for the moment, it may simply be mentioned that *Ben(bellows)* leased property in Pond Lane which joined the Pond Forge to the Pond Tilt. It may be noted that the dams of Sheffield's many Water Wheels were potentially ready reservoirs for steam power and this might help to explain why the bellows maker Benjamin Plant can be associated with sites around various Water Wheels, in particular, along the Porter Brook.

The Porter Brook forms much of the northern boundary of Sheffield's sub-manor of Ecclesall, for which there are suitably early property records. Property evidence associates *Ben(bellows)* with the Spurr Wheel, the Stalker Wheel, and the Pond Tilt. The latter two Wheels are known to have been in the tenancy of his wife's family and their ancestors, the Wards and the Broomheads.

13.1.5 Around the Pond Tilt

Benjamin Plant's brother-in-law, the 1790 Master Cutler Joseph Ward, was the principal heir to Samuel Broomhead (1722-86) of Pond Lane in Sheffield. Pond Lane is shown running parallel and just to the west of the River Sheaf, near the right edge of Figure 13.2. It was apparently near Pond Lane that the Duke of Norfolk leased land to *Ben(bellows)* — such evidence first appears in rate books in 1794 with the mention of Benjamin's '*Dukes Allotment*' (Chapter 11). In his 1805 will, *Ben(bellows)* left property here '*in or near Pond Lane*' to Joseph Ward's eldest son, the 1798 Master Cutler Samuel Broomhead Ward, as will be detailed later in this Chapter.

⁷*Benjamin Huntsman, 1704-76*, K.C.Barracough, Sheffield City Libraries Local Studies Leaflet.

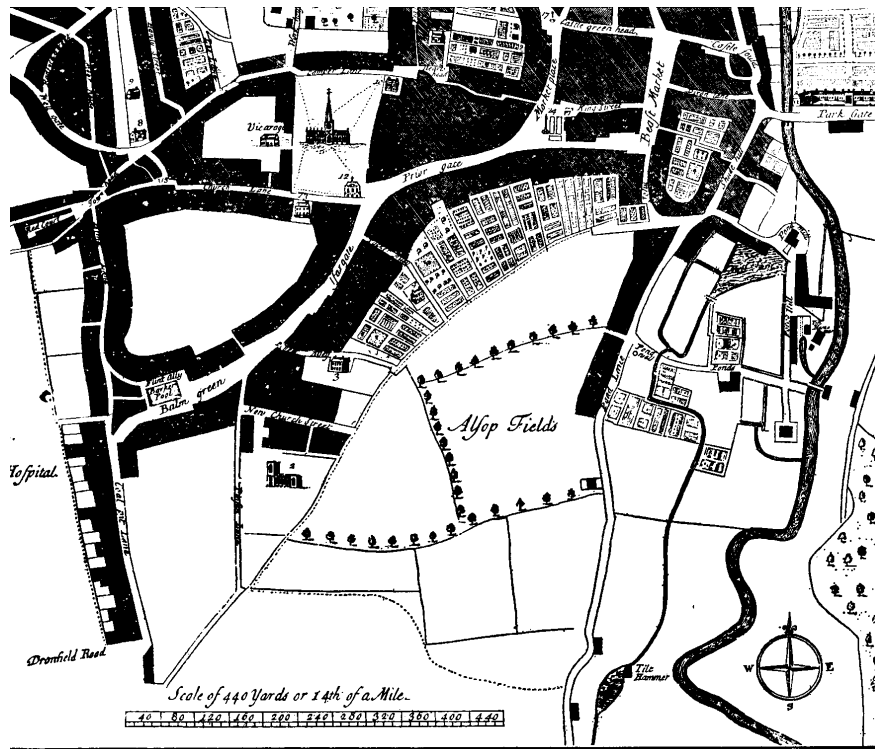
⁸Benjamin Huntsman invented crucible steel at Handsworth, 3 miles to the south east of Sheffield, in 1741, though it was slow to be adopted. Later, there is various clear evidence of associations between *Ben(bellows)*'s wife's family, the Wards, and the Huntsmans in *Peeps in the Past: being passages from the diary of Thomas Asline Ward*, edited by A.B.Bell, 1909.

⁹*An illustrated History of Derbyshire*, *ibid*.

¹⁰David Fine (1992) *Sheffield: History and Guide*.

¹¹*A guide to the Industrial History of South Yorkshire*, editor Derek Bayliss, Association for Industrial Archaeology, 1995.

(a) Map dated 1736



(b) Map dated 1771

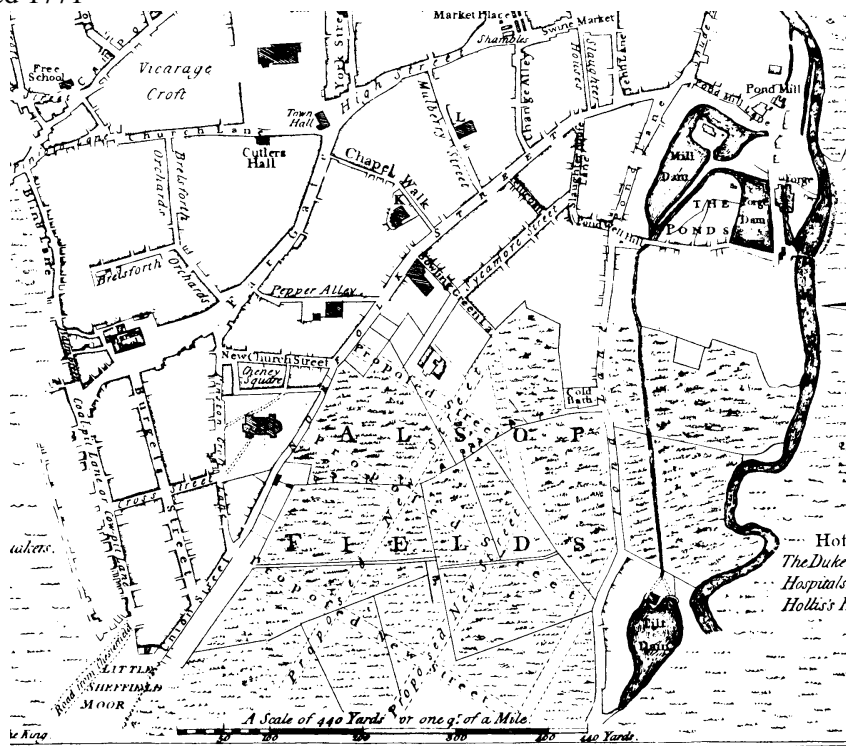


Figure 13.2: The south half of Sheffield town, showing Coal-pit Lane towards the bottom left, the Cutlers Hall and Parish Church towards the top centre, and the Pond Tilt towards the bottom right

At the time (1794) of *Ben(bellows)'s* leasing of this 'Dukes Allotment', his brother-in-law, Joseph Ward, was a co-owner of the lease of the nearby Pond Tilt, near the confluence of the Porter Brook and the River Sheaf¹². The Pond Tilt is labelled as 'Tilt Hammer' on a 1736 map (bottom right corner of Figure 13.2(a)) and it would no doubt have used water-power for operating large tilt hammers¹³. The uses of Tilt Hammers were various, though they were often applied to hammering together heated and softened pieces of blister steel to form faggots¹⁴. Their uses can be taken to suggest the likely presence of automated bellows at the premises and, by the late 18th century, such bellows would presumably have fallen in the technological province of the bellows maker Benjamin Plant. Benjamin's bellows, along with the associated drive mechanisms, were no doubt installed at various premises and, for example, the Wards also had an interest in the Wicker Tilt at the confluence of the Sheaf and the Don. A 1771 map (Figure 13.2(b)) indicates that the Pond Tilt became connected to Sheffield town after residential and factory developments took place (between 1776 and 1793) across Alsop Fields. The Pond Tilt had earlier (Figure 13.2(a)) been separated from *Ben(bellows)'s* Coal-pit Lane base by 0.3 miles of fields.

The Pond Tilt and Benjamin Plant's nephew S.B.Ward are mentioned in a letter dated 31 May 1824 from another nephew, T.A.Ward, to his friend Joseph Hunter. In this letter, T.A.Ward writes '*S.B.W. seems not very comfortable. He has set out for London, and perhaps another voyage to Paris. I believe he would not again act the part he did respecting the Pond Tilt, but rather because it is not so good a bargain as he expected than from any visitings of conscience.*'¹⁵. Fuller reading suggests that this reference to *conscience* related to disputes with the 'tilters' (*i.e.* tilt hammer workers) who were no doubt aggrieved with new techniques and working practices, which were perhaps partly necessary because of the progressive adoption of Huntsman's cast steel. It hence seems that Benjamin Plant's Ward nephews were, in the early 19th century, responding to technological innovations which dated back to the times of their father's step-father, Samuel Broomhead, and to their uncle Benjamin Plant.

13.1.6 Some contemporary social detail

The recorded history of *Ben(bellows)'s* wife's family enables us to add some social detail. The guest list for the Cutlers Feast of the 1790 Master Cutler, Joseph Ward, included amongst many others the Duke and Duchess of Devonshire, the Duke of Norfolk, William Wilberforce MP, William Huntsman, Robert Asline, John Kenyon, William Hoyle, Joseph Ibberson and Peter Spurr, as well as Mr and Mrs Benjamin Plant and Mr and Mrs John Plant¹⁶. Some of these names will appear again later in this Chapter as business associates of the Plants, providing apparent illustrations of the Plants' workplace activities.

We can also add some biographical narrative concerning an incident involving *Ben(bellows)'s* sister-in-law, Sarah Asline, who was rescued by her husband, Joseph Ward, from the water near the Pond Forge on 25 Oct 1795¹⁷. This is told in a letter from Mrs Elizabeth Girdler who, along with the historian Joseph Hunter, was related to the Coal-pit Lane neighbour, Joseph Fletcher Smith, of Benjamin Plant¹⁸. The letter states "*Mrs Ward, she that was Miss Asline, had the misfortune to be*

¹²The Wards obtained a half share of the Norfolk lease of this water-powered Tilt Forge in 1788, purchasing the works in 1807, and they remained associated with it until its closure around 1855. *Water Power on the Sheffield Rivers*, *ibid.*

¹³It seems that heavy tilt hammers were repeatedly levered upwards by a cam on a rotating shaft, being left to drop under their own weight.

¹⁴It can be added that a process of cold working by hammering and then annealing at high temperatures would help to homogenise the blister steel, which was the sole steel used before Huntsman's 1741 invention of cast or crucible steel.

¹⁵*Peeps into the Past*, *ibid.*, pps 279-81.

¹⁶*History of the Company of Cutlers*, Vol II, Robert Eadon Leader, 1909.

¹⁷This incident was at Boardman's Bridge near the Pond Forge which was near the other end of Pond Lane from the Pond Tilt. The Wards' country villa on Park Hill was less than a mile to the east of Boardman's Bridge, which led from central Sheffield towards Park Hill ('Park Gate', which led to Park Hill, is shown near top right corner of Figure 13.2(a)).

¹⁸Mrs Elizabeth Girdler was the grandmother of Joseph Hunter, the celebrated author of the 1819 '*Hallamshire*' history, and also a great aunt of Benjamin Plant's Coal-pit Lane neighbour, the 1796 Master Cutler Joseph Fletcher Smith, who

Owner	Occupants	Land Tax Assessed and Exonerated
Joseph Ibbotson	Benjamin Plant & oths	6/8 $\frac{3}{4}$
Benjamin Plant	John Ogley	7/9 $\frac{1}{4}$
John Plant	Self & oths	2/1 $\frac{3}{4}$

Table 13.1: Ecclesall Land Tax records (1836-93)

blown into the water yesterday at Boardman's Bridge. She had been at church and was returning to their house in the country to dinner. She was talking to a lady, and a sudden gust of wind took her over the low wall of the bridge into the water which was two yards deep. Mr Ward was present. He immediately jumped in and got her out. She was taken to a house there was near and put into a warm bed."¹⁹.

13.2 Ecclesall Plant property records of around 1800

By 1790 some of the Ecclesall property records are more detailed than earlier and, though still scant, there are unusually long lists of property associated with *Ben(bellows)* in Ecclesall rate books for example. Such property records show, for example, that *Ben(bellows)* held property at his early Coal-pit Lane base up to the time of his death, as well as keeping property at his later-life Little Sheffi eld base. There are also some indications, in his property records, of *Ben(bellows)'s* industrial connections.

13.2.1 The nature of the Ecclesall property information

Information from deeds, in particular from some deeds that just predate *Ben(bellows)'s* 1805 will, can be supplemented with information from some Ecclesall rate books and Land Tax records.

Rather oddly, clues relating to 18th century Plant properties are contained in 19th century Ecclesall Land Tax records. It seems clear that the information in *these* records was copied onwards down the decades and there is accordingly some difficulty in establishing the precise dates from when this information originated²⁰. A few of the later records (nominally dated 1894, 1896, 1897, 1898) are more complete and they include entries under '*Names and descriptions of Properties charged*' (Table 13.4). Despite the nominal dates of these records, it seems clear that they relate to some of the properties of the bellows maker Benjamin Plant and the bricklayer John Plant who were in Ecclesall Bierlow up to 1806 and 1816 respectively.

Some of the late 18th century *rate book* information corresponds with this Land Tax information and this helps to provide more accurate dates. The items that are *listed under* Little Sheffi eld (such as Broomhall Land, Barn and Dukes Allotments) remain essentially unchanged in 1799 rate books

had signed the much vaunted document allowing Joseph Hunter '*Freedom of the Company of Cutlers*', a document which has long been on permanent display in the Cutlers Hall.

¹⁹*Peeps into the Past*, *ibid*, p 181.

²⁰Remarkably constant entries appear in these records throughout the whole of the 63 years (1836-98) for which they are available. Some entries, relating to the name Plant, are shown in Table 13.1 for 1836-93 —these entries remain unchanged apart from occasional corruptions of the name Ibbotson to Ibberson, Plant to Bland, and Ogley to Oxley or Ogle. It seems impossible to identify names with individuals in these records that span 63 years *unless* we assume that the names were perpetuated beyond the lifetimes of the individuals from whom they originated. This supposition is reinforced by the evidence that some of the names in the full set of records were sometimes qualified with '*late*' but then subsequently perpetuated without being so qualified.

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(Table 13.3(a)) from the entries of 1795 (Table 11.4(b) of Chapter 11). However the 17 properties that were listed under Coal-pit Lane, whose rates were still being paid by Benjamin Plant by 1795, no longer appear under his name by 1799 though it seems clear that Benjamin still retained the ownership of (some of) these properties, as is indicated below.

13.2.2 Coal-pit Lane

Directory information indicates that *Ben(bellows)* had moved his main base from Coal-pit Lane to Little Sheffi eld by 1787. By the time of the Ecclesall rate book for 29 Oct 1799, the evidence for *Ben(bellows)'s* Coal-pit Lane rates payments had eventually diminished to a note '1800 January the 3 Recd 1:16:11 for 2 Houses in Coalpit Lain' which is written alongside Benjamin Plant's Little Sheffi eld entries. Moreover the same sum £1:16:11 is written alongside his entries for 18 May 1802. In the rate books of around 1804-7 (recorded rate of 12p in the £) the Plant entries listed under Coal-pit Lane itself have diminished to just a single mention in the form of an entry 'Plant Shop 6d ?Emte'. However, subsequent evidence shows that *Ben(bellows)* and his Plant heirs remained associated with Coal-pit Lane in property deeds dating well into the 19th century. It is clear that those who were, by 1800, paying the rates for this Coal-pit Lane property were the *occupiers* in place of *Ben(bellows)* who still *owned* (at least some of) the property.

On a modern note we can add that Coal-pit Lane is now called Cambridge Street and that it lies amidst modern Department Stores at the shopping heart of a busy central Sheffi eld. Anachronistically, some old property survives on the west side of this street and this comprises the listed 1870's buildings that became known late in the 19th century as *Leah's Yard*. A range of 3 storey buildings lines the north side of this Yard and these building lie at the site that is shown on an 1850 map to be the *Coalpit Lane Horn Works*. The 1774 Sheffi eld Directory lists John Hollingworth as a horn button maker and he is earlier stated to be a 'Coalpit Lane scissor maker' when in 1768 he became the apprentice master of James Plant, son of William²¹. Thus the evidence suggests that *Ben(bellows)* can be associated, through his apparent brother James Plant, with a Coal-pit Lane horn button maker by 1768 and, hence, it seems possible that this horn button maker may have had a base near the site of the 1850's Coal-pit Lane Horn Works. This base would apparently have been near the site of *Ben(bellows)'s* late 18th century property which seems *likely* to have been near the surviving buildings of the subsequent Leah's Yard. This *likely* location for *Ben(bellows)'s* Coal-pit lane property can be judged partly from two 1805 deeds, which are in the name 'Benjamin Plant of Little Sheffi eld Bellows Maker' and which refer to property 'on the west side of the Cowpit Lane²² called Balm Croft alias Garlick Croft'. The 46 yard strips of land in these deeds no doubt extended between Coal-pit Lane and Back Fields Lane, which is shown in outline to the west side of Coal-pit Lane in Figure 13.2²³. As indicated in Chapter 11, it seems *likely* that the strips of land in these *Balm Croft* deeds were near the *Balm Green* end of Coal-pit Lane and hence most probably formed a part of the current large site of Leah's Yard²⁴.

The first of the two 1805 deeds lists the former and current occupants of a 13 yard wide part of *Ben(bellows)'s* Coal-pit Lane property (Table 13.2). These include Elkana(h) Roberts, which name (presumably Elkana Roberts the Elder) is associated with the first known 'patent record' (1704-5) of the Company of Cutlers (Chapter 12) and which name (presumably the Younger) is adjacent to Benjamin Plant's in property records dating back at least to 1772 (Chapter 11). The 1787 Sheffi eld Directory lists Elkana Roberts as a Coal-pit Lane baker and the corresponding 1805

²¹*History of the Company of Cutlers*, Vol II, *ibid*.

²²Cowpit Lane, as indicated for example in Figure 13.2, was another name for Coal-pit Lane.

²³The deeds mention a 13 and an 11.5 yard wide strip though, as strips of about this width are shown all along the west side of Coal-pit Lane in Figure 13.2(a), this provides little immediate help in identifying the precise location of this property.

²⁴Balm Croft, which is given as the name of Benjamin Plant's Cowpit Lane property in these deeds, may have been near Balm Green. The *exact* location of even Balm Green is unclear however, as it is written on the map in Figure 13.2(a) to be in front of Barkers Pool (Sheffi eld's main drinking water supply) and it is shown instead to be an adjacent continuation of Coal-pit or Cow-pit Lane in Figure 13.2(b).

(a) 1784 deed (CQ-240-350)

heretofore	afterwards	now
Elkanah Roberts the Elder	Elkanah Roberts the Younger	Elkanah Roberts the Younger
Elkanah Roberts the Younger	Richard Watson	Joseph Brierly
Joseph Wilcockson	Joseph Brierley	John Sheldon
	George Hawkesworth	James Bennet
	John Sheldon	

(b) 1805 deed (EX-28-40)

heretofore	now
Elkanah Roberts the Younger	Edward Middleton
Joseph Brierly	John Prince
John Sheldon	Joseph Gillot
James Bennet	Richard Baxter

Table 13.2: Occupants of the 13 yards part of Benjamin Plant's Balme Croft property

deed (18 Sep 1805, EX-28-40) is between Benjamin Plant and baker Edward Middleton who, by 1805, had replaced Elkanah Roberts the Younger as a current occupant of the property (Table 13.2)²⁵. This 1805 deed concerns the same Coal-pit Lane property as that described in other available deeds, of 1784 and 1794 (Chapter 11), and this property is described as *'thirteen yards of the said croft from north to south measured by the line of the hedges on both sides and forty six yards east to west'*. The second of the two 1805 deeds apparently concerns nearby property, which is described as *'eleven yards and a half down the said Close to be measured by the hedges on both sides from that part heretofore demised to Joseph Downes and all the erections and buildings thereon made ...'*. The property in the first deed includes *'...the house of the said Joseph Downes and also all those three tenements or dwelling houses thereon erected ... together with the Garden and yard thereto belonging ...'*. The ground in this first deed is said to adjoin *'the lands late of Joseph Downes on the south and the lands late of Benjamin Downes on the north'*. This Joseph Downes was no doubt the 1690 Master Cutler. Moreover there is a 1707 will for the Coal-pit Lane cutler Benjamin Downes which indicates that he was amongst those, probably just the few around Sheffield, who had a 3 storey dwelling — this dwelling had a *house* (*i.e.* living room), kitchen, parlour, chambers over house, kitchen and parlour, near garret, and far garret²⁶.

13.2.3 The Little Sheffield site of Plant's Yard

It seems that *Benjamin Plant of Sheffield Moor* moved his main base from the head to the foot of the Moor by 1787, from Coal-pit Lane to Little Sheffield to where his brother, John Plant from Rotherham, is known *also* to have been based by 1787. Little Sheffield was separated from Sheffield by (Little) Sheffield Moor, until this Moor was developed into mixed residential and commercial property after its enclosure as part of the 1779-88 Ecclesall Enclosure Act. Figure 13.3 (dated 1795) shows a triangle of new development splaying out down (Little) Sheffield Moor and this led south west from central Sheffield town towards the town's new frontier at Little Sheffield²⁷. Evidence for the extents of the Plants' holdings at Broom Close in Little Sheffield is contained in property deeds for around 1800 and these make it clear that Benjamin Plant's part of this site was 0.4 acres and John Plant owned a further 0.5 acres to the south. The detailed measurements indicate that these

²⁵The name Middleton appears adjacent to Benjamin Plant's in property records dating back to 1772 (Chapter 11).

²⁶The will of this Benjamin Downes mentions two brothers and a brother-in-law (*How they lived in Old Ecclesall 1600-1800*, Mary M Bramhill, 1986, page 41).

²⁷The Broom Close land of Plant's Yard was sited on the left of the bend in the road, which can be seen near the centre bottom of Figure 13.3.

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adjoining Plant lands at Broom Close extended over and beyond the site that became widely known in 19th century Sheffield as *Plant's Yard*. The surviving remnants of the pentagon marking Plant's Yard (Chapter 10) extend about 45 yards to the west of the road and a similar distance north to south, though the actual frontage onto the road is under 30 yards, whereas John's and Benjamin's lands at Broom Close reached about twice as far as this to the west of the highway and, taken together, somewhat further (64.5 yards) along it.

13.2.4 Some business and family connections

The date of the Plants' purchase of their Little Sheffield *Plant's Yard* base is (as yet) unknown but it seems likely to have been before 1787. It seems probable that the previous owner of the Little Sheffield site of Plant's Yard was the same Edward Shepherd as he who, in 1749, acquired the Porter Wheel (now the Shepherd Wheel Museum) under Greystones Cliffe and he retained this Wheel until his death in 1794²⁸. The allotments that were awarded to Benjamin Plant in the 1788 Ecclesall Enclosure Act (Chapter 11) were near this Shepherd Wheel. Table 11.3 of Chapter 11 also contained a reference to an allotment number 320 (7 square perches on Sharrow Moor) which was allotted to John Plant and which lay roughly amidst the 2 miles between the Shepherd Wheel and Plant's Yard. A deed dated 6 Nov 1804 (registered 25 March 1805, Wakefield Deeds Office, ET-371-181) shows that John Plant's Sharrow Moor allotment, number 320, was bounded to the south by a slightly larger allotment (number 321 of 1 rood and 17 square perches) which lay between it and the turnpiked road to Manchester. This 1804 deed indicates that the allotment 321 had passed from its original 1788 allottee, John Wright, to John Plant and his wife Dorothy's brother, William Needham. This makes it clear that this John Plant in Ecclesall was the bricklayer John Plant from Rotherham, where he had married Dorothy Needham and, for reasons that will be discussed further in Chapter 14, it is clear that this bricklayer John was *Ben(bellows)'s* brother.

An 1805 deed for the Little Sheffield site of *Plant's Yard* (EX-153-206) is in the names of '*Benjamin Plant bellows maker*' and William Hoyle '*Gentleman*'. This William Hoyle is presumably he who, by 1806, owned both the Upper and Nether Slack Wheels near the confluence of the River Loxley with the Don, just to the immediate NW of Sheffield. William Hoyle had acquired the tenancy of these Wheels from *John Senior* in 1784 and this no doubt relates to the John Senior who is recorded to be an occupant at the Little Sheffield *Plant's Yard* site by the 1790's. It is also known that, when James Cam took a part share in this William Hoyle's '*Houle's Wheel*' in 1793, it had recently been converted into a forge²⁹.

There is also another deed which relates the *Plant's Yard* Plants, albeit indirectly, to forges and, in particular, to the introduction of steam power at the Pond Forge by 1805. The second of the two aforementioned Coal-pit Lane deeds (7 Oct 1805, EX-152-205) is between Benjamin Plant and a surviving executor, John Kenyon merchant, of a silversmith John Winter deceased. This is quite surely the John Kenyon of the Pond Forge, at the other end of Pond Lane from the Pond Tilt, as well as of Middlewood Forge and Rolling Mill on the nearby River Don. The 1797 Directory lists *Kenyon, Frith & Co., iron masters, Forge Street* and Forge Street adjoined the Pond Forge. This Directory also lists *Kenyon, John, merchant, fi lesmith, and sawmaker, 9 Hollis Street*, which apparently refers to the premises for Kenyon's end products. Kenyon, Frith & Co are known to have acquired a steam engine for the Pond Forge by the time of this 1805 deed with *Ben(bellows)*³⁰.

13.2.5 Benjamin and John Plant's Broom Close deeds

The available information, around 1800, for Benjamin and John Plant's parts of their Little Sheffield *Plant's Yard* base can be detailed further as follows. The aforementioned 1805 deed for Benjamin

²⁸There is only one Edward Shepherd in 18th century Sheffield Directories and this is in the 1787 entry *Shepherd, Edward, factor, and manufacturer of cutlery wares, Far-gate*.

²⁹*Water Power on the Sheffield Rivers*, *ibid*.

³⁰*Water Power on the Sheffield Rivers*, *ibid*.

Plant's part of Broom Close refers to premises described as '*... being part of a certain close or parcel of ground called Broom Close situate at Little Sheffi eld ...*'. This site is described as '*... late in the possession of Edward Shepherd ...*', bounded on the north and west by '*lands of John Rotherham esquire*', on the south by '*another part of the same close belonging to Mr John Plant*', and on the east by '*the highway from Sheffi eld to Chesterfi eld and a certain footway*'. The mention of the footway in particular suggests that this ground may have contained the subsequent pentagon of *Plant's Yard* (Chapter 10)³¹. A similar description is given for John Plant's adjacent land to the south. A property deed dated 22 Feb 1798 (DZ-319-424³²) is in the name of '*John Plant late of Rotherham ... bricklayer but now of Little Sheffi eld*'. This relates to '*that piece or parcel of ground being part of a certain close or parcel of ground called Broom Close situate at Little Sheffi eld in the parish of Sheffi eld aforesaid heretofore in the possession of Edward Shepherd...*'. This piece of ground is described as '*... adjoining to another part of the same close sold to Mr Benjamin Plant on the north ...*' and it is stated that to the east was the Sheffi eld to Chesterfi eld highway, to the south another part of the same close, and to the west '*the land of John Rotherham Esquire*'³³.

The speci fi ed property of John Plant in this 1798 deed comprises '*those four several messuages tenements or dwellinghouses on the said close ... now in the several tenures or occupations of the said John Plant, Sarah South, Widow Beard and John Senyor*'. These same names are listed adjacently in 1799 rate books (Table 13.3(a))³⁴. Another reference to *Jno Senior* appears in Land Tax records in connection with land that was occupied by '*Self W Smith Jno Senior & anth*' and which is stated to have been *owned* by John Plant. It can be added that these 4 households were apparently contained within the Land Tax description '*2 Messes & a small piece of land*' (Table 13.4). These '*2 Messes*' would tally with 2 large buildings which, on a map dated 1808 (Chapter 10), are to the south of the subsequent pentagon of *Plant's Yard* and hence apparently on the area of John Plant's land. The corresponding rate-book entries indicate that John Plant was paying a larger rate (4/- in Table 13.3(a)) than each of the other 3 occupants, who were paying 4/6 in total. It hence seems likely that the bricklayer John Plant was occupying the whole of one of his two messuages at Broom Close while the other messuage was being occupied as 3 '*dwellinghouses*' by his speci fi ed tenants.

13.2.6 Land near the Broomhall Wheel

The Broomhall Wheel was on the Porter Brook just to the NNW of John and Benjamin Plant's Broom Close base in Little Sheffi eld (Figure 13.3). A '*Land near Broomhall Wheel*' entry fi rst appears under *Ben(bellows)'s* name in 1794 rate books and it is replaced in 1799 (Table 13.3(a)) by '*Stalker Wheel land*' with an exactly doubled payment. This suggests, as the rate had doubled, that these two descriptions refer to the same land. It hence seems probable that this land lay between the Stalker Wheel and the adjacent Broomhall Wheel. The Stalker Wheel was in the tenancy of Benjamin Plant's brother-in-law, Joseph Ward — the dam and goits of the Stalker Wheel, which was on the north side of the Porter Brook, appear just downstream (to the right) of the Snuff Mill which is shown near the lower left edge of Figure 13.3. The dam of the next Wheel downstream from the Stalker Wheel, the Broomhall Wheel, is on the south side of the Brook and it appears just upstream of the smaller dam of the Corn Mill, which is shown just to the NNW of Little Sheffi eld in Figure 13.3. The Broomhall Wheel belonged to the Newbould family who are known to have been

³¹The ground in this deed is stated to measure 91 yds 12 ins on the north, 96 yds 27 ins on the south, 7 yds on the west and 37 yds 18 ins on the east '*containing in the whole one thousand nine hundred and seventy four superficial square yards or little more or less*'.

³²These reference numbers for deeds apply to the referencing scheme of the West Yorkshire Archive Service, Wakefi eld Headquarters, Registry of Deeds, Newstead Road, Wakefi eld WF1 2DE.

³³John Plant's parcel was measured as '*two roods be the same more or less*' being 94 yds on the north, 81 yds 32 ins on the south and 27 yds 5 ins on both the west and the east.

³⁴For example, the name of the occupant *John Senyor*, in the 1798 deed, appearing spelled quite similarly as in the rate book entries (*John Senier*) of Table 13.3(a). This seems to indicate that John Senior was a resident of John Plant's part of the Little Sheffi eld site of *Plant's Yard* and indeed the name *John Senior* still appears in an 1816 property deed in connection with a garden on Benjamin Plant's adjoining part of the site of *Plant's Yard*, as will be described in Chapter 14.



Figure 13.3: Sheffield by 1795, showing a triangle of development splaying out SW across (Little) Sheffield Moor from Sheffield town (top right) towards Little Sheffield (bottom centre)

close associates of the Wards and the Plants (Chapter 11).

13.3 Benjamin Plant's 1805 will

As well as providing for his wife and daughter, Benjamin's 1805 will provides for a 'widow Bradley', a Ward nephew (S.B.Ward) and potentially three Plant nephews. Two of these Plant nephews were sons of the second trustee of the will, the yeoman James Plant, who was one of Benjamin Plant's brothers. This James Plant, who is no doubt he who can be associated with Coal-pit Lane through his 1768 apprenticeship record, was buried 10 miles to the south at Duckmanton near Chesterfield some 20 years later in 1825.

13.3.1 The testator's trustees and properties

In his 12 Nov 1805 will (under £ 450, administration 10 July 1806, proved 16 Aug 1806), the testator is described as '*Benjamin Plant of Ecclesall Byerlow in the Parish of Sheffield in the County of York Bellows-maker*'. The trustees are described as '*my Friend Samuel Broomhead Ward of Sheffield aforesaid Merchant and my Brother James Plant of Calow³⁵ in the Parish of Chesterfield ... Yeoman*'. The specified property bequeathals to the trustees suggest that Benjamin Plant held some other properties, in nearby parishes, besides those which have been investigated in detail for Ecclesall³⁶. The 'bequeathals in trust' continue with '*... And also my five sittings in Trinity Church*

³⁵As mentioned earlier in this Chapter, Calow was the site of Eb Smith & Co's iron works near Duckmanton.

³⁶The trustees are bequeathed '*All my Freehold and Leasehold Messuages Lands Tenements Tithes and Hereditaments situate and being in Sheffield and Ecclesall Byerlow or elsewhere in the Parish of Sheffield aforesaid and at Apperknowle in the Township of Unston and Dronfield in the Parish of Dronfield ... and all and singular other ... whatsoever and*

(a) 1799: 24d in £		(b) 1802: 24d in £	
Joseph Smith		...	
John Bennett	charged	...	
John Hobson	before	Plant Benjn	4/9
Benjn Plant for Hos	1/9	do Barn Empty	6
do for Barn	6	do Stalker Wheel Ld	6/7½
do for Broomhall Land	6/5½	do Dukes Ld	7/6½
do for Ibberson Land	7/11	do Hos & Land	1/9
do for Stalker Wheel Land	6/7	Broomhall Ibbn Ld	7/11
do for Dukes	7/6½	do Spurr Whl	17/6
Widow South for Hos	1/3	do Jn Wood	1/6
John Plant	3/6	Biggin Andrew	1/3
do for Land	6	South Widw	3/6
?Wm Beard ?Emte	1/7½	Plant Jno Allt	6
John Senier	1/7½	...	

Table 13.3: Some Ecclesall rate book entries around 1800

in *Sheffi eld*' but some property is excluded by the statement '... (except for the Rent of a House in Pond Lane in *Sheffi eld* ... and of a House intended and directed to be built for Ann Bradley Widow)'.

13.3.2 Widow Bradley

It later becomes apparent that the aforementioned widow Ann Bradley was to be bequeathed accommodation near Benjamin's home³⁷. The will contains '... bequeath unto Ann Bradley the widow of Abel Bradley deceased ... yearly sum of Ten Pounds ... and direct my said Trustees do and shall with all possible speed convert the Laith adjoining to the House I have let to Robert Swift near to my own dwelling house into a convenient Tenement or Dwelling ...'.

13.3.3 Wife, daughter, and nephews

The will includes 'I do hereby give and bequeath unto my dear Wife Hannah Plant yearly ... Forty Pounds ... Also ... Five Pounds to be paid to her immediately after my decease and also the choice of either of the Houses in Pond Lane aforesaid ...'. These Pond Lane houses would have been quite near to the Howard Street house of Hannah Plant's brother, Joseph Ward, and to this extent they were perhaps thought to be more convenient to her as a town house than the dwellings at the Plants' Little *Sheffi eld* base.

The only offspring mentioned is 'my daughter Mary Ward Hancock ... and ... her Husband Timothy Hancock of *Sheffi eld Cutler*³⁸, who eventually in stages, if she outlived her mother and husband, was to receive Fifty Pounds yearly.

Following the deaths of his wife and daughter the estates were to be divided amongst Benjamin Plant's nephews. The only Ward nephew mentioned is S.B.Ward as follows. 'I Give devise and bequeath all my Leasehold Messuages Lands and Tenements situate in or near Pond Lane in *Sheffi eld* aforesaid which I hold by Lease under the Norfolk Family with the appurtenances unto the said

wheresoever ...'.

³⁷Though no details have been established about Bradley family relationships, it is interesting to note that some thirty years later (in 1833) a J.Bradley was miller at the Broomhall Corn Mill, which was just NNW of Little *Sheffi eld* (Figure 13.3). Although the precise locations of some of Benjamin's properties remain uncertain, it seems possible for example that the accommodation to be granted to Ann Bradley might have related to the 'Land near Broomhall (or Stalker) Wheel' that is mentioned in rate books. This was near the Broom Close site of Plant's Yard in Little *Sheffi eld* which appears to have been the site of Benjamin's home. Alternatively, this accommodation could have been on part of *Broom Close* itself.

³⁸There is a 1797 Directory entry *Hancock, Timothy, Springknife cutler, 41, Broad Lane*.

Samuel Broomhead Ward ...’. Further property rights that were to be reserved for Samuel Broomhead Ward are subsequently clarified to be *‘Tithes arising ... out of certain Lands belonging to Dronfi eld School and to Joseph Ward in the Parish of Dronfi eld aforesaid and now in the possession of John Folds and also an annual Fee Farm rent of threepence issuing out of the said Lands of the said Joseph Ward*³⁹ ...’.

The remaining estates are bequeathed *‘unto my Nephew Benjamin Plant Son of my Brother the said James Plant ... and after the decease ... unto the eldest or only Son ... and the heirs male ... and for default of such issue ... unto my Nephew Joseph Plant another Son of my said Brother James Plant ...’*. A further bequest of Ten Pounds is made *‘unto my Nephew William Plant*⁴⁰ *Son of my Brother Thomas Plant’*.

Further provision includes the choice to Benjamin’s wife of up to half of his *‘Household Goods and Furniture Plate China and Linen ...’*. There is also an allocation of £ 20 and expenses to each of the Trustees.

13.3.4 Benjamin’s finally listed properties

The assessed value of the will only corresponds to around £8000 at 1985 prices (after allowing for the *negative* inflation of the early nineteenth century as well as the more significant positive inflation of the twentieth century). This was still a significant amount however, since the assessed *values* of wills before 1858 were calculated only on the *personal* estate that they contained, which was usually minimal⁴¹. There is moreover evidence to suggest that Benjamin had already disposed of some of his property by the time he made his 1805 will. Thus the evidence for Benjamin’s wealth lies rather more in the earlier indications of widespread properties (and influential connections) than in the will, which shows that Benjamin Plant had retained until his 1806 death just £450 of (taxable) *‘personal’* estate.

By 1804 the number of properties listed in Ecclesall rate books under *Ben(bellows)’s* name was dwindling and, listed under Little Sheffield, there is by then just a single entry *‘Plant Benjn 6/6’*. This charge reduces to *‘4/9’* in the 16 July 1805 book. In the 21 April 1806 book the name *‘Benjn’* is crossed out and *‘W^o’* is written alongside. This no doubt indicates that Benjamin’s widow continued to make the rate payments on his Little Sheffield property (presumably at the Broom Close site of Plant’s Yard) after Benjamin’s death on Jan 3 1806. An entry *‘Plant W^o 4/9’* continues at least as far as the 7 March 1807 rate book, by when Benjamin’s widow is known to have been a regular visitor, for Sunday lunch, at her brother’s Howard Street home (Chapter 12)⁴².

The evidence suggests that Benjamin Plant had disposed of some land in the vicinity of the Spurr Wheel at Greystones before making his 1805 will. From 1804, up to the 1 July 1806 rate book, there appears an entry *‘Smith Thos 5/4/0’* followed by *‘do Late Plant Ld 7/6’* in an area that appears to be near Greystones, about 2 miles to the west of Little Sheffield. Almost the nearest property to the Spurr Wheel, about 0.5 miles to the east in the direction of Plant’s Yard, is shown on an 1850 map to be the *‘Rustlings’* which has already been discussed in association with the allotments that were awarded in the 1788 Ecclesall Enclosure Act to Benjamin Plant (Chapter 11). It has been mentioned that these allotments apparently gained a barn in 1793⁴³. We can thus suppose that the land described as *‘Land premises & hereditaments & Barn’* in the Land Tax records of Table 13.4 might perhaps apply to a large piece of land that *included* Benjamin Plant’s small 1788 allotments near the

³⁹This was no doubt Benjamin’s brother-in-law, the 1790 Master Cutler Joseph Ward.

⁴⁰This is no doubt *W^o(1)* of Chapter 9.

⁴¹Real estate belonged in theory to the King, unlike personal estate which belonged to God, and it was hence the convention that only the value of personal estate was assessed for wills, which were administered up to 1858 by the Church Courts. Personal estate comprised leasehold and household goods and the assessed value of Benjamin’s will would not include the *‘Freehold ... Messuages Lands Tenements Tithes and Hereditaments’* that it mentions.

⁴²Howard Street lies across the *Alsop Fields* developments shown in Figure 13.2(b) and it is the *‘Proposed Street’* there that leads from the Tilt Dam to the *‘New Church’* (St Pauls) near Cheney Square, which lies just to the east of Coal-pit Lane.

⁴³This is apparent in rate books and confirmed in an 1800 deed.

Owner	Occupiers	Properties	Exonerated
Ibberson Jos	Self and B Plant	Land, Spur Gart wheel & woods	$6/8\frac{3}{4}$
Plant Benjn	Jno Ogle, W Banks & others	Land premises & hereditiments & Barn	$7/9\frac{1}{4}$
Plant Jno	Self W Smith Jno Senior & anth	2 Messes & a small piece of land	$2/1\frac{3}{4}$

Table 13.4: Ecclesall Land Tax records (nominally 1894-8)

Rustlings. The Land Tax and other records accordingly suggest that the bellows maker Benjamin Plant *owned* this moderately large piece of land and that he was also *leasing* nearby land around the Spurr Wheel. It seems unlikely that these Greystones lands were part of the unspecified ‘freehold’ and ‘leasehold’ possessions that are mentioned in *Ben(bellows)’s* 1805 will. It seems that, instead of being passed on to the will’s principal Plant beneficiary (*i.e. Ben(carp)*), this freehold land in particular may have passed *in some sense* into the hands of another of *Ben(bellows)’s* nephews, the ‘Ag.Lab’ William Plant (*i.e. W^m(1)*). *W^m(1)* was the oldest son of the farmer Thomas Plant of Clowne and it is not inconceivable that *Ben(bellows)*, who had no sons or grandchildren of his own, may have been holding this rural land at Greystones *in some sense ‘on behalf of’* his nephew *W^m(1)*. The widow, for example, of this *W^m(1)* can be found with her son-in-law at the Rustlings in 1851.

13.4 Around the Spurr Wheel

The 1781 Master Cutler, Peter *Spurr*, can be associated with the *Spurr* Wheel through an apparent connection with Benjamin Plant who is *known* to have been the rate-payer for the ‘*Spurr Whl*’ in 1802 (Chapter 12). There is also evidence of an association between Peter Spurr and a Joseph Ibberson, who also can be associated with this Wheel (Table 13.4).

13.4.1 The Spurr and Ibberson connections

The cutlery trade’s apprenticeship records⁴⁴ show that Peter Spurr was apprenticed to Joseph Ibbotson in 1748, becoming a Freeman in 1758. Moreover, the father Timothy Hancock of *Ben(bellows)’s* son-in-law was also apprenticed to an Ibberson, to a John Ibberson in 1772 becoming a Freeman in 1784. The preserved guest list for the 1771 Cutlers Feast provides some clarification as it lists Joseph *jnr* along with John, and Joseph *snr* who is described as ‘*Joseph Ibberson, MC 1759, Town Trustee 1770-5, Town Collector until his death in 1775*’. No doubt it was subsequently Joseph Ibbotson *jnr* who was to be found at the Spurr or Spurgear Wheels though the 1774 Sheffield Directory entry is apparently in the name of Joseph Ibbotson *snr*, just before his death, and it takes the form *Ibberson Joseph, and Sons, cutlers, Norfolk Street*.

Thus, it is presumably this Joseph Ibbotson *jnr* who was the *tenant* of the *Upper Spurgear Wheel* from 1775, before he held its freehold between 1817 and 1826. Ibbotson’s *presence* at the *Spurr* or *Nether Spurgear Wheel* is apparent in rate book entries of 1774 and 1793⁴⁵. We can add that

⁴⁴*History of the Company of Cutlers*, Vol.II, *ibid*.

⁴⁵*Water Power on the Sheffield Rivers*, *ibid*.

the Land Tax records seem to suggest that Joseph Ibbotson *jnr* became the *owner* of the *Nether Spurgear Wheel*, perhaps around 1800, before he obtained the freehold in 1817 of the adjacent *Upper Spurgear Wheel*.

It seems that this Joseph Ibbotson *jnr* had sufficient wealth, perhaps inherited from the 1759 Master Cutler Joseph Ibbotson *snr* (Chapter 12), to become a shareholder of the Tontine Inn in 1782. Other shareholders of the Tontine included the Broomheads and Jonathan Watkinson, who have been mentioned earlier (*e.g.* in Chapter 12) in association with Benjamin Plant⁴⁶. The shareholder Samuel Broomhead was no doubt the step-father of Benjamin Plant's wife, Hannah, whilst the other Broomhead shareholders would have been her step-uncles. The shareholder Jonathan Watkinson was no doubt the ill-famed 'W—' who was the first father-in-law of Benjamin Plant's nephew S.B.Ward. It seems that the shareholder Joseph Ibbotson *jnr* was based in Little Sheffield, near Benjamin Plant, as can be judged for example from the 1797 Directory entry *Ibbotson, Joseph, weavers' knife maker, Little Sheffield*.

An indirect connection between Benjamin Plant and the Spurrs is apparent in the early 1790's when Benjamin Plant's Coal-pit Lane property is listed in close proximity to that of Thomas Tillotson (MC 1790), whose wife was Peter Spurr's sister. At this time, Benjamin Plant's brother-in-law, Joseph Ward (MC 1791), was a fellow officer in the Company of Cutlers of Tillotson (MC 1790) and it seems that Joseph Ward's succession as 1791 Master Cutler *may have* had some connection with *Ben(bellows)'s* being Tillotson's neighbour. Subsequently in 1812, 1814, 1816 and 1824, there are references to the Spurrs, as social acquaintances, neighbours and fellow administrative officials, in the diary of Benjamin Plant's nephew T.A.Ward⁴⁷.

13.4.2 The Spurr or 'Spur Gart' Wheel

The 17/6 rate payment by Benjamin Plant for the '*Spurr Whl*' in 1802 is precisely twice that paid by Josh Ibberson in 1793 for '*Spurr Wheel, Dam &c*' and, since the rate had doubled, these two descriptions presumably apply to the same property. Between 1799 and 1802 (parts (a) and (b) of Table 13.3) Benjamin Plant's rate book entry '*Broomhall Land 6/5 $\frac{1}{2}$* ' is replaced by two entries '*do Spurr Whl 17/6*' and '*do In Wood 1/6*'. This suggests that Benjamin may have forfeited this '*Broomhall Land*' (though the rate book entries show that he retained the nearby Stalker Wheel land) when he acquired instead the tenancy of the Spurr Wheel, which was just under 2 miles to the west of the Little Sheffield site of Plant's Yard (upstream on the Porter Brook off to the left of Figure 13.3).

The reasoning behind identifying the names '*Spurr Wheel*' and '*Spur Gart Wheel*' with the *Nether Spurgear Wheel* can be summarised as follows. Both of the names '*Spur Gart*' and '*Spurr*' appear in Ecclesall records and, unlike the Upper Spurgear Wheel, the *Nether Spurgear Wheel* was on the Ecclesall side of the Porter Brook boundary⁴⁸.

The various names '*Spurr*', '*Spur Gart*' or '*Spurgear*' for these Wheels hold some interest in so far as they apparently relate to the mechanics of these water-powered premises. W.T.Miller⁴⁹

⁴⁶The Tontine Inn was completed in 1785; it was a type of stately English inn of the great days of coaching, the Post House and main transport centre of Sheffield, as well as being the scene of many social, business and political meetings. At a meeting on 1 Nov 1782, it had been decided to issue shares in the form of a tontine, whereby the shares of subscribers who died were to be added to the profits of the survivors. From the more prosperous townspeople, 39 had taken 48 £ 100 shares, including The Earl of Surrey (4 shares), Vincent Eyre (2), Samuel Broomhead, Benjamin Broomhead, Joseph Broomhead, Jonathan Watkinson and Joseph Ibbotson.

⁴⁷*Peeps into the Past*, *ibid*, pages 196, 212, 216, 233, 280, 284.

⁴⁸Both the Upper and Nether Spurgear Wheels are described in *Water Power on the Sheffield Rivers* edited by David Crossley. According to this text, the Upper Spurgear Wheel was at first called the New Wheel, after its inception in 1754 and then the Cutlers Wheel in the 1760's, before Joseph Ibbotson became its sole tenant in 1775, whereafter it became known as the Ibbotson Wheel. The description of the Nether Spurgear (Third Endcliffe) Wheel in this book does not mention that it was apparently also called the Spurr Wheel. For the Nether Spurgear Wheel it is merely mentioned that a John Ibberson had obtained a Norfolk lease in May 1749 to build a weir above Smith Wood, to convey water to a cutlers wheel to be built on lands of Montague Wortley, opposite Smith Wood.

⁴⁹W.T.Miller, *The Water Mills of Sheffield*, Second Issue (1947), page 51.

comments on the recorded 1794 name ‘*Upper Spurgaire*’:-

‘Perhaps spur-gearing was something of a novelty in this district as compared with the more common bevel-gear drive’.

though this 1947 published explanation omits to mention the additional information that there was apparently a connection with Peter Spurr.

Land associated with the ‘*Spur Gart wheel*’ in Land Tax records is stated to have been owned by Joseph Ibberson (often recorded as Ibbotson) and to have been occupied by ‘*Self and B.Plant*’ or ‘*Benjamin Plant & oths*’ (Tables 13.1 and 13.4). The property is described in these records as ‘*Land, Spur Gart wheel & woods*’ and the woods in this description were presumably those shown on an 1850 map, on which the Upper Spurgear Wheel is called the Ibbotson Wheel with the Ibbotson Woods lying between it and the Nether Spurgear Wheel⁵⁰. It can be added that woods were often cultivated for charcoal. This might help to explain *Ben(bellows)*’s interest in his Greystones lands since charcoal was used in forges, though higher-temperatures were obtained with coke which was used by Huntsman for completely melting blister steel to form his high quality cast steel. Woods were also no doubt a source of the timber for the bellows and other mechanical plant which was installed to operate Sheffi eld’s developing forges (*cf.* Figure 13.1).

13.4.3 Benjamin Plant’s possible role at the Spurr Wheel

Around the time of *Ben(bellows)*’s appearance as the rate-payer for the *Spurr Whl*, this *Nether Spurgear* Wheel was sold, in May 1802, to Daniel Brammall who enlarged the dam. Daniel Brammall, who was a fi lesmith, lived in the White House on Brammall Lane which was close to the Little Sheffi eld site of Plant’s Yard and which was just 0.2 miles to the east of the Mount Pleasant home, at Highfi eld, of Benjamin Plant’s friend and nephew Samuel Broomhead Ward⁵¹.

A 1794 description of the Upper Spurgear Wheel mentions 11 troughs and, by 1830, 17 troughs are mentioned for the Nether Spurgear Wheel⁵². The adjacent Shepherd’s Wheel Museum, whose origins can be dated back to 1566 but whose current buildings date back to the late 18th century, has 10 troughs in 2 grinding hulls or ends (*i.e.* separate workshops) — the grinding wheels in both these ends are driven through plant that comprises wheels and leather belts, from a *crown wheel* which has teeth on the side (*i.e.* on the vertical face) of its rim. This contrasts with a *spur gear*, for which the teeth form extremities projecting radially outwards beyond the wheel’s rim⁵³.

The precise function of the Spurr Wheel around 1800 is not entirely clear though the mention of 17 troughs by 1830 might lead us to deliberate whether Benjamin Plant may have been employing jobbing grinders here, around 1800. Perhaps more likely however, we may contemplate whether the bellows maker Benjamin Plant may have been active here, around 1800, in the installation of suitable bellows prior to Daniel Brammall’s interest in the Wheel, perhaps as a fi le forge. Though there is no known direct evidence, it seems possible that new ‘*spur-gear*’ mechanisms could have been demonstrated here by the 1758 apprentice, Peter Spurr, of Joseph Ibbotson *snr* with *Ben(bellows)* perhaps, around 1800, using robust gearings at these premises of Joseph Ibbotson *jnr* for the activation of powerful, perhaps even cylinder (steam) bellows.

⁵⁰The Upper Spurgear Wheel dam remains, with water fowl, at the foot of Bingham Park. The building was demolished around 1950, despite suggestions around 1930 that it could be preserved as an Industrial Museum along with the adjacent Shepherd’s Wheel, which is a Museum (*Water Power on the Sheffield Rivers*, *ibid*). The dam of the Nether Spurgear Wheel also survives, with rowing boats, at the western end of Endcliffe Park.

⁵¹The White House is shown near the bottom centre of Figure 13.3. Subsequently, a grandson of Benjamin Plant’s nephew *W^m(1)* was living here, in 1871 (Chapter ??).

⁵²The mention of ‘troughs’ implies grinding troughs whereby water in the each trough would moisten a stone vertically-spinning grinding wheel to cool it and, incidentally, this would also limit the dust which is now known to have been a serious health hazard.

⁵³A large oak-toothed *spur wheel* can be seen in the Tilt Forge of the *Abbeyle Industrial Hamlet* museum on the nearby River Sheaf.

13.5 Sheffi eld Plants and the Industrial Revolution

Various Plant properties have been described in this Chapter for around 1800. Some, such as the Spur Gart Wheel, are of interest for their possible technological significance. *Ben(bellows)'s* 1770's Coal-pit Lane base is a site of particular surviving interest, though the available evidence for its *precise* function in the late 18th century seems (so far) somewhat unclear.

It seems possible that extensive residential and working property here may have been broken down into smaller units after the times when two large dwellings were occupied by the cutlers (and Master Cutlers), the Downes. Deeds indicate, for example, that the number of occupants in a particular 13 yard strip here of *Ben(bellows)'s* property did not change much, apparently since soon after those times. *Ben(bellows)'s* ownerships of these properties may date from around the times when he is stated to be a bellows maker in the 1768 Sheffi eld baptism record for his daughter (Chapter 12). Early Ecclesall Land Tax records (Chapter 11) appear to place him amongst Coal-pit Lane neighbours by 1772 and, certainly, a 1774 Directory lists this bellows maker here. It seems that the 1779 site of '*Late Plant yard*' may have been here, in Coal-pit Lane, and, indeed, perhaps this was the site that was left as 17 properties after *Ben(bellows)'s* moved his main base to Little Sheffi eld. The 3 shops amidst *Ben(bellows)'s* 17 houses and shops in Coal-pit Lane, as listed in 1790's rate books (Chapter 11), may have included such working shops as a bakery — this is suggested by the listed occupants in the corresponding property deeds. The 1790's rate books also list, *amidst Ben(bellows)'s* Coal-pit Lane payments, other payments by the Coal-pit Lane cutler and 1796 Master Cutler, Joseph Fletcher Smith, suggesting the *possibility* of some shops here of a rather different nature.

The Stalker Wheel was just to the NW of Little Sheffi eld. At least by 1793, Benjamin Plant was paying rates for land near the Stalker Wheel, which was by then in the tenancy of his wife's brother though, in 1780-1, it had been in the tenancy of *Ben(bellows)'s* wife's step-father when this tenant was subjected to threats that have been cited as an early indication of rattening⁵⁴. *Ben(bellows)* and his brother John Plant apparently bought their nearby Little Sheffi eld base by 1787 from Edward Shepherd. This Little Sheffi eld site is known later to have been *universally* called *Plant's Yard* and the Edward Shepherd, from whom it was bought, is quite surely he who was the tenant of the Shepherd Wheel (now an industrial museum) 2 miles to the west of Little Sheffi eld.

The Shepherd Wheel was near the Spurr Wheel for which, by 1802, *Ben(bellows)* is known to have been the ratepayer. The *possibility* has been mentioned in this Chapter that *Ben(bellows)'s* activities at the Spurr Wheel may have involved the use of Spur-Gearing to better mechanise his bellows, which were presumably much in demand at that time. He had been leasing apparently-nearby *Ibberson Land* at least by the time of the more detailed rate book entries of 1793 and it may also be relevant to mention that there is a 1786 rate book entry '*Plant 3½ Unwin 6½ 1/8d*' since it is known that an Elizabeth *Unwin* was leasing Duke of Norfolk land near the Shepherd Wheel in 1754.

The late 18th century is remembered mostly around this area as an historic time of industrial advance following on from Arkwright's horse-driven cotton mill in Nottingham. It was 1771 when Sir Richard Arkwright, who is sometimes called the *Father of the Industrial Age*, adopted water power and set up his first successful cotton mill in Cromford, 20 miles south of Sheffi eld. Little appears to be known about the detailed history of contemporary mechanical developments at Sheffi eld's ancient Water Wheels, or about the introduction of newer steam-powered (cylinder) bellows. However, rarely were advances more needed than they were in the late 18th century, such as for forging and for obtaining the higher temperatures (1600°C) needed for melting Huntsman's new cast steel. With hindsight, one might comment that providing the means whereby local metal workers could progress from their tradition of cutlery and edge tool grinding, as well as lead and silver crafts, towards more specifically the forging of wrought-iron and Huntsman's new steel, was a *crucial* step

⁵⁴These threats and their possible significance are described in *Peeps into the Past*, *ibid*. Rattening is defined as the molesting of a workman or employer by abstracting or injuring tools or machinery in a dispute (OED).

in Sheffi eld’s advance towards eventually becoming known as *Steel City*.

There is direct evidence in Plant property deeds to connect the Plants of *Plant’s Yard* with John Senior, William Hoyle and John Kenyon and we can accordingly associate the Plants’ business activities with those who were involved in converting the Slack Wheels to a forge by 1793 and introducing steam power to the Pond Forge by 1805. It seems that the Plants’ brief could have been to meet the furnace and forge masters’ requirements for what may be described as a *bellowing white heat*⁵⁵. We can hence comment that *Ben(bellows)’s* property records *appear* to place him at an archetypal hearth — his historic place appears to be where his bellows blew oxygen into the hearths of those particular iron and steel forges that signalled the future direction Sheffi eld’s industry. The blast from Benjamin Plant’s bellows would then have been drawn into appropriate flues, which may have been supplied by his bricklayer brother John Plant. We can accordingly consider that it may have been largely through *Ben(bellows)’s* mechanised bellows, with his brother’s accompanying constructions, that the Plant name became known throughout Sheffi eld. Such a contention might help to explain why their Little Sheffi eld base became *widely* known in 19th century Sheffi eld as *Plant’s Yard*. We may wonder whether there were any industrial connotations for the word *Plant* as early as, for example, the times of the 1779 Ecclesall rate book entry *Late Plant yard*. Johnson’s 1755 Dictionary defi nes *plant* as:

1. Any thing which comes from seed; any vegetable production.
2. A sapling.
3. The sole of the foot.

There is little or no hint here of the modern meanings *fi xed machinery* or *factory* though this word may *perhaps* have begun to acquire some industrial connotation in such an area as Sheffi eld, perhaps starting from around these times. It may have been around these times of the Industrial Revolution that the Spurr and Plant names began to attain their respective associations with the *spur*-gearings and new *plant* by which Sheffi eld forged its metallurgical ascendancy. To this extent the Plants’ portfolio of known properties described in this Chapter apparently provides evidence to relate the *Plant’s Yard* Plants to the advancement of Sheffi eld’s late 18th century ‘*Plant Base*’ — this seems to be true for more than one meaning of these ambiguous words — for the meaning ‘*industrial plant base*’ by which Sheffi eld developed into a major industrial city as well as, more clearly, for the meaning ‘*Plant property base*’ around which the *Plant family* gathered in Sheffi eld.

The demise to various Plants of the property of *Ben(bellows)* and his brother John provides a link that leads through into the mid-nineteenth century. This will be described further in Chapter 14, along with the possible origins of this Plant family.

⁵⁵An ancient defi nition of the four elements was wind, water, earth, and *flogisten* with the latter denoting fi re, light, and heat. In crucible furnaces, for example, such roaring ‘flogisten’ was drawn through cavities around the high-temperature crucible pots.