

The Dust-Pressed Process - An Early Addendum

"What a damned foolish Specification" Prosser v Wakefield 1846

On 12th February 1846 Richard filed a claim in the court of Chancery against Benjamin Wakefield, a fellow Birmingham mechanical engineer, for infringement of his 1840 dust-pressing patent. The pleadings, a Bill (the claim) and an Answer (the defence), are held in *The National Archives (TNA)* at Kew. I had not come across the record in my earlier online searches and when I did (in November 2015) I could not be certain that the "Richard Prosser" named in the proceedings was "our" Richard nor did the entry provide any clues as to the subject matter of the litigation.

In June 2016 we visited *TNA* again to take photos of the surviving court records in the many cases in which Richard or his licensees were involved in litigation over his 1840 lap welded tube machinery patent. I had pre-ordered the pleadings in the Wakefield case as well.

Benjamin Wakefield (c1800 - 1887) has been described as "rather naive and not a very good businessman" by one of his descendants (*Ancestry*). He was born in Wolstanton in Staffordshire, a village on the outskirts of Newcastle under Lyme, but had probably moved to either Birmingham or nearby Aston by 1823; he was married in that year at the Aston church of St Peter & St Paul, where Richard was to marry Sarah thirteen years later.

This is not the only coincidence in the lives of the two engineers. In his 1846 Answer Wakefield testified that he had known Richard for many years and that by 1840 he was on "intimate terms" with him. An intimacy that possibly arose due to their both working with the American inventor Dr. William Church in their earlier careers. I have already described Richard's association with Dr. Church in *The First Story "Rescuing Richard"*.

Searches in the *British Newspaper Archive (BNA)* revealed that Wakefield had given evidence at the inquest following the explosion of the boiler that occurred when Dr. Church's steam engine "The Surprise" was being trialled at Bromsgrove in November 1840. Two workmen, including the engine driver, died of what must have been horrendous injuries from the description given in

one press report of the inquest. Wakefield's testimony was to the effect that he had been engaged by Dr. Church to superintend part of the engine's construction including that of the boiler, which had been tested to pressure of three times that which would normally have been required.

Although Wakefield described himself as an "engineer and machinist" at the inquest, his own career appears not to have advanced beyond that of a mechanical tool maker, although he was clearly a talented one. In 1838 he was credited with inventing an ingenious new railway coupling but he failed to take out any patent for it. He did however patent two other inventions, both jointly with others: in 1841 for an improved bolt for building purposes and the other on 21st January 1840 for machinery and tools for cutting out, stamping and piercing buttons etc. from metal plate. It was this latter patent that was to be exploited in a seemingly unscrupulous fashion by Richard according to Wakefield's 1846 testimony.

The co-patentee of Wakefield's 1840 button patent was his then employer Charles Rowley of 23 Newhall Street, Birmingham. Rowley (1808-1863) started his career as a stamper and piercer but evolved into a very successful manufacturer of metal buttons; he left an estate valued at about £40,000 on his death (*Ancestry*).

It appears likely that Wakefield did not benefit greatly from the button patent and in 1841 he was actually charged by Rowley, still his employer, with neglecting his duties and wilfully damaging a "patented machine". The adjourned hearing held on 31st December 1841 resulted in the claim being settled when Wakefield undertook to repair the damage. This brief account in the local press was followed by a notice a fortnight later in *Aris's Birmingham Gazette* announcing that a pamphlet was shortly to be published containing a full report of the "important investigation" by the police into the charges preferred by Rowley and of the arguments at the hearing of the lawyers for each party. I have found no copy of the pamphlet, but it was clearly aimed at other manufacturers who would be interested in these legal arguments which concerned the "several Statutes concerning Masters and Servants". The notice also identified the Birmingham magistrates hearing the case and included a familiar name: that of Henry Van Wart.

Rowley's dispute with Wakefield might have, at least in part, been engendered by the circumstances described in the latter's testimony in 1846 when he was sued by Richard. This testimony sheds further light on several aspects of the events described in "The Button Wars" (Part One of The Second Story "The Dust-Pressed Process").

The 1846 pleadings held in *TNA* consist of the then usual large parchment sheets; there were three each in the case of both testimonies, which had been transcribed by a clerk in a small but neat hand. Dockets attached to the pleadings revealed the names of the solicitors acting for each of the parties.

Richard was represented by Wills and Oliver, the Birmingham firm that had acted for him in his suit in 1845 against Walter Chamberlain and John Lilley, the owners of the Royal Porcelain Works in Worcester at the time known as "Chamberlains". Here, I have to admit to carelessness in my previous research. I had assumed in the first published version of "The Button Wars" that "Wills" was William Wills, the wealthy and influential lawyer who was a principal (but arguably unprincipled) participant in the battle for ownership of the Britannia Nail Manufactory (the story is told in "Rescuing Richard"). In fact, the 1846 court dockets revealed that the partners of Wills and Oliver were Frederick Wills and Edward Oliver. Frederick (1793 - 1874) was the younger brother of William; they had separate practices in Birmingham. Frederick's office was at 22 Temple Row and he had owned his practice there since at least 1821 (Edward Oliver was twenty years his junior and had left the firm by 1849).

Wakefield's solicitor was a Thomas Slaney and his junior partner was John Walford Cutler; both these names and that of Frederick Wills will feature prominently in the next story in Richard's life concerning his involvement in the much litigated development of metal tube manufacture.

On 9th April 1846 Frederick Wills attended at Slaney's office at 108 New Street Birmingham where they each witnessed Wakefield being sworn to his revealing Answer to the claim that Richard had filed in early February that year.

It has to be said that Richard's testimony in his Bill appears to have been somewhat economical with the truth. It commenced with a detailed description of his 1840 patent and, as he had in his claim against Chamberlain and Lilley, he alleged that he had expended thousands of pounds on presses for the manufacture of dust-pressed products. He also inferred that he was directly (as well as indirectly through others) involved in this manufacture profiting greatly, in particular, from the sale of buttons both in the home market and exports abroad, especially to the USA.

Richard then continued with a reference to his claim, commenced only six months previously in July 1845, against Chamberlain and Lilley. He glossed

over the result of the August trial in Bristol stating that after a "thorough" investigation the jury had found for him on all the issues resulting in his being granted the requested injunction. He did not explain that the trial was brought to a swift end after only one day's evidence from both parties and that the outcome was in fact part of a hastily negotiated compromise in which he had agreed to pay his own costs. Richard did refer to the licence that was subsequently granted to Chamberlains to make buttons under his 1840 patent; he claimed he granted the licence. (By 1845 Herbert Minton was a joint owner of the patent, but his name was never mentioned by Richard in his testimony in 1845 nor that in 1846.)

The next event described in Richard's 1846 testimony was rather unexpected and its relevance was not immediately apparent to me. In "The Button Wars" I have briefly mentioned that Richard had amended the wording of his 1840 Specification for the dust-pressed process in so far as it related to a claim to a second invention: that of a two-hole button with a groove for the thread. Richard had alleged that this adaptation of the "common four-hole button" had a number of benefits: not only that the number of holes were reduced (presumably simplifying the manufacturing process and perhaps strengthening the button) but, in addition, that the groove for the thread reduced its abrasion and, if the groove was correctly aligned, that wear to the proposed garment's button holes would also be reduced. Richard had claimed this surprising, and seemingly unlikely, new invention not only for grooved two-hole buttons made by the dust-pressed process but also for those made with "other materials". It was this last claim that Richard sought to omit from his Specification by the deletion of wording that suggested the patent was applicable to the manufacture of buttons made with "other materials" e.g. metal. Richard confirmed in his testimony that he had filed his application for this "disclaimer" on 17th December 1845; it was very quickly approved as it was enrolled on 29th December 1845. (Six weeks later Richard filed his claim against Wakefield; the disclaimer was probably conceded by Richard to pave the way for these proceedings, perhaps as an inducement to the metal button manufacturer Rowley, Wakefield's joint patentee, to secure his neutrality.)

Richard then explained the grounds for his claim against Wakefield. According to Richard: following the settlement of the 1845 litigation he had agreed that Wakefield could be engaged by Chamberlains to make presses for the manufacture of dust-pressed buttons under their licence from Richard; by January 1846 Wakefield had supplied the Worcester firm with presses based on those described in Richard's patent; however, Wakefield had also made additional presses which he had retained with the intention of making

dust-pressed buttons and other articles himself or in collusion with unidentified others and had actually done so and sold dust-pressed products in large quantities; Richard had asked Wakefield "frequently and in a friendly manner to desist from doing so", but Wakefield had denied that he was involved in dust-pressed manufacture and had asserted that making and selling the presses to others who were did not infringe Richard's patent. (Although Richard ignored the point in his testimony, Wakefield had no doubt relied on the fact that Richard's patent did not actually cover the press and tools described and depicted in his enrolled Specification; the patent was limited to the dust-pressed process itself and the allegedly innovative two-hole button.)

Richard, nevertheless, claimed infringement of his patent on the grounds that Wakefield was not only knowingly selling presses "in large quantities" to persons for the express purpose of making dust-pressed buttons and other articles, he was actually sharing in the profits arising from such manufacture.

As I have described in "The Dust-Pressed Process" (p.56), according to Minton's chief engineer John Turley there had already been numerous infringements of Richard's patent, which had been stopped by the mere threat of proceedings. These compliant potters were not identified by Turley, who did briefly mention the court case against the defiant Chamberlain and Lilley and the proceedings in the USA in 1844 against the van Warts (the latter were actually instigated by Richard's elder brother Thomas for infringement of his own American patent by the importation of dust-pressed buttons from England).

It seems implausible that Richard did not know the identity of the manufacturers (presumably potters) who were supposedly being supplied with presses by Wakefield if they were making and selling dust-pressed products in the quantities suggested by Richard's testimony. So why did Richard not sue them, the clear infringers of his patent, instead of pursuing his more tenuous claim against Wakefield?

Whatever his reasons for making Wakefield his target, Richard may well have regretted doing so when he read Wakefield's defence testimony filed by his solicitor Thomas Slaney. (It may not be coincidence that Slaney also acted for Job Cutler, who was the father of his junior partner; Cutler senior was a business associate of Richard's in a new tube manufacturing venture in which trouble between the participants may already have been brewing, causing Richard to resign from this partnership on 30th July 1846.)

Much of Wakefield's testimony has a ring of truth about it and its contents, if they had become public knowledge, would probably have damaged Richard's reputation (and that of Minton).

Wakefield wasted no time and went immediately on the attack from his opening statement; the following is a summary of his defence with my comments in italics:

1. The existence of Richard's 1840 patent was admitted, but Wakefield denied that Richard was the first inventor of the dust-pressed process, which he had been informed was introduced into England by a "Frenchman named St Amand" who had sold it to "Chamberlains of Worcester" about 20 years previously; he alleged that Chamberlains had been making dust-pressed buttons and other articles since then as they had proved at the 1845 trial in Bristol. *The probable earlier origins of the process were fully discussed in "The Dust-Pressed Process" including the doubtful (in my view) claims of Walter Chamberlain to have successfully developed and implemented the process. The naming of a M. St. Amand is consistent with other contemporary comments that the process may have originated in France (see "The Dust-Pressed Process" pp.18 and 191). The only reference I have found to a possible candidate for Wakefield's "Frenchman" is to a pottery in Bordeaux that was said to have been established in 1829 by a "M. de St. Amand ...which lasted a short time" (Marks and Monograms on Pottery and Porcelain: With Historical Notices etc. by William Chaffers 2nd Edition p.171)*
2. Richard's 1840 Specification in any event was not sufficiently clear/detailed to enable a competent workman to implement the process, in particular it would have been "mechanically impossible" to make a button with holes. *There would appear to be some truth in these statements, the Specification does not describe the composition of the clay powder in any detail, there is no detailed description of the machinery (a form of fly press, already an old invention, is depicted in the accompanying drawing) and the button dye depicted in the drawing is for a button with a shank rather than holes.*
3. Wakefield and Charles Rowley had taken out their patent on 21st January 1840 (five months prior to that granted to Richard) for a new stamping and piercing process for making buttons (and other articles) from metal plate by one pressing; the Specification, filed by Rowley and enrolled on 21st July 1840, described the invention in detail including drawings of the new type of fly press and the new ancillary tools; this new invention had

"ever since" been used extensively (*by Rowley presumably who, in the light of their subsequent dispute, must have left Wakefield feeling inadequately rewarded for his input*). *The first drawing in the Specification included an illustration of a four-hole button - see image of drawing on page 12 below.*

4. At the time that Richard had enrolled his Specification, although it referred to a four-hole button (the form very generally manufactured in other materials), it did not describe how this form of button could be made as Richard did not then have any "correct notion" as to the tools required to do so and remained in such ignorance for a period of "some time" following the date of his patent; during this period, either it would have impossible to make four-hole dust-pressed buttons or, if they had been, they would have been "very imperfect". *Richard's patent was dated 17th June 1840 and his Specification was enrolled on 17th December 1840.*
5. Wakefield had known Richard for many years and by the end of 1840 was on "intimate terms" with him; Richard had learnt of the Wakefield/Rowley patent and had asked for details of the tools used; Wakefield showed him an abstract of the Specification prepared by John Farey CE together with a set of the tools; Richard, having studied and admired both, declared "What a damned foolish Specification - Clay is not metal plate - They are just what I want I shall use them" or words to that effect; Wakefield subsequently agreed to make some of the tools for Richard, he had by then "little interest" in his joint patent with Rowley and therefore did not object when Richard, with whom he was still on "friendly terms", claimed that he could use the patented tools to make clay, not metal, buttons without causing any infringement. *It must be doubtful that Rowley consented to this disclosure to Richard; Rowley had presumably paid Farey, another well-regarded mechanical engineer, to write the "damned foolish Specification" based on the press and tools made by Wakefield; Farey (1791-1851) has already appeared in "The Dust-Pressed Process" (p.176) in an account of a demonstration of the process at the Institution of Civil Engineers in April 1843, but in 1840 he was already known to Richard (since at least 1836 when they jointly acted as expert witnesses for a tube manufacturer defending an infringement action).*
6. Following the above discussions Richard and "his licensees" had abandoned their attempts to use the press shown in Richard's Specification to manufacture four-hole buttons and instead had been using the press and tools patented by Wakefield and Rowley, but Wakefield had not discovered this until August 1845 at the Bristol trial.

7. Wakefield did not know how much money Richard had expended on presses but did not believe Richard had ever himself "worked" his own patent or manufactured dust-pressed products for sale; until the August 1845 trial the patent was exclusively worked by "Minton and Company of Stoke on Trent" under licence from Richard (except for production by "Chamberlains" without reference to the patent); after the August 1845 trial Richard had granted Chamberlains a licence and both licensees, Minton and Chamberlains, continued to manufacture dust-pressed products (particularly buttons for sale both at home and abroad, especially to the USA) to their's and Richard's "great profit".

8. "Walter Chamberlain and John Lilly (herein called Messieurs Chamberlains)" subpoenaed Wakefield as a witness to give evidence on their behalf at the trial at Bristol; on 22nd August 1845 he attended the first day of the trial; towards the end of the day, after the conclusion of evidence given by and on behalf of Richard, it was the turn of Chamberlains to present their defence; Chamberlains produced abundant and conclusive evidence that they had made buttons and other articles from dry materials similar to that described in Richard's patent for at least 14 years prior to 1840 under a process bought from "Monsieur St Amand" twenty years previously and which proved that Richard's patent had been for the identical process (which was already in use by Chamberlains); however, the litigants then perceived that the threatened invalidation of Richard's patent would result in making the dust-pressed process freely available to other manufacturers to the injury of both parties and, therefore, Richard and his legal advisers suggested it would be expedient to come to an "arrangement", which the parties then attempted, unsuccessfully, to negotiate that evening; on the following day the judge allowed further time for discussions and it was decided that Richard's patent must be preserved to protect both parties; Wakefield was informed (and believed) that the litigants had agreed that Chamberlains would consent to a verdict in Richard's favour, that each party would pay its own costs, that Chamberlains would be granted a licence by Richard on "favourable" terms and, also, that to give greater "colour" (credibility) to the deceit Richard's application for an injunction would not be opposed by Chamberlains; during the course of the trial Richard had produced a press and tools used to make dust-pressed buttons and this was when Wakefield had discovered for the first time that the tools being used were the same as those patented by him and Rowley. *This last statement may be true as a matter of strict fact, but, in the light of his earlier evidence of his disclosure of his patent and tools to Richard in about 1841, Wakefield*

must surely have known that Minton was using these presses and dyes to produce his four-hole "Agate" buttons. Wakefield's explanation for the settlement of the litigation and the alleged collusion between the litigants does make sense. However, it must be viewed in the context of the events and sources already discussed in "The Dust-Pressed Process" inter alia: Binns comments on the difficulties that Walter Chamberlain had encountered in making dust-pressed buttons pre-1840; Chamberlains failure to challenge Richard's patent; Richard's evidence that Walter Chamberlain had sought a licence to use his patent in April 1842; Minton's probable role in the settlement negotiations as a (previously undisclosed) joint owner of Richard's patent and also a business associate of Walter Chamberlain in encaustic tile manufacture; the crippling licence fee that Richard/Minton extracted from Chamberlains as part of the 1845 settlement (not at all "favourable" as suggested by Wakefield). The evidence produced by Chamberlains at the end of the first day of the trial was not reported in the press; it was clearly sufficiently convincing and potentially damaging for Richard (perhaps persuaded by Minton) to change the forceful and confident stance he had taken up to then (as demonstrated in his publicity campaign against Chamberlains prior to the trial); this suggests that Richard was in ignorance of all the facts concerning Chamberlains' claim to have originated the dust-pressed process. Wakefield did not explain why he had been subpoenaed by Chamberlain and Lilley; someone had supplied the Worcester firm with presses and dyes to make the large quantities of buttons it had recently been exporting to the USA - might this have been Wakefield? If so his next statements in his testimony are disingenuous.

9. Following the outcome of the Bristol trial and after the licence was granted to them Chamberlains had asked Richard to provide the requisite "tools", but he had said he could not. Chamberlains then asked Wakefield to make some of the tools described in Richard's patent, but he had pointed out that these would be of no use to make four-hole buttons; he agreed to make Chamberlains tools for four-hole buttons, which he did being those he had patented jointly with Rowley. These tools were supplied during and after January 1846; they were suitable for making buttons from metal plate as well as by dust-pressing, however, Wakefield emphasised that he was not "familiar" with the latter process. As to Richard's claim that he had sanctioned Wakefield's arrangement with Chamberlains, Wakefield denied any knowledge of this.
10. Wakefield then claimed that he had not sold his button tools to anyone other than Chamberlains - except for only one set, which he had sold to a

Samuel Bayliss, whose whereabouts he did not know; nor did he know why Bayliss wanted the tools and had not colluded with him; he did not believe that these tools had been used, but presumed they had been intended to make buttons of various descriptions and materials. *Samuel Bayliss (1821-1898) was later a successful engineer. He had been initially apprenticed to Richard and had become a valued and trusted employee before his departure in 1845 after a disagreement over wages according to Richard's counsel at the trial of his slander suit against Bayliss heard in March 1846. I have briefly referred to the press report of these proceedings in "The Dust-Pressed Process" pp 97/98. Wakefield did not state the date of his dealings with Bayliss; if they had occurred earlier in 1845 it is possible Bayliss was still employed by Richard, who had sent him to visit Wakefield pursuant to pre-trial investigations for his claim against Chamberlains. Bearing in mind the publicity generated in the local press by Richard's proceedings against Bayliss, it seems unlikely that Bayliss was unknown to Wakefield when he was sworn to his defence only a fortnight later.*

11. The defence testimony concluded with statements by Wakefield: that he had not made any dust-pressed buttons except when testing tools made for Chamberlains using "material" they supplied, these buttons were not finished, i.e. fired and glazed, and had immediately been broken into powder again; that Richard had not previously approached him regarding his allegations and the first he knew of them was when he was served with the subpoena; that, although he had not done so, he was entitled to make and sell the tools described in Richard's patent and, also, to make buttons by Richard's alleged, but "invalid", invention whether alone or in association with others and whether using those tools or those patented by him jointly with Rowley.

Dockets with the pleadings indicate that the case was still continuing in October 1846, but I have found no record that it came to trial. This is not surprising in the light of the contents of Wakefield's testimony, which neither Richard, Minton nor Chamberlain would have wanted to come into the public arena.

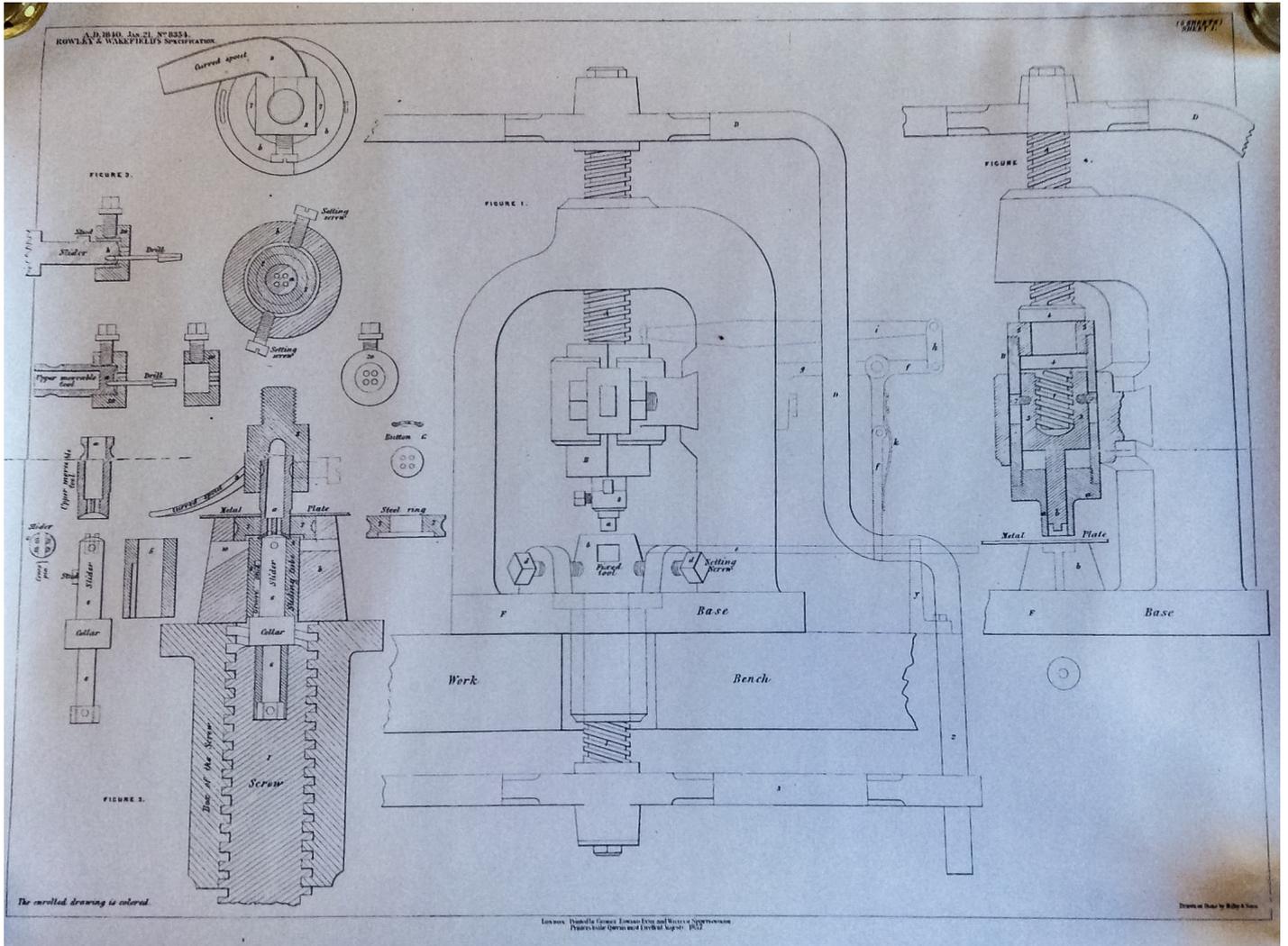
It is surprising that Richard commenced the proceedings if he knew, as seems probable, that Wakefield was aware of the reasons for the settlement of the action against Chamberlains. Whether Richard's concurrent slander suit against Samuel Bayliss is coincidental or linked in some way to that against Wakefield remains unknown, but Wakefield's reference to Bayliss in his evidence suggests that the two actions may have been connected.

The subject matter of Bayliss's slander was not disclosed in the press reports; none of the pleadings have been traced. It would not be surprising if the disgruntled Bayliss had challenged the authenticity of Richard's claim to have invented the dust-pressed process, however, he would also have been privy to many other aspects of Richard's complicated business affairs.

Whether the defence's evidence given before the Bristol court in August 1845 would have been sufficiently persuasive to convince the special jury to find for Chamberlains, thus invalidating Richard's patent, will never be known. The verdicts of these juries, which were selected by both parties' lawyers from a list of qualifying property owners (rather than experts in the subject matter of the trial), were unreliable, sometimes even defying the clear recommendation of the presiding judge (as Richard was later to experience in unrelated litigation). Richard was clearly quickly persuaded (perhaps coerced by Minton) that he could not afford to risk the lottery of a jury verdict. Nor would he have wished to allow the substance of Chamberlains' claims to become generally known; such disclosure would also have been a matter of public embarrassment to both Richard and Minton after the recognition that had been given to the important "new" invention in the highest of circles.

So, Richard, Minton and Chamberlains colluded and conspired to deprive other English potters access to the process until Richard's patent had expired, thereby retaining a monopoly contrary to the public good. The patent was tainted - perhaps the "circumstance connected with Mr. Prosser's patent (*that*) embarrassed the subject" hinted at by John Marriott Blashfield ("The Dust-Pressed Process" p.183). Richard's relations with Minton may have been compromised. As for Richard, his subsequent apparent disenchantment with the process, his "disgusted" reaction to the outcome of the 1845 proceedings described by *Binns* ("The Dust-Pressed Process" p.79), might be some indication of the extent to which he may have felt let down by Minton and/or deceived by his elder brother Thomas. Thomas, the Worcester architect, who had no doubt introduced Richard to dust-pressing after the outcome of the feud between them - the story told in "Rescuing Richard".

As for Wakefield, however "naive" he was in his business affairs, it seems unlikely that he would not have exacted some financial reward from Richard for the design of his "tools" for making what is still probably the most common form of button - one with four-holes. His testimony was silent on this point.



Drawing 1 - Wakefield and Rowley Patent dated 21st January 1840

The Scottish Dust - Pressed Patent

In "The Dust-Pressed Process" (pp 218-222) I have discussed the surprising failure by Richard to renew his patent before its expiry in June 1854. The contents of Wakefield's testimony may explain why, ultimately, this was not pursued - the threat that the originality of the patented invention might be challenged in any renewal proceedings.

However, as already discussed in "The Dust-Pressed Process", Richard must have continued to harbour hopes of securing a renewal until almost the end of both his life and that of his patent; possible further evidence of his intention to do so has recently come to light.

In 1853 Richard had applied for and obtained a Scottish patent for the process - the Specification filed was identical to that of the 1840 English patent (to which it referred) as amended by the 1845 disclaimer. The Scottish patent was dated 13th May 1853 and the Specification was enrolled on 16th August 1853. I learnt of its existence as a result of my enquiries of the *National Records of Scotland* in 2016 into Richard's Scottish tube patents; the dust-pressing patent was also uncovered by one of its archivists. Previously, I was only aware of the well documented contemporaneous English, French and American dust-pressing patents, the patentee of the latter actually being Richard's brother Thomas. In the course of my researches in the newly accessible Minton Archive in 2015 I had also seen mention of a Belgian patent (The Dust-Pressed Process p.226), which I presume was also obtained in 1840 or shortly thereafter.

Richard did not as a matter of course take out separate Scottish patents for those inventions he patented in England. Only two others have been identified, which relate to tube machinery and were patented in Scotland in 1844 and 1845. Richard was then still a partner in a tube works venture that had just been set up near Glasgow; the location of the business would have necessitated obtaining these patents.

The considerable cost of obtaining a Scottish patent in the first half of the 19th century, approximately £100 (worth about £10,000 today), would have been a deterrent to such duplication without some pressing commercial incentive. So, it is puzzling that Richard decided to incur this expense for his dust-pressing patent as late as 1853 and, presumably, for a limited period of protection which would expire at the same time as the English patent on 17th June 1854.

The archivist at the *NRS* helpfully referred me to an on-line paper "*Patenting in England, Scotland and Ireland during the Industrial Revolution, 1700-1852*" by *Sean Bottomley*. One of the reasons put forward by *Bottomley* for English patentees securing a Scottish (and/or Irish) patent for their invention was in order to have a remedy in the event of a competitor seeking "to circumvent a patent in one part of the Union by importing and selling the protected article from another, where no patent was in force".

As I have described in "The Button Wars", in 1851 and 1852 Richard (supported by Minton) had been actively litigating and threatening litigation in England against importers of dust-pressed buttons made in France at the manufactory of M. Bapterosses. It seems likely that the Scottish patent was taken out to enable infringement action to be taken in Scotland in the event of

the French buttons being imported there and sold on into England. (The application may have been lodged in Scotland before 1st October 1852 the date of commencement of the Patent Law Amendment Act 1852, which unified (and reformed) the patent systems of the UK or, possibly, subsequently pursuant to some transitional (and less costly) provisions which appear in the Act.)

By 1852 Richard's own finances would have been hugely depleted by the costs incurred in litigation over his tube machinery inventions and, in particular, the development costs of his anti-weld tube machine patented in 1850. Minton may, of course, have underwritten the cost of the Scottish patent.

Whatever the principal motive for the Scottish application, it is surely unlikely that Richard and/or Minton would have incurred this trouble and expense if they had abandoned all hope of obtaining a renewal of the dust-pressing patent on its expiry in 1854.

The reasons for its non-renewal remain a mystery. In "The Dust-Pressed Process" I speculated that Richard might have been bribed by one of Minton's competitors. One contender for doing so could have been the emergent tile firm of the Maw brothers, whose father had acquired the tile business of Chamberlain's pottery in 1849, including possibly the button licence granted by Richard in 1845. However, the defence testimony of Benjamin Wakefield suggests that the Maws had no need to pay such a bribe; they would surely have been informed of the claims put forward by Chamberlain at the 1845 trial and would have threatened to oppose the renewal unless their own interests in the process continued to be accommodated. Perhaps, no such accommodation was reached.

Minton Hollins Campbell private ledger 1841-1857 (Minton Archive)

On 23rd March 2016 John and I visited Stoke-on-Trent Archives for a second time to inspect documents that had recently become available for viewing, including the above ledger.

The leather bound volume contains the financial accounts of the partnership existing between Herbert Minton and his first wife's nephew Michael Daintry Hollins from 1841; subsequently the firm was joined by one of Minton's own nephews, Colin Minton Campbell, in 1850. The entries reveal that the partners were co-owners of the entire Minton pottery, although the china,

button and tile businesses were separate departments within the firm. After Campbell joined the partners were equal co-owners; until then Minton had retained a majority two thirds share in his partnership with Hollins, whose initial share before 1843 was only one sixth.

The business accounts within the ledger warrant detailed expert analysis, which is well beyond my capabilities and the scope of my narrative, but will be of importance for Minton historians and enthusiasts.

My own interest centred on the earlier years and it is clear that the button business achieved its zenith in 1844 and 1845, when the profit it generated had grown so rapidly that it equated to over half that of the long established china factory. The equally rapid subsequent decline of the button business is also evident.

Minton and Nasmyth's 1851 Patent

In “The Tile Revolution” (pp. 206 - 208) I have described the patent taken out by Minton and Nasmyth in 1851 which was intended to speed up dust-pressed tile production at Minton’s pottery. I speculated whether Richard’s hydraulic presses had been supplanted by this new machinery when *Tomlinson* visited the pottery in Stoke in 1851 or 1852 and subsequently described the new steam presses then in operation in his *Cyclopaedia* published in the latter year (ibid. pp. 147/148). I cast doubt on this speculation in the light of the content of the later patent granted to Minton and Nasmyth in 1856.

Whilst writing up my findings on the background to Richard’s tube patents, I revisited the evidence that he gave on 21st March 1854 when he was interrogated by members of the Parliamentary Select Committee on Small Arms only two months before his unexpected death. I was surprised to find that the subject of Minton and Nasmyth's 1851 machine came up for discussion; a reference I had previously overlooked.

That tile manufacture was discussed at all in the context of the production of firearms may seem an unnecessary irrelevance and, in fact, it was introduced to counter Nasmyth's earlier evidence to the Committee that firearm manufacture could be more completely mechanised than Richard (and other expert witnesses) deemed possible.

Richard was being questioned by G.F. Muntz, an MP for Birmingham and prominent local businessman (the patentee of the famous “Muntz” metal), and, without doubt, they would have been well known to each other

("Rescuing Richard" p. 162). After a long interrogation concerning the manufacture of gun barrels, Muntz, surely disingenuously, asked Richard if he knew of "a man of the name of Minton, in the Potteries". The following exchange must have been "set up" between the two before the commencement of the session and a full transcript is included below.

In seeking to embarrass Nasmyth, Muntz enabled Richard to confirm that the 1851 patent was not successfully implemented. The presses seen by *Tomlinson* in operation in 1852 (and for some years afterwards) at Minton's pottery may, therefore, have emanated from Richard's Birmingham workshops.

The transcript of the extract of Richard's examination by Muntz follows:

Do you happen to know a man of the name of Minton, in the Potteries? - Yes. Mr. Minton is working my patent for buttons.

I believe he is a potter, and he makes tiles and bricks? - Yes.

Has he got machinery for making tiles? - He has a great many.

When Mr. Nasmyth was examined, he stated that he had been making a machine for Mr. Minton? - He has a patent for a machine with Mr. Minton, jointly.

Has he ever made a machine for Mr. Minton? - There is one at Stoke now.

How long is it since he made it? - It is a patented machine, on 26 April 1851.

Was that the first that he made? - The first, and the only one.

Has it ever made any tiles? - It has; I had a letter from Mr. Minton this morning; I am often applied to for machinery for making bricks, and I wrote to Mr. Minton to know how they were getting on; and he says "Mr. Nasmyth's machine has worked well for a short time, but each time it has broken; we are now strengthening some of the parts, and hope soon to have it at work again."

How long has it been put up? - Between three and four years.

And is not got to work yet? - In a new machine there is generally a screw loose.

Have you ever seen it? - Yes.

What is the matter with it? - I told Mr. Minton, when I saw the specification, it never would make a brick.

But it has done so? - No; I distinguish between making and manufacturing, in a manufacturing sense.

It has not turned out well, has it? - I should say not.

Is Mr. Minton satisfied with it? - He is a very liberal man, and he does not grumble at a little expense.

Is he connected with Mr. Nasmyth in the machine? - Yes.

Who is the inventor? - They are joint inventors.

Then Mr. Minton cannot complain of Mr. Nasmyth, because it would seem that they are both in fault? - Yes

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