

Prosser The Engineer: A Forgotten Birmingham Genius



Richard Prosser 1804 -1854
The Discovery of his Life of Invention and Contention

The Fifth Story

Finally: Gunnery, Death, Aftermath

Susan Darby

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The purpose of the free publication of this work is to gain some belated, but much deserved, recognition for its subject Richard Prosser, an inventor who was also one of the main proponents of the first major legislative reform of the patent law system in 1852. He was fiercely protective of intellectual property rights. Any concerns as to possible copyright infringement in this narrative or any images within it should be addressed to the author in the first instance please at contact@prossertheengineer.co.uk and they will be given due and proper consideration; if any infringement is established the offending material will be removed, if required by the owner, with an apology - as Prosser himself would have demanded .

The narrative of The Fifth Story includes the relevant events in Richard's life that occurred during 1854. His portrait on the left of the title page was painted shortly after his death from a death mask (© Science Museum).

The little that is known of Richard's personal life up to 1840 is related in the First Story, "Rescuing Richard". The Second Story, "The Dust-Pressed Process", occurred over the period 1840 until his death in 1854 and, as such, is largely contemporaneous with the events described in the Third Story, "Tubes: A Wealth of Trouble", and is partly contemporaneous with the current narrative. Readers are referred to pages 6 to 10 and 92 to 98 of The Second Story for a necessarily short account of Richard's personal history from 1840 to 1848; to Part 1 of the Third Story, pages 147 to 161, for some similar insights to 1849 and to Part 2 for important events in 1850. The years 1851 through to early 1854 are covered in the Fourth Story.

The typeface used on the "cover" of this narrative and chapter headings is "Baskerville" in deference to Richard's admiration for another Birmingham genius:

John Baskerville (1706-1775).

The Richard Prosser Stories

The First Story

Introduction & Chapters 1 to 5

Rescuing Richard: The Brothers' Feud & The "Chunk" Conundrum

The Second Story

Chapters 6 to 9

The Dust-Pressed Process: The Button Wars & The Tile Revolution

The Third Story

Tubes: A Wealth of Trouble

Part 1

Chapters 10 to 16

A Litigious Nightmare

Part 2

Chapters 17 to 21

The Weldless Tube & Second "Marriage"

The Fourth Story

The Emancipation of Inventors

Chapters 22 to 38

The Fifth/Final Story

Finally: Gunnery, Death, Aftermath

Chapters 39 to 47

The stories will remain works in progress and will be subject to revision as, hopefully, further information and corrections come to light.

Acknowledgements

Throughout my narratives I try to acknowledge all my contributors and sources as they appear and, where appropriate, provide a [link](#) to any relevant website. In the case of "Finally: Gunnery, Death, Aftermath" especial thanks are due to the following:

The archivists at the British Library and The Library of Birmingham (in particular, Steven Campion within the Business and Intellectual Property Centre of the British Library) - both libraries are the custodians of much original "Prosser" source material; Jody Behrbaum, my American collaborator on "The Button Wars", who sourced Thomas Prosser's fascinating Civil War letter to Jefferson Davis; the Ancestry, familysearch.org, and newspapers.com websites, which enabled me to uncover much about the lives in the U.S. of Thomas and his descendants.

The British Newspaper Archive, my main source of contemporary accounts, without which the Richard Prosser Stories would not have been discovered;

Above all, Richard Prosser's great great grandson, Richard John Darby, my husband, for his support and toleration of my obsessive pursuit of his ancestor. Known as "John" since birth, my husband was named Richard after his maternal Prosser grandfathers: the mining engineer Richard Ellis Prosser, the historian of invention Richard Bissell Prosser and Richard himself.

All errors, omissions and misconceived speculations in my narratives are entirely my responsibility. It is my hope that publication will lead to feedback, which will enable corrections to be made and will resolve some, at least, of the many questions that remain unanswered about Richard's life and inventions.

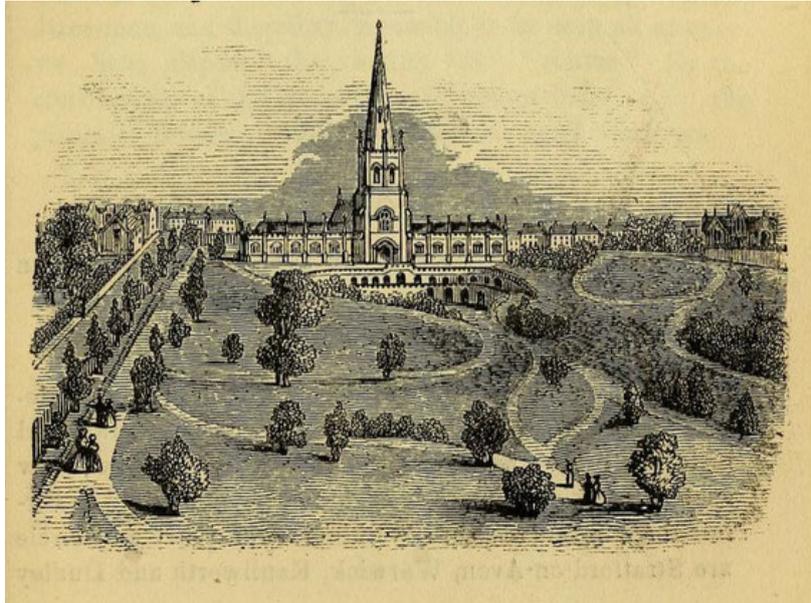
Susan Darby
contact@prossertheengineer.co.uk

Finally: Gunnery, Death, Aftermath

Chapter 39	1854 Feb - Death of Eleanor	6
Chapter 40	1854 March? - Gunnery: A Commission	10
Chapter 41	1854 March/April - Gunnery: The Select Committee	18
Chapter 42	1854 April - Gunnery: A Government Contract? The Whitworth Effect ?	39
Chapter 43	1854 April/May - Gunnery: The Unfinished Appendix	50
Chapter 44	Death and Aftermath	57
Chapter 45	About Richard's Descendants & a Stained Glass Memorial	71
Chapter 46	Thomas Prosser: a Civil War Letter & the Krupp Inheritance	94
Chapter 47	Richard: A Personal Conclusion	130
Appendix	Obituaries	137

Chapter 39

1854 Feb - Death of Eleanor



*Warstone Lane Church of England cemetery and St Michael and All Angels:
Cornish's Strangers' Guide to Birmingham 1851 (public domain)*

If Richard had been present when his friend W. C. Aitken read his paper on “Ancient and Modern Metal Working and Ornamentation etc.” at the Society of Arts in the evening of Wednesday 15th February 1854, he had probably been unable to be with his mother when she died. On the previous three Wednesday evenings Richard had attended at the Society’s meetings and participated in the debate on patents described in the last chapter of The Fourth Story, *The Emancipation of Inventors*. In fact, her death certificate suggests that none of her family were with Eleanor at her death.

The certificate recorded that Eleanor Prosser, aged 90, died of “Old Age” on 15th February 1854 at the house leased by Richard at 18 Broad Street, Birmingham (close to his Tube Works). The certificate also described her as the widow of Walter Prosser, a builder. The informant who registered her death was a Margaret Hawley “Present at the Death”. Hawley was illiterate (her signature was represented by an “X” - her mark) and lived nearby in Bishopgate Street. I was surprised that Eleanor’s death was not registered

by her daughter Hester, who was still living with her in the 1851 census at 18, Broad Street.

Eleanor's funeral took place on 18th February. She was buried in the Warstone Lane Cemetery, then adjoining the town's Jewellery Quarter, in the district of Hockley to the north of the centre of Birmingham. This Church of England cemetery had only been opened in 1847/48 and the funeral service was, presumably, held at the new church built on the site, St Michael and All Angels (demolished 1953). The cemetery continued to accept burials well into the 20th century but no spaces are now available.

The microfiche of the burial register held by The Library of Birmingham Archives recorded that Eleanor was buried in plot number 2602 and further enquiry of the Cemetery's management identified its location as within "section L - 928":

Inscription

Warstone Lane - L 968

Eleanor PROSSER 14th February 1854 aged 91 years. Flat Slab Stone buried on site

A visit to the cemetery in June 2022 to search section L was unsuccessful due, as later discovered, to the inscription having been recorded before the city council had, indeed, buried Eleanor's memorial (and many others) on the site in the 1950's. The recorded date of her death and age were inaccurate and the record of the inscription on the slab is surprisingly terse - perhaps because it was partly illegible due to erosion.

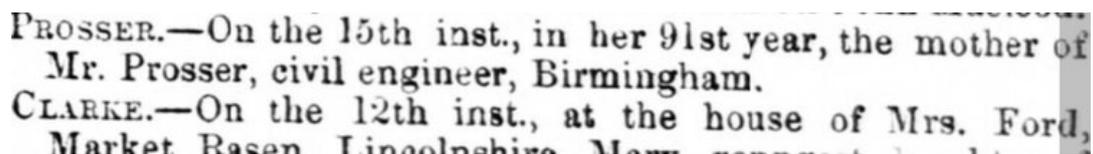
The photograph below was kindly provided by The Friends of Key Hill and Warstone Lane Cemeteries - the blue bag marks the site of her grave. Eleanor was buried in the area behind the small tree in the middle of the engraving in Cornish's 1851 Guide.



After arriving in Birmingham in about 1800 Eleanor had lived in the Deritend and Bordesley districts of south Birmingham until about 1850, where her three sons and six of her grandchildren by Richard had been baptised (her sons at St. John's and the grandchildren at St. Martin's in the Bullring). Her late daughter-in-law Sarah, Richard's first wife, had been buried in the church yard of Holy Trinity Bordesley in February 1848 where many of Sarah's Potter family were already interred and where their baby daughter Sarah Hannah was also buried later that year - Richard was also to be buried there within four months of his mother's death.

The discovery of Eleanor's burial on the other side of Birmingham was, therefore, unexpected. Burials at St Martin's had already ceased due to lack of space and the same was probably the case at St. John's, but Holy Trinity would have been an option. The latter newer church, consecrated in 1823, had been built in the Gothic Revival style and was part of the High Church movement; perhaps this would have been objectionable to Eleanor or, maybe, family differences were a factor in the choice of her burial place. Her husband Walter's death and burial remain untraced; alive in late 1836 he had died before 6th June 1841, the date of the census that year when Eleanor had described herself as already a widow.

No notice of Eleanor's death appeared in the Birmingham press. A search in the *BNA* has revealed just one - in the *Sheffield and Rotherham Independent* dated 25th February. Why and by whom placed in this Yorkshire newspaper remains a mystery.



PROSSER.—On the 15th inst., in her 91st year, the mother of
Mr. Prosser, civil engineer, Birmingham.
CLARKE.—On the 12th inst., at the house of Mrs. Ford,
Market Basin, Lincolnshire, Mary

Image © The British Library Board all rights reserved)

In 1898 an interment was to take place in the Warstone Lane Cemetery which would have been of significance to Richard: that of the remains of one of his heroes John Baskerville (1706?-1775). Baskerville was a committed atheist and, in accordance with his instructions, his embalmed body had originally been buried in the grounds of his house at Easy Hill. The location of this house, (demolished in the 1790s) came to be associated with his name and is where the current Baskerville House stands neighbouring the new Library of Birmingham (itself in part built on the site of Richard's Tube Works in Cambridge Street). A narrow street leading to Broad Street from Cambridge Street was known as Baskerville Place. By 1880 the Place was a

“slum” according to Richard Bissell Prosser when he wrote in the first of his articles for the *Birmingham Weekly Post*:

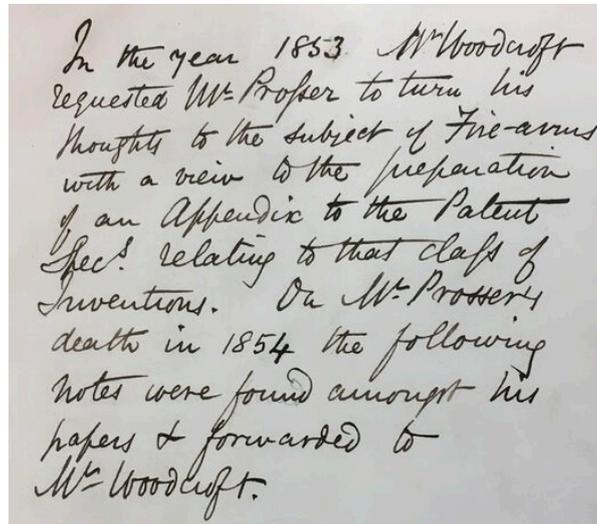
If our memory is not at fault, there was for some years nothing to mark the name of the street until the present inscription in Minton's encaustic tiles was put up about 30 years ago by the late Mr Richard Prosser, a great admirer of Baskerville, who occupied the premises at the top of the Place.

(In 1881 all 37 articles were privately published by RBP in his *Birmingham Inventors and Inventions*.)

Many websites record both Baskerville's importance during his lifetime and the history of the journey of his remains to the Warstone Lane Cemetery - this [link](#) is to a page on the website of the Jewellery Quarter's Cemeteries Project.

Chapter 40

1854 March? - Gunnery: A Commission



In the year 1853 Mr Woodcroft requested Mr Prosser to turn his thoughts to the subject of Fire-arms with a view to the preparation of an Appendix to the Patent Spec^s relating to that class of inventions. On Mr Prosser's death in 1854 the following notes were found amongst his papers & forwarded to Mr Woodcroft.

Image © The British Library Board. All rights reserved

By the time of his death Richard must have become an expert on the “firearms, cannon, shot, shell, cartridges, weapons, accoutrements, and the machinery for their manufacture” which was to form the subject of some of the first volumes of pre-1852 patent specifications published by the Patent Office. His obituary in *The Spectator* actually placed more emphasis on Richard’s recent researches on the subject than on the remainder of his career as is evident in the following extracts comprising over a third of the obituary:

Richard Prosser, of Birmingham, an engineer of high original faculties and great attainments, has died suddenly, of inflammation, while sedulously pursuing a work of importance to the Ordnance Board, an appendix to the volume just issuing from the office of Mr. Woodcraft, containing all the patented inventions on the subject of gunnery from the earliest periods. Mr. Prosser's work would have added thereto all the practices that have not been patented, together with original views of his own as to what is still required in the science and practice of projectiles, which Mr. Prosser regarded as being very inferior to what would obtain if progress were rightly directed. How hard Mr. Prosser worked to get together his materials, and how conscientiously he strove to make his work perfect, his friends were well aware; and to his over-anxiety may be attributed the disease that so suddenly laid him low....

The Board of Ordnance will miss the brain that would have solved for them the problem of the efficient manufacture of arms by machine-tools, and of a better kind than have yet been produced....

It is possible that Woodcroft may have commissioned Richard to write the firearms appendix sometime in 1853, but the known circumstances suggest otherwise. The subject matter was immense and the project must have been very time consuming, but little evidence is left of the results of Richard's reputedly sedulous researches.

In the issue of *The Spectator* dated 1st July 1854, in an article titled "Firearms and Projectiles: Recorded Patents", the unidentified author reviewed the volumes of the specifications of the pre-1852 firearms patents that Woodcroft had arranged to be published by the Patent Office. The reviewer commenced with some farsighted thoughts provoked by the then ongoing war in the Crimea (thoughts pertinent today (2022) to the current war in the Ukraine):

In proportion as nations become intelligent, wars diminish in brutality. The art of slaying is reduced to a kind of chess game, in which those possessing the best weapons and the best powers of calculation even with inferior numbers win the day. And in proportion as victory becomes certain, there is less desire on the part of the intelligent to obtain it save for worthy purposes, and the unintelligent have a proportionate fear of stirring up strife. We may therefore assume that by the time war has been made a perfect science, it will cease to exist save as a means, when other means fail, to coerce barbarians into good behaviour. On this reasoning, they also are benefactors of their species who give their time and energy and skill to perfect the processes of destruction and render weapons of war unerring and more and more widely destructive. Swindlers thrive through the ignorance of honest people and coarse brutes overpower refined people who are unskilled in scientific resistance. But the club is no match for the pike; the musketeer falls before the rifle; the regiment of cavalry is scattered like chaff before well-served artillery; and if we find that artillery is vanquished by the bearers of needle guns and Minie rifles, it is merely a proof that the science of artillery is in arrear and needs more studying.

The review continued with an endorsement of the recent acquisition of the Patent Office's publication by the Board of Ordnance (the Government body then responsible for the supply of armaments and munitions to the British Army). Before embarking on a long and detailed examination of the publication's contents, the reviewer went to some trouble to describe the public benefit derived from the stimulus to invention generated by the patent

system. Subsequently, the knowledgeable reviewer was critical of the Board of Ordnance for the inferiority of the artillery that it supplied to the British forces and advocated the dissemination of the volumes as an encouragement to inventors to improve on what had gone before - adding:

If we are rightly informed, an appendix was in hand by the late Mr. Prosser, which we trust will yet be added to this collection.

It appears that *The Spectator's* reviewer was to be disappointed. While searches online have revealed many references to Woodcroft's appendix to the Patent Office's 1853 volume of pre-1852 specifications for reaping machines (including to one copy held by the British Library) and to the firearms volumes themselves, no printed appendix to the latter has come to light. A pencil note in a separate index to the firearms volumes held by the British Library confirms that: "The planned Appendix by Richard Prosser was never completed".

In his history of the Patent Office between the years 1852 to 1883, *Rooms Near Chancery Lane*, John Hewish in 2000 described how Richard "had died suddenly in May 1854, leaving only his notes, proofs of the intended drawings, and an unfinished translation of a Russian treatise on the factory". The "factory", as Hewish had identified earlier, was "The Imperial Russian Arms Factory at Tula".

Just when Richard was formally commissioned by Woodcroft to write the Appendix is not known. The British Library holds what little evidence remains of Richard's researches; letters and notes which were forwarded to Woodcroft after Richard's death. The small book in which the few of his notes held by the Library have been bound contains the following comments written in ink on a fly leaf at the beginning:

In the year 1853 Mr Woodcroft requested Mr Prosser to turn his thoughts to the subject of Firearms with a view to the preparation of an Appendix to the Patent Specs. relating to that class of inventions. On Mr Prosser's death in 1854 the following notes were found amongst his papers and forwarded to Mr Woodcroft .

The known circumstances suggest that Richard probably did not commence working in earnest on the Appendix until the spring of 1854. The phrase "turn his thoughts" suggests a passing remark rather than a formal commission. The comments are attributed in a separate memorandum to Atkinson, the librarian at the Patent Office who in 1857 had challenged Woodcroft's claim to be named in its Catalogue as the main contributor to the founding collection of the POL (see *The Emancipation of Inventors* p.17).

Although the *Report of the Commissioners of Patents for 1853* (published in August 1854) had recorded that all the pre-1852 firearms patent specifications had been printed in 1853 this may not be correct. Certainly, the eight volume bound set of these specifications was not published by the Queens Printers until 1854 as evidenced in the 1858 Patent Office Library Catalogue, presumably not much before the article appeared in *The Spectator* on 1st July. The Catalogue entry also revealed that the volumes included all relevant specifications patented up to 31st December 1853. According to *The Spectator's* reviewer these volumes contained the specifications of 262 patents together with new lithographs of any accompanying drawings.

A short letter dated 15th May 1854 from Woodcroft to Richard refers to the Queen's Printers having "finished the letter prep" and to lithographs "being all on stone without I believe an exception". The letter was, in fact, just a hurried note, which started by saying that Woodcroft had heard from the translator of the "Russian treatise" on the Tula factory that he "has got on with the translation but has not finished it, at the same time he asks for my cheque for £15 or £20." Woodcroft's next references, quoted above, to the Queen's Printers and lithographs can, therefore, only refer to the pre-1852 specifications not the unfinished translation. The note ended abruptly and enigmatically: "A run up as soon as you can may expedite matters, I am quite ready to devote my time to you. Yours Truly B. Woodcroft".

What Woodcroft meant by a "run up" is unclear: a visit to London or a draft of the Appendix? What is clear is that completion of the firearms project had become urgent. Richard was to die within a week of receipt of the letter.

It may be that well before Richard's death Woodcroft regretted that he had given priority to the publication of the volume of the pre-1852 patent specifications for reaping machines and its Appendix, of which he was the author; these had been published in 1853 as reported in the Patent Office Report for that year. On the face of it, the subject of firearms would seem to merit earlier attention than reaping machines, but the latter had been a preoccupation of Richard's following the much publicised but (in his view) undeserved success of an American reaping machine at the Great Exhibition. Woodcroft may have shared Richard's indignation, hence the, otherwise, rather surprising prioritisation.

It was certainly not a time for swords to be beaten into ploughshares and it may be that Woodcroft's superiors in the Patent Office had criticised his lack of judgement in putting reaping machines before rifles during the ongoing

war in the Crimea, which had commenced in October 1853 between Russia and the Ottoman Empire. Britain and France both declared war on Russia and joined in the conflict on 28th March 1854.

It was against the background of Britain's likely participation in the war that, on 1st March 1854, the House of Commons voted to approve the appointment of a Select Committee "to consider the cheapest, most expeditious, and most efficient mode of providing small arms for Her Majesty's service". On the same date Richard was in London: "Mr Prosser and Bridges Adams came about Guns and pistols" noted Henry Cole in his diary entry for that day. (Cole also met Richard on the next day this time accompanied by Herbert Minton - two of just four entries where Richard is mentioned; the others related to Cole's attempt to "seeing Prosser's Tesseræ made" on 16th June 1843 and to the Society of Arts patent debate on 25th January 1854 described in *The Emancipation of Inventors* Chapter 38). William Bridges Adams (1797-1872) was a locomotive engineer, inventor and author. Transcripts of Cole's diaries are held by the V&A.

Readers of *Tubes: A Wealth of Trouble* will recall that the background to the appointment of the Select Committee was discussed in relation to Richard's testimony relevant to tube manufacture (see Part 1 of *The Third Story - Tubes: A Wealth of Trouble* pp. 136-141).

The 14 members of the Select Committee initially appointed on 3rd March included at least seven MPs with military or Ordnance Board experience and four others representing Midlands' constituencies including Birmingham; the latter being represented by the familiar names of Muntz and Geach. Muntz, notwithstanding his allegiance to the gunmakers of Birmingham, had unsuccessfully sought the appointment of a London MP in the place of a Scottish one, arguing that the London gunmakers should have at least some representation. Subsequently, the MPs for Southwark (Sir William Molesworth) and Totnes (Lord (Edward Adolphus) Seymour) were co-opted to the Committee; Molesworth was the serving First Commissioner of Works, a Government post that had been held by Seymour in 1852. The presence of Seymour on the Committee was to prove significant; his knowledge of arms procurement gained in a number of previous Government posts was evident in his interrogation of witnesses.

If not already being treated as urgent, the appointment of the Committee must have galvanised Woodcroft into expediting the completion of the printing of the firearms specifications. As for Richard's Appendix, the paucity of his research material passed on to Woodcroft after Richard's death

suggests that he had not progressed this as far as might have been expected if Woodcroft had formally commissioned him to write it several months previously. Woodcroft's note to Richard on 15th May, also, suggests that he had only recently commissioned the, then still unfinished, translation of the "Russian treatise". However, on the date, 21st March, that Richard gave his evidence to the Committee he did then confirm that he was in the process of writing a work on firearms. In fact, he had probably only recently commenced his in depth research.

Amongst the papers passed to Woodcroft after Richard's death are letters to Richard from the "Office of Ordnance" advising him that he would "very probably" be called upon to give evidence to the Select Committee. The first of these letters was dated 6th March 1854 and was signed on behalf of Sir Thomas Hastings (1786-1870) by Sam Roper, a senior clerk in the Ordnance Department's store account office. Sir Thomas, then a captain in the Royal Navy, was the Principal Storekeeper, a senior appointment within the Department which he had held since 1845; he was to retire from the navy with the rank of admiral in 1866. Another letter dated 7th March advised Richard that the Ordnance's officers in Birmingham and Enfield (both Small-Arms Departments) and, also, at "the Tower" (of London presumably, although Birmingham's proof house appears to have been so named too) had been authorised to allow him entry to inspect their respective armouries (but those at Hampton Court and Windsor, were expressly excluded as the Board could "not assist"). A further letter dated 10th March authorised Richard to make drawings of arms and tools for arms stored at the three armouries specified in the Board's previous letter.

Richard was also supplied with a letter dated 15th March addressed to the Inspector of Small Arms at Birmingham instructing the Inspector to "furnish to Mr Prosser the component parts of a musket in the rough state Pattern 1853 - also a musket complete of the same description. Mr Prosser will return to him the above articles when no longer required." In fact, the firearm in question was not technically a musket; the "Pattern 1853" was a rifle (the barrel was rifled not smooth) one of a new type of firearm first produced in Britain at the Enfield armoury. The famous British "Brown Bess" muskets still predominated as the main infantry weapon, but were considered inferior in accuracy and range to the French Minié rifle and German needle rifle. The "Pattern 1853" was also described as the "Enfield Minié" rifle.

During the second and third weeks of March 1854 Richard must have been fully occupied preparing for his interrogation before the Committee. He would probably have been able to carry out most of his researches in

Birmingham and an answer to a list of questions from him to an Edward Johnson dated 18th March may have been from the gun finisher of that name in Cecil Street and Coleshill Street (*Whites History & Directory of Birmingham 1849*). The answer (one of the papers passed to Woodcroft) concerned the number of “viewings” (inspections by Government inspectors) the various components of a firearm (e.g. lock, barrel, pins and bayonet) were subjected to before, during and after assembly; Johnson’s response was brief (he had “not time to enlarge”), but confirmed that the “slightest variation” could lead to rejection. The assembly of the component parts of the gun into a safe and working firearm was a skilled task made especially difficult due to the fact that the parts were all separately made by a multiplicity of specialist craftsmen working, in the case of those used by Birmingham’s gun makers, mainly in the Black Country.

On 21st March, before the Committee, Richard confirmed that he had not visited the Government’s Royal Small Arms Factory at Enfield, although he did mention having been at the “Woolwich Dockyard last week”. This visit to Woolwich must surely have been made primarily to attend at the nearby Royal Arsenal; why Richard might have considered that a visit to this much longer established and larger armoury was more worthwhile than attending the still modest but, possibly, more technically advanced one at Enfield is explained later.

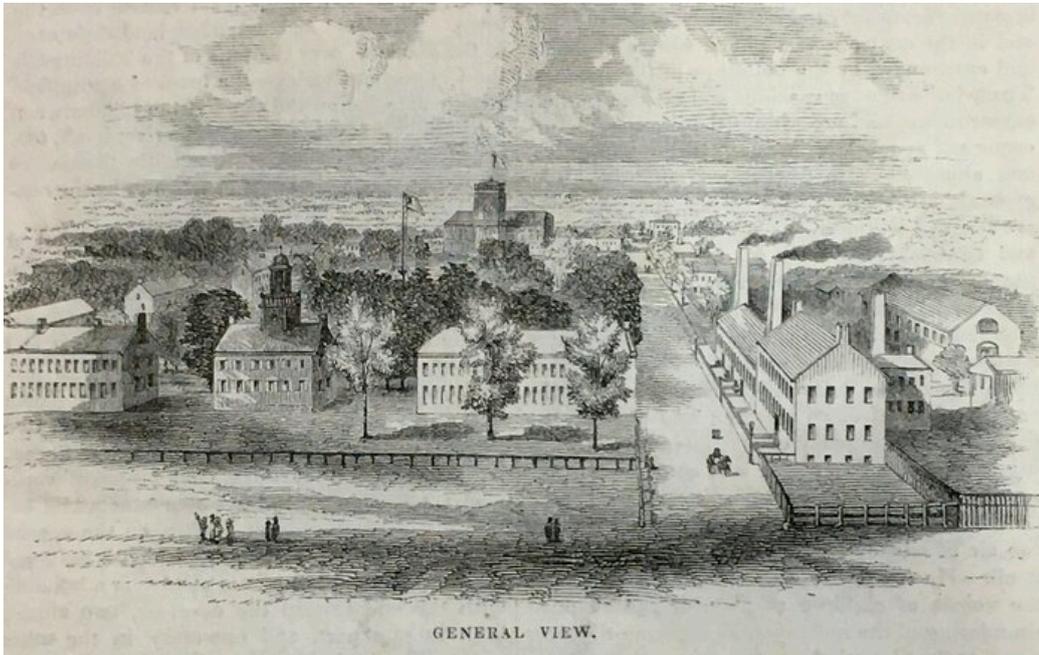
The Select Committee had elected Molesworth its Chairman on its first sitting on Thursday 9th March and commenced its examination of witnesses the following day continuing to do so every week day of the following three weeks and the final three of the fourth; in all nineteen days of questioning which finished on 7th April. The eventual printed Report, including transcripts of the witness examinations, ran to just over 500 pages.

As explained previously (*Tubes etc* *ibid*) the Committee’s remit was to investigate whether the centralised system of firearms’ manufacture as practised in the U.S. could be adopted within the UK - possibly at an expanded (Government owned) Enfield Factory. The manufacture, using machinery, of all the component parts of a firearm within one factory allegedly led to such uniformity that the American manufacturer Samuel Colt felt able to testify to the Committee that the individual parts of his famous revolvers were fully interchangeable - a boast that was disputed by some of the British witnesses. No such claim could be made for British firearms however, if one of its parts was damaged beyond repair the whole gun probably had to be discarded.

It will be evident that the Committee's verdict would be of crucial concern to the British independent firearms' industry, which was predominantly based within Birmingham and its vicinity. Birmingham gunmakers are said to have supplied two thirds of the guns used by the British Army during the Napoleonic wars. Unsurprisingly, the Birmingham press reported at length on the evidence given before the Committee and the summaries in the next Chapter (other than Richard's testimony) are based on reports in the *Birmingham Journal*.

Chapter 41

1854 March/April - Gunnery: The Select Committee



*The Armory at Springfield Massachusetts
Harper's New Monthly Magazine July 1852
Image © The British Library Board. All rights reserved*

The Witnesses' and their Evidence

On the first four days of questioning by the Committee the witnesses were all Board of Ordnance officers. Hastings, the sole witness on Friday the 10th March, gave evidence as to the Board's existing arms procurement arrangements. Birmingham's gunmakers (in practice the only available source of large scale procurement) came under his fire for delays in completing contracts and absence of effective price competition (he alleged that they acted as a cartel). Both Muntz and Geach were prominent in asking Hastings for further evidence to justify his allegations. Hastings praised "Colt's machinery" as revolutionary and was in favour of the Government becoming its own manufacturer (at an enlarged armoury), which would be "infinitely the more preferable, speedy, efficacious and economic mode" than the existing system. Hastings' questioning continued on the following Monday 13th March when he was asked to give his opinion on the potential for mechanisation of the industry, but Hastings declined stating that he "relied on the authority of Mr. Anderson" to do so. Shortly afterwards

Hastings' interrogation was interrupted to allow the waiting Mr. Anderson to be examined as he "had to return to Woolwich".

The then Mr. Anderson was the later Sir John Anderson (1814-1886), who in 1854, still only 39, was the chief engineer at the Royal Arsenal. Anderson had worked at the Arsenal since 1842, rising from being a foreman to his current post, and had already introduced some mechanisation there including 16 machines of his own invention for (inter alia) rapid production of bullets and granulating gun-powder. Anderson had, for at least a year or two, been investigating the manufacture of small arms. He testified to having visited Birmingham in March 1853 followed by Enfield in October; the former's manufacturers he decided could "not be depended upon for a large supply" and at the latter armoury he saw a "great deficiency in the machinery employed" compared to that in Colt's new revolver factory in Pimlico, London which he had viewed in December. Anderson, having praised Colt's production methods, assured the Committee that he was confident that a similar system could be adopted by the Government for the manufacture of small arms. He showed the Committee a large coloured plan that had been drawn up following a tour in England and Scotland carried out by a number of officers of the Board in January and February to investigate "the most economical plan consistent with efficiency" for the manufacture of small arms. The actual drawing displayed to the Committee was of a proposed large Government factory within which all of a firearm's components could be manufactured (with the aid of machinery) obviating the "carrying of materials to and fro" which was "one of the great defects in the system pursued at Birmingham". Having described improvements he considered possible in arms manufacture, he produced, by way of examples, a barrel, stock and bayonet made by such new methods. Anderson's testimony ended with a résumé of estimated set-up costings: building construction £50,000; steam engines and machinery £25,500; and "tools and finishing machinery" £68,500.

Richard's visit to Woolwich (see p.16) must have occurred sometime during the same week as Anderson's attendance on the Monday before the Committee.

On the Tuesday (14th March) a "Colonel Tulloh" was questioned. Another Board officer based at Woolwich, an inspector in its "carriage department, Alexander Thomas Tulloh (1798-1885) had previously been the superintendent of the powder mills at Waltham Abbey. Tulloh, who had been one of the officers who had accompanied Anderson on the tour earlier in the year, endorsed Anderson's findings so emphatically that at one point, when

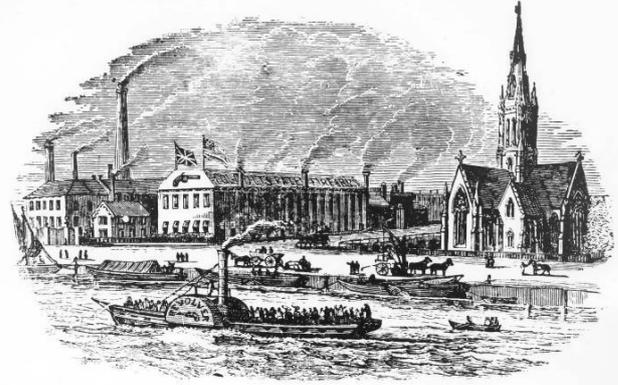
Geach was asked to defer a question he wished to put, a disconcerted Muntz exclaimed that “the proceedings might as well be closed at once”. Both Geach and Muntz subsequently interrogated Tulloh vigorously having, apparently, remained silent during Anderson’s testimony; Tulloh was not to be intimidated and, in answering Muntz, confirmed he had great confidence in “young” Anderson’s competency, but he emphasised that his own views were nevertheless based on his own observations. (Tulloh was to eventually retire with the rank of Lieutenant General in the Royal Artillery.)

Muntz’s consternation must have been exacerbated when Hastings resumed his testimony by reading a letter dated 13th March to the Board just received from Colt in which the American undertook to supply 1,000,000 muskets manufactured in England at a price of £1 10sh each (less than half the price demanded by Birmingham gunmakers for the “Enfield rifle”). Hastings examination on this offer lasted the remainder of the sitting during which he maintained that his preferred course remained the construction of a Government armoury “to save Colonel Colt’s profits”; he, later, confirmed that this would entail the closure of the Government’s Enfield and Birmingham departments, the latter to be moved to Woolwich. Hastings had earlier explained in answer to a question from Newdegate, the North Warwickshire MP, that he had only recently come to this decision following his investigations in Birmingham where he had come to the view that the Birmingham gunmakers’ inability to meet the Board’s procurement demands were in part due to strikes for higher wages by workmen (who maintained a well organised system of “combination”) and in part due to the attraction of other more lucrative contracts (i.e. for bespoke guns - the previous day he had stated that “in high priced first class guns Birmingham exceeded all the world”). Having listened to Hastings repeat Colt’s assurances that he could quickly “enlarge his machinery for making pistols” to produce one million “muskets” of the same quality as those made in Birmingham, Muntz declared his doubts and “expressed an intention of seeing the factory at Pimlico himself”. Muntz did, however, concur with Hastings assertion that pistols could, also, be made in the proposed Government manufactory as the same machinery could be used to roll both rifle and pistol barrels.

The next day, Wednesday 15th March, the sitting was entirely devoted to further interrogation of Anderson. The Birmingham MPs were again, apparently, to the fore in the questioning (this impression given in all the *Birmingham Journal* reports may not, of course, be an accurate reflection). Most of the questioning concerned Anderson’s proposals for the introduction of labour-saving machinery for the manufacture of gun components and the improvements he thought possible. Muntz confirmed he had visited Colt’s

factory that morning and had seen “a great number of costly machines making pistols, but part of the work was performed by hand”; to which Anderson answered that manual labour could not be entirely dispensed with and he would only use machinery insofar as it was cost effective. Lord Seymour, another of the more prominent (and pertinent) questioners in the *Journal's* reports, asked about the interchangeability of such machine made parts; Anderson, tellingly, could only reply that he “had heard that this had been done in America” and, if correct, he would “regard it as the perfection of the manufacture”.

Image - Colt's Patent Fire Arms Manufacturing Co. Pimlico, London.
© Connecticut State Library.



Samuel Colt (1814-1862) appeared before the Committee in person on the following day (Thursday 16th March). He appears to have been allowed to speak at length without any interruptions and first confirmed the terms of his letter to the Board, clarifying that the million muskets would be supplied over a period of a 10 year contract (later adding that the price quoted reflected this quantity and duration). Having detailed his experience as a gun manufacturer in the U.S. (which included rifles) and, since January 1853, in London, he extolled the method of manufacture (machine based) that had been adopted in the U.S. for many years compared to that in Birmingham for: the superior quality of the product; the lower cost; and, its greatest advantage, uniformity of parts (enabling their interchangeability). Apart from some insignificant enquiries at the end of his discourse, Muntz, Geach and Newdegate seem to have been stunned into silence. The sitting continued with interrogation of the Board officer responsible for drawing up the plan and estimates of the proposed new Government factory, which he recommended should be built on a site within the Woolwich Arsenal. There then followed some discussion between Muntz and Hastings, which resulted in another example of the Birmingham gunmakers' failure to meet the Board's procurement needs being cited by the latter at the end of the sitting.

At the sitting on Friday 17th March the “celebrated machinist” James (Hall) Nasmyth (1808-1890) was the first witness. Nasmyth appeared on behalf of the Board according to the *Journal's* reporter and he certainly supported the

evidence given by its other representatives and was enthusiastic in regard to Colt's production methods. His own experience of supplying parts (excluding the stock) to the "Russian Government" for their "regulation musket" (which was manufactured by stamping using the famous steam hammer "of his own invention") led him to believe that the parts of a similar musket could be made entirely by machine. Both Geach and Muntz sought to undermine his evidence but without much success.

Nasmyth was followed by a seemingly unlikely authority on small arms, but George Wallis (1811-1891), the then Head of the Government's School of Design in Birmingham, was an acknowledged expert on the subject and, in particular, on rifle design. Wallis was careful to confine his testimony to his views on the American production methods he had observed on visits in 1853 to U.S. arms manufactories in Massachusetts (including those of the U.S. Government at Springfield and Harper's Ferry) as one of the Royal Commissioners sent ostensibly to attend the Exhibition of Industry being held in New York. His views on the whole favoured the American system of arms manufacture, but he did remark in passing that, so far as he could judge, he thought the "Birmingham arm supplied to the Government was superior to the Springfield musket". The final witness that sitting was a Colonel Chalmers, Inspector of the Artillery at Woolwich. Chalmers thought that the existing system of Government arms' procurement was a bad one, but the issue as to whether it remedied the situation by establishing its own factory or procuring arms from Colt was of "minor importance"; his main concern was to "get the best arm that could be made, as cheaply and rapidly as possible".

On Monday 20th March the most senior officer of the Board of Ordnance, its Master General, Lord Raglan (1788-1855) was the Committee's first witness. Raglan, had an impressive military record including serving under Wellington in the Peninsular Wars and at Waterloo (where he lost his right arm); he was shortly to be made commander of the British troops in the Crimean War dying of ill health during the siege of Sevastopol in June 1855. The *Journal's* report of Raglan's testimony to the Committee was brief, he maintained that: the current system could not be relied upon to procure the "large supply of arms" that might be required urgently; he recommended the establishment of a Government factory under the management of the Board (admittedly in reliance largely on the advice of Anderson). More space was taken up by the *Journal's* account of the testimony of the next witness, "Mr. Whitworth, machine manufacturer, of Manchester".

Joseph Whitworth (1803-1884) has only been briefly mentioned previously in this narrative (see *The Emancipation of Inventors* pp. 184 and 200); he ranks as one of the greatest mechanical engineers of his time and was, also, a noted philanthropist. Whitworth Scholarships are still awarded by the Whitworth Society; Manchester's famous Whitworth Art Gallery and its University's Whitworth Building are just two examples of recognition of his bequests to education and other causes in the city. In 1853 Whitworth, too, had been appointed one of the Royal Commissioners sent to the New York Exhibition; he had accompanied his friend George Wallis on the visits to the Massachusetts' arms manufactories. Whitworth testified at length as to his own investigations into arms' manufacture as well as to his observations in the U.S. factories, which had led him to conclude that "the application of machinery in this manufacture would result in the production of better and cheaper arms than are now supplied to the army, but hand labour would be necessary to finish them". On the issue of interchangeability he considered that, whilst not "indiscriminately" interchangeable, the parts of an American musket were "so nearly accurate" as to enable a fit to be found without difficulty. He recommended that the Government experiment with machinery on a small scale in the first instance, but later estimated that it would be possible to construct and set up the Board's proposed (mechanised) factory within 12 months, emphasising, however, that hand finishing would still be desirable: "He did not think that manual labour could be dispensed with to the extent contemplated by Mr. Nasmyth".

Whitworth's evidence was followed by that of a Mr. C. W. Lancaster, a London manufacturer of "superior sporting arms" (Charles William Lancaster of New Bond Street). The elite bespoke market was his main business, but he described an instance where he had agreed to supply "350 carbines" (a lightweight, short-barrelled musket or rifle) to the Ordnance. He had failed to complete the order in the agreed time and he blamed the delay on the Birmingham gunmakers to whom he had sub-contracted it. His evidence otherwise supported that of Whitworth's as to the merit of the use of machinery in arms manufacture (subject necessarily to hand finishing).

Lancaster's examination was continued on Tuesday 21st March but before he was recalled a Major Bruce briefly testified to the "excellent quality" of Colt's revolvers and to the superiority of the Minié rifle over the Enfield "carbine". Bruce could only testify as to the quality of the arms (not their manufacture) that he had seen used in the "Kaffir war" whilst serving in southern Africa in what was actually the eighth of the wars against the Xhosa Kingdom. On being recalled Lancaster expanded on his previous testimony providing more detail as to how the use of machinery could facilitate the

manufacture of each part of a firearm and cheapen the cost. Machinery also had the benefit that it could “stand still” when demand was low and could quickly be made ready to produce “a large supply” if required, which he did not believe was achievable using the manual labour then available under the prevailing contract system (i.e. as practised in Birmingham). For cheapness and efficiency Lancaster recommended that the Government establish its own factory. The remainder of the day’s sitting was taken up with the examination of Richard. The *Journal’s* reports suggest that, apart from two further Ordnance witnesses (who were out of the country and appeared before the Committee on 27th March), Richard was the last of the witnesses summoned by the Board.

There follows an overview of the evidence (as reported by the *Journal*) at the remaining sittings before Richard’s evidence is examined.

Wednesday 22nd March was to see witnesses called by Muntz being examined. The first of these was the Board’s Inspector of Small Arms for both Birmingham and Enfield, the aptly named Mr. (Richard Webb) Gunner, who, only about a month previously, had replaced the previous Inspector, George Lovell. An American, Lovell, was much disliked by the private gunmakers for the severity of the strictness of the “view” (inspection) that he had imposed. Gunner had, in fact, been relocated to Birmingham from the Enfield factory where he had been employed as its Superintendent and Storekeeper. Gunner testified as to the new “viewing” regime he had adopted in Birmingham, which seemed to be working without complaint from the local gunmakers; he criticised the quality of Colt’s revolvers declaring the Birmingham made rifles (that had passed inspection) were of superior workmanship. Hastings was next re-examined at Muntz’s request and first produced the figures he had been asked to provide for arms procured by the Board from Birmingham and London since 1844; the annual numbers were surprisingly low and irregular (highest 25,000 in 1849; lowest 2,402 in 1851). Having referred to an order for gun barrels then overdue, Hastings declared his view that the Birmingham gunmakers were incapable of quickly supplying arms in the large numbers required “in such an emergency as the present”. He testified at some length in reaffirming his belief that the proposed Government manufactory was the best way forward and, particularly, re-emphasised the benefit of uniformity of manufacture by machinery adding that “the evidence of Messrs. Whitworth and Prosser had not changed his view”. He disagreed with Gunner over Colt’s “pistols”, which he considered “equally efficient” as the Birmingham rifle, if not as well finished.

The next witness was a Birmingham gun barrel maker named Millward, who attributed previous delays in completing Board orders to the “severity of the view” imposed by Gunner’s predecessor and to workmen’s strikes. After testifying at some length (inter alia) on technical aspects of barrel manufacture (including the use of machinery - to which he was not averse if “consistent with economy and good work”) and pricing issues, Millward declared that if he was awarded a five year contract he could undertake to supply 2,000 barrels a month and that if other Birmingham barrel makers were similarly contracted he was confident that they could together supply 150,000 barrels annually.

Millward was detained in London to conclude his evidence on Thursday 23rd March, when he added little to his previous testimony on the previous day but did point out that “want of a succession of work”, i.e. consistency of orders, “prevented men from being permanently employed” and led to consequent staffing difficulties when a large order was received. The next two witnesses were both Birmingham merchants, who traded mainly with businesses in the U.S.. The first, a Mr Goodman, was also a partner in a gun manufactory and testified; to a recent increase in the Birmingham gun trade, including a “large trade” to the U.S. “chiefly in locks”; that some of “his men” were “competent” enough to work for the Board, but the business mainly made cheap muskets sold to west Africa (45,426 in 1853); to his business making revolvers using machinery based on Colt’s, but that he did not consider muskets were as well suited to manufacture by machine; that Birmingham gunmakers would be able to meet the Board’s procurement demands whatever the quantity and in time provided the “view was abated, and a succession of work was guaranteed”. The name of the second merchant to testify that Thursday has appeared in all of the previous Stories in Richard’s life - that of the American born exporter Henry Van Wart, who had been in business in Birmingham for nearly 50 years and had become a prominent member of its business community. The brief testimony of Richard’s old adversary included references to his experience of the gun trade (he exported all parts of firearms to the U.S. except the stock) and he “entirely agreed” with all Goodman had said on the subject in his evidence. A bayonet maker named Lawrence was the final witness that sitting he testified to difficulties he had met: in satisfying orders from the Board due to strictness of the “view”; and in his own experiments with machinery, expressing the opinion that the problems inherent in the method suggested by Anderson were “insuperable”.

Friday 24th March saw Lawrence continue with further clarification of his problems with the Board; interestingly he explained that he had put aside his

promising designs for a ‘bayonet’ machine on hearing of the “probability” of the Government setting up its own factory. “Mr. Brazier”, a lock maker since 1836 from Wolverhampton, spent most of his testimony criticising the “view” in Birmingham which, until Gunner’s appointment, had been so strict that he had ceased dealing with the Board; he was also critical of the finish of Colt’s locks which was “very inferior” and the locks “fitted badly”. The Birmingham gunmaker, William Scott, had been a viewer for the Board earlier in his career and appeared to be concerned not to offend this potential customer when stating that, when a supplier to it, he had found the view “occasionally vexatious”. Scott was not detained long and the sitting then concluded.

The remaining two Board witnesses were the only ones to testify on Monday 27th March; both had just returned from Belgium having accompanied a party of army and Board officers sent to enquire into that country’s arms procurement system. “Colonel Gordon” (unidentified - but not he later “of Khartoum”) explained that, due to disputes and delays in dealings with private manufacturers, the Belgian Government had built its own arms factory in Liege in 1837 where, whilst machinery was largely used, manual labour was still employed to a “great extent”. On the whole Gordon spoke favourably of the system adopted and the cost and quality of the arms manufactured in Liege. Gordon’s evidence was supported by the Superintendent of the British Government’s Enfield factory, James Gunner, who was probably related to the previous Enfield Superintendent, now the Board’s Inspector based at Birmingham (whose evidence the previous week had made reference to his having a son employed at Enfield). Both witnesses praised Colt’s revolvers.

The questioning of Superintendent Gunner continued the next day, Tuesday 28th March, when he spoke at some length on improvements recently put in place at Enfield, but supported Anderson in his opinion that an enlarged Government factory would be better located at Woolwich due to the difficulty of recruiting the necessary workforce from Enfield’s “thin and scattered” population. The four witnesses that followed that day and the next were all from the Birmingham gun industry: a maker of sights, a lock filer and two from firearm “setting up” firms (i.e. finishers (assemblers) of the component parts). Their testimonies repeated the complaints of previous Birmingham witnesses as to the severity of the “view” under the previous Inspector and the manning difficulties they encountered due to the “want of succession” of the Board’s orders.

Thursday 30th March was to see two London gunmakers give evidence that: they relied almost entirely on foreign trade, including to Governments

abroad; no London makers had received orders from the Board since 1849 despite soliciting such business; and to being confident that all the Board's procurement needs could be met from within the city. They were followed by one of their competitors from Birmingham, who appears to have been something of a Luddite so far as concerned the possible application of machinery to gun manufacture; he no longer tendered for orders from the Board and mainly made "fowling pieces of a superior description". This somewhat unhelpful witness was followed by one of the "viewers" employed by the Board in Birmingham, who testified to the inspections still being "very strict" notwithstanding some relaxation of the instructions under Inspector Gunner which had resulted in a decrease of the rejection rate (nevertheless still up to 30%).

The testimony of the witnesses on Friday 31st March may have muddied the waters somewhat. The agent of the mighty East India Company, a Colonel Bonar, testified that the EIC had no difficulty in procuring arms at any time for its army of 250,000 men notwithstanding its irregular demands. It divided its contracts between a number of gunmakers and suppliers of materials in both Birmingham and London. Bonar did not consider that the EIC's procurement demands interfered with those of the Ordnance or vice versa. Two London gunmakers, both contracted to the EIC, then gave evidence. One of them made the point that the "patterns" of the EIC's musket had been designed by "some person in the trade" which was a "better plan" than the Board's imposition on its suppliers of "patterns made in their own establishment"; he also considered the Board's system of view was too strict - both factors he thought impeded its arms procurement. Neither gunmaker thought the introduction of machinery would be advantageous - the first was not opposed in principle, but considered it uneconomic. Each indicated that he would not hesitate to become a contractor with the Board. At the end of the sitting the Committee adjourned until the following Wednesday.

The Committee sat for three more days. On the Wednesday, 5th April, it heard evidence from two makers of ammunition boxes, "a machinist" who had invented a machine for making bullets (in use at Enfield) and two London gunmakers. The first witness was employed by the Board at Woolwich, where boxes were said to be made more cheaply and quickly by the machinery used there than by the next witness, an independent supplier, who contended that, whilst more expensive, his boxes were of much better quality. The machinist's evidence inferred that Anderson, the chief engineer at Woolwich, had "borrowed" some elements of the design of his invention for that of the "rapid production" bullet machine which Anderson had introduced at the Royal Arsenal; an inventor of other arms related machinery,

the machinist took care not to offend the Board. The first of the gunmakers to give evidence that Wednesday was not kept long, he owned an English patent for a French invention, a machine to rifle barrels, that was in use at his works; he had submitted the machine to the Board where Anderson and Gordon had seen it.

The questioning of the other gunmaker, a “Mr. Clarke”, who had clearly worked in the trade for a long time and was then employed by the London gunmaker Whitton (an earlier witness), continued into the Thursday sitting. An outspoken witness, Clarke inveighed at great length and in detail in his complaints of the previous overly strict and vexatious viewing system, which had undermined the trade’s ability to meet the Board’s demands. He suggested to the Committee that the trade should be given the opportunity to show what it could do “under the present improved system of view”. Clarke, also, criticised the Board for not being receptive to suggestions from independent gunmakers (in contrast to the EIC). He believed the Committee was unaware of the extent to which machinery was already used in the trade in England and contended that he had evidence that the greater adoption of machinery in the U.S. armouries had actually resulted in pecuniary loss. Clarke concluded his evidence on Thursday 6th April by reading a report in December 1853 to the U.S. Senate in support of Colt’s application to extend the duration of his revolver patent on the ground that his Pimlico factory had “absorbed all the profits of his American establishment”; the previous day Clarke had described Colt’s revolver as “a very inferior weapon”.

The next witness’s testimony was very pertinent to Clarke’s closing submission and cannot have pleased either the Board or Colt, until recently his employer. An American mechanical engineer, (Gage) Stickney had worked for Colt in the U.S. for six years and had been in England for 18 months employed until three months previously by Colt as the superintendent of the Pimlico factory. Stickney, contradicting Colt, maintained that 50% of the workforce at Pimlico was manual labour (mainly skilled workmen) and that the machine made parts of the revolver were not interchangeable without filing. The remainder of his testimony was largely confined to the manufacture of rifle stocks, which were made of the, straight grained, American walnut in the U.S. and in only one factory there by a machine, which could not cope with the more expensive, harder and cross grained English walnut - walnut still being the favoured wood for stocks.

A Birmingham barrel maker named Beasley next described the merits of a machine of his own invention for making “twisted barrels” and agreed to demonstrate it at Enfield if “remunerated for its use”.

Beasley was followed by Anderson who had been recalled by the Committee to respond to the comments of “the machinist” the previous day relative to the bullet making machine of his invention compared to that invented by Anderson in use at Woolwich. Anderson quickly disabused the Committee of any suggestion that the labour intensive and time consuming manual hand press of the machinist bore any relationship to his steam powered machine which produced 100,000 bullets a day in a continuous stream and merely required oiling by its operative. He also produced specimens of the bullets produced by each machine as proof that those produced by the machinist’s machine were, in comparison, of very inferior quality.

Only one witness was questioned on Friday 7th April on what was to be the final day of hearing evidence. Birmingham born William Westley Richards (1789-1865) was one of the pre-eminent gunmakers of his day; the eponymous name of the firm he founded in 1812 remains famous amongst gun enthusiasts and the business is still based in Birmingham. Richards, an innovator, testified to his having supplied sights of his own invention to the Board. However, in the previous two years, of the 80 muskets he had made for the Board only “about half a dozen gave satisfaction” - a surprisingly small order and high rate of rejection, but the Board’s custom might not have been of importance to him. Richards recommended that the Board adopt the practice of “Foreign Governments”, which should result in a superior arm at a lower cost, namely: to only contract with a small number of gunmakers and/or “setters up”/finishers for the supply of the entire (already assembled) firearm, but excluding the stock, to a design stipulated by the Board and at a fixed price; the Board to provide its own stocks as the wood “required a long period for its preparation”. He saw little scope for the introduction of further machinery into the manufacture of muskets, except for improvements to that which was already in use. He thought interchangeability of parts an impossibility and had proved this to be the case with Colt’s revolver by taking apart six or seven of them. Richards in the remainder of his testimony expressed confidence in the country’s gunmakers being able to make 50,000 “muskets” in the first and 100,000 a year thereafter if the “view” was fair; he pointed out that there were many Birmingham gunmakers who did not manufacture for either the Board or the EIC who he “was satisfied...would render the Government all the assistance in their power” if, due to war, a large supply of arms was needed. He, also, (possibly somewhat disingenuously) contended that the proposed Board factory would prove more costly to the Government as the Board’s superintendents would be less concerned with “profit and loss” than private manufacturers would be.

The evidence taking concluded, the day's sitting ended with the members of the Committee being asked to consider proposed resolutions put forward by the Government; these were not then made public, but the *Journal's* reporter believed that they included a recommendation for the establishment of an "experimental factory only".

Richard's Testimony

In *Tubes: A Wealth of Trouble* (pp.137-141) I cited the comments on the Committee's proceedings by David Hounshell the author of *From the American System to Mass Production ...* published in 1984 (pp. 17 to 25 - available online at this [link](#)). Hounshell picked out Colt, Whitworth, Wallis, Nasmyth, Stickney, Richard and Anderson as significant witnesses, describing Richard as a "noted English machine builder"; he also cited Clarke and Westley Richards. Hounshell had evidently accessed the full 500 page Report of the Committee.

As suggested by the title of his book Hounshell's discussion on these witnesses' evidence (including Richard's) principally concerned the issue of mechanisation of firearm manufacture and as an adjunct that of interchangeability of components. On one other aspect Richard received a special mention in the closing paragraphs of Hounshell's commentary.

The introduction, in the first half of the 19th century, of mechanisation into many manufactures in the U.S. and the method's subsequent growth there resulted in the concept later becoming known as the "American System" of manufacture. This attribution as to the origination of the system was not accepted by all, including in 1854 by some of the witnesses to the Select Committee. Hounshell pointed out that both Nasmyth and Whitworth had referred to the machinery used by the British Navy for making pulley blocks introduced into its dockyards about 40 years previously. Nasmyth, quoted by Hounshell, had testified that the Americans, including Colt, were, in fact, "carrying out those systems that were originated by Sir Samuel Bentham, Mr. Maudslay and Brunel, in the block machinery". A statement with which Whitworth later concurred according to Hounshell. The *Birmingham Journal's* report had not mentioned these comments of Nasmyth and Whitworth.

Hounshell continued:

Of all the witnesses, however, Richard Prosser was by far the most opinionated on the issue of American originality.

Prosser suggested that the Americans were not the first to introduce "labour-saving machinery" in gunmaking. That honor fell to a

Birmingham firm, which in the 1810s had equipped an arms making plant for the Russian Government at Tula...

...Prosser showed his contempt for American technology...

Hounshell continued with an edited quote from Richard's later testimony to the Committee that I have already cited more than once - his complaint that the "Yankees" had claimed to have invented a medal winning reaping machine exhibited at the Great Exhibition. Richard accused Americans of "constantly doing that" (i.e. claiming prior English inventions as their own) before turning to the subject that led to his attack on Brunel, over the invention of the pulley-block machinery, already described in *The Emancipation of Inventors* (Chapter 26 The Bentham Affair pp.40-57).

Hounshell suggested that Richard's assertion, that Bentham's patents of 1791 and 1793 encompassed all subsequent improvements to woodworking machinery, was an allusion to the "much hailed" machinery in use in the U.S. to make gun stocks. (Hounshell went on to ascribe the origins of the American system of arms production to a standardised (but then unmechanised) system that had been introduced in France in the 18th century.)

The full transcript of Richard's interrogation by the Committee is available on a link to a 13 page PDF on the prossertheengineer.com website (on its Links page).

The previous Stories in Richard's life have described his evidence to the Committee relevant to his experience of barrel making (*Tubes etc. ibid.*) as well as those mentioned above concerning the issue of originality of machinery for pulley-block manufacture and reaping machines.

Rescuing Richard (p.144) made reference to the answers Richard gave to questions concerning nail making machinery; a recent invention to the development of which much of his early career had been devoted. Early on in his testimony he had concurred with Whitworth that there was a limit to which machinery could be introduced into firearms' manufacture comparing, by analogy, nail making machinery where "iron" was put in and nails were ejected:

... That I call a machine; but I never expect to see lumps of wood put into one end of a machine, and bar-iron at the other, and come out a musket.

Richard preferred Whitworth's expression "labour-saving machines".

Richard, having already confirmed his credentials for being competent to express an opinion on the subject (including his research for his proposed Appendix for the Patent Commissioners' publication of firearms' specifications), was first asked whether "labour-saving machinery [could] be introduced to any considerable extent in gun making?".

"Very largely" was his response, immediately followed by the short discourse (cited by Hounshell) intended to dispel the assumption, accepted by the Board's previous witnesses, that America had led the way in its introduction. Richard had continued:

In 1811, James & Jones, of Birmingham, took out a patent for improvements in firearms. That machinery was offered to the English Government, and refused; and a friend of mine, who is dead now, or I would have produced him, recommended James & Jones to the Russian Government, and the Russian Government took up this invention, and they established at Toola (sic) a manufactory for manufacturing arms of which these are the plates, and the description. There are 42 plates (producing the same). I do not think that there is any part of the gun except the stock, but what is in someway operated upon by means of labour-saving machines, or tools; and the result of that machinery is this, that about 1822 Mr Fairy (sic), engineer of London, went to Russia and at Toola he saw this machinery in operation. It was sometime about 1817 that it went out, and he saw there 12 Russian soldiers come with muskets made by this machinery; there were 12 baskets before them, into which they put the stocks, locks and barrels and everything else, and then fell into rank again. Each man then went to the basket and took up a stock, a barrel, and everything, and put them together, and fired them off in two minutes.

The *Journal* reported this part of Richard's testimony in detail; Birmingham's contribution to the development of, what might reasonably be called, the 'Russian System' was not overlooked. The 1811 patent of (Henry) James and (John) Jones "of Birmingham" referred to above by Richard has already been referred to in the context of the litigation over Richard's 1840 lap-welded tube machinery patent (*Tubes etc. Part 1* p.23). In his *BI&I* (Chapter XIX), when referring to his father's researches into the Russian factory, Richard Bissell Prosser had described Jones as a "forgotten Birmingham genius"; an accolade which initially I had (carelessly) read as being attributed by his son to Richard - in my opinion it is equally applicable to Richard.

The, surely misnamed, "Mr. Fairy" mentioned by Richard, was (as suggested by Hounshell), almost certainly, the engineer and polymath John Farey

(1791-1851), who has already made several appearances in Richard's life story.

The "description" and "42 plates" referred to by Richard were of the treatise in Russian, which as Richard later told the Committee, had not yet been translated. The author of *Description of the Tula Arms Factory from a Historical and Technological Point of View* (with plans and illustrations of weapons and vehicles on 42 pages. Moscow 1826) was Joseph Christian Hamel (1788-1862), a doctor, natural scientist and technologist according to the Google translation from German of his entry in *Wikipedia*. Hamel was born in Russia of German parents and remained in service to the Russian Government throughout most of his working life. Richard said he had actually "had Dr. Hamel with me" (as a potential customer?) about eight years previously following his remark that "the Russian Government have always had emissaries over here buying tools and taking the best of everything".

Richard believed the Russian machinery was still in use in Tula, but that it was "too complicated" and no longer "sufficiently up to the knowledge of the day". When asked why (British) private gunmakers had not introduced machinery to make guns, Richard's response was emphatic:

There is not the slightest inducement for them to spend a penny in machinery; I would not do it.

His reason for this response was that put forward by many of the other witnesses: "the lack of certainty" of sufficient "Government work" to make the machinery remunerative. Having pronounced that, if gunmakers were given an order of 500,000 muskets a year, they would have "no difficulty in finding money to erect machinery", Richard gave the example of a "beautiful workman" he employed who had rejected offers from gunmakers of twice his current wages because "the gun trade is so uncertain, that he prefers staying with me". At which point the members of the Committee present may have been somewhat surprised when Richard, without any bidding, produced an axe handle for their inspection.

The handle was not made by his "beautiful workman". Richard explained that it had been "turned in America by machinery; I have had it for many years; but I never could find anyone to believe my statement." As he no doubt intended, Richard was then questioned as to the machinery used, of which he told the Committee: "We have nothing of the sort in this country". He attributed the machinery to a type similar to that used to make gun stocks in the U.S. invented and patented "in 1820 by Blanchard", with which he had been "familiar for many years".

Thomas Blanchard (1788-1864) was an inventor who lived most of his life in Springfield, in Massachusetts, working for much of his career at the U.S. armoury there. According to his entry in *Wikipedia*: “he pioneered the assembly line style of mass production in America, and also invented the first machining lathe for interchangeable parts.” Richard probably, also, knew of him from one of Blanchard’s earlier mechanical inventions for the manufacture of a type of nail: a tack making machine. Hounshell (*ibid*) devoted several pages to a discussion of Blanchard’s contributions to U.S. arms manufacture and in particular the “stocking” lathe, recognising that the inventor himself had acknowledged the benefit he had derived from what he had learnt of the block machinery installed in the Portsmouth dockyards. Hounshell, however, in very briefly mentioning Richard’s remarks later in his testimony, ignored his attribution of the origins of the Portsmouth machinery to Bentham’s earlier woodworking inventions and, instead, attributed it to Brunel and Maudslay.

The only other witness reported by the *Journal* to have mentioned the American stock machinery was the American gunmaker Stickney, who, some days later, was to testify that it could not cope with English walnut. Whether Richard knew of this alleged problem is not known as he was not asked to expand on his knowledge of the efficiency of Blanchard’s machinery.

Instead he was asked if he had visited Colt’s factory, which Richard confirmed he had not, but that he knew the pistol and had brought one with him. He was then asked about the “Minié” rifle, presumably meaning the Pattern 53 supplied by the Birmingham Ordnance office referred to previously, which had actually been made at Enfield; he had it with him and praised it as a “first rate piece of workmanship” and doubted that there were 20 men in Birmingham who could file the “very good” lock so as to pass the “view and get a living”. He did however confirm that the rifles made in Birmingham were of equal quality to those of Enfield manufacture. Having confirmed that “a good deal” of machinery could, indeed, be used to manufacture as “good an arm” using less labour and at less cost, Richard’s interrogation, which had been commenced by Lord Molesworth, was continued by Lord Seymour on the subject of tubes already discussed in *Tubes etc.* (*ibid*).

The Warwickshire and one of the Birmingham M.P.s on the Committee, Newdegate and Geach, then raised questions, often repetitious, including about the Tula factory and as to Richard’s knowledge of firearms and the gun trade in Birmingham and elsewhere. In his answers to Newdegate, Richard confirmed that his in depth researches had only been recently commenced.

He admitted that he had no knowledge of the previous viewing regime in Birmingham, but he considered that the less stringent view criteria required by Inspector Gunner was still too severe and a “very great” impediment to production. When asked if he was in the gun trade, he replied “No, and therefore I have no bias”. Geach was told that another deterrent to gunmakers installing new machinery was that any change by the Ordnance to its “Pattern” rifle might render the machinery unusable, perhaps, even before it was finished. In answer to the Birmingham M.P. and industrialist Muntz, Richard agreed with those who had expressed the view that costs would be reduced if “the gun was to be suited to the machinery, and not the machinery to the gun”

The remaining half of Richard’s interrogation was from then on dominated by Muntz, whose own knowledge of the gun trade and arms manufacture was considerable, as he let it be known in his questioning. Muntz asked if Richard was aware that the lathe invented by James and Jones had been in use at Muntz’s factory and seen in operation there by the “Emperor of Russia”; Richard replied in the affirmative. Muntz implied that he had sold his James and Jones’ lathes, including some to the “Emperor” and some which were still in use in Birmingham; Richard denied knowledge of this but stated he had seen similar, but not identical, lathes in operation. Muntz then questioned Richard at length on technical aspects of barrel manufacture in much, surely uncalled for, detail beyond the purpose of the enquiry and the understanding of, probably, many of the Committee members. The manufacture of locks was then raised by Muntz; during this discussion Richard estimated that the use of machinery should reduce the hand labour involved by 50% (an estimate which Stickney was also to testify to). Richard had estimated the cost of such machinery at £1000, a substantial investment but affordable provided regular orders were assured, whereon Muntz questioned Richard on the collaboration between Nasmyth and Minton described in the Early Addendum to *The Dust Pressed Process*. The joint venture was for a new type of tile making machine (patented in 1851), which was still not working satisfactorily. This, presumably, an attempt by Muntz to discredit Nasmyth’s earlier evidence (and perhaps Richard’s) was followed by a discussion as to the comparative costs of arms’ manufacture in London and Birmingham (at least 10% less in the latter according to Richard). Except for a few interjections by other Committee members, Muntz’s long interrogation continued until it was abruptly terminated at the end of that day’s session following Richard’s final denunciation of Brunel and his description of his visit to Woolwich the previous week. He was not recalled the following day.

Earlier, during the latter part of Muntz's questioning, Richard had already managed to introduce the Bentham v. Brunel and reaping machine controversies in his responses. He was also questioned at some length on the manufacture of the particular type of bayonet specified for the Government's rifles (three-cornered, tapered with a "constant change of curvature") which he could not "conceive" could be made by machinery. His other, more pertinent comments, included criticism of the Government's approach to "their mechanical operations" at its armouries, which he described as "higgledy-piggledy". He recommended that the Government should spend between £25,000 to £50,000 on equipping two arms manufactories with machinery - one wherever it chose and one in Birmingham, each with a proper accounting system:

...and I think the Birmingham people would very soon show them what o'clock it was.

He considered that, as it would not be able to compete with them on cost, the Government should leave the actual manufacture of arms components to private gunmakers other than the stock and the "setting up" (assembly of the parts). However, he conceded that the Government should maintain an armoury of its own to keep the private industry (and its workforce) "in check". He, also, conceded that the invention and development of industrial machinery was a slow process in response to questions from Geach and agreed with him, citing Babbage, that there was a distinction between "making" and "manufacturing" (on an industrial scale). The following interchange with Muntz was particularly telling:

Muntz:

You have been in the habit of erecting and making a good deal of machinery, and you can give the Committee a correct opinion as to the probable results of any outlay upon machinery; Her Majesty's Government contemplate laying out £150,000 to make guns by machinery, say within 12 months from the commencement, though they have not yet got a machine made, and in 18 months from the time of the commencement they are to make 500 guns a week; do you believe, knowing what you do about machinery, that the manufactory will be completed in 12 months, or that they will produce a gun in 18 months?

Richard:

If you were to lock me up, with a good salary, I would not engage to give an opinion upon such a manufactory under 12 months; I must have all the drawings and specifications before me.

The Report

Richard's evidence had been heard on 21st March and the last witness, Westley Richards, appeared on 7th April. The Committee's report was not

finally agreed until 12th May, but was swiftly approved in the House of Commons; a full transcript appeared in the the *Morning Chronicle* dated 20th May. The Committee's recommendations had already been leaked as evidenced by a short article on 15th May in the same newspaper, which described its contents as "very favourable to Birmingham" - a sentiment echoed in many other reports.

A transcript of the Committee's report, also, appeared in *Aris's Birmingham Gazette* on 25th May, preceded by a preamble which alleged that the Chairman, Molesworth, had initially submitted a draft report for the Committee to consider which had reflected the "Government's views" (in favour of establishing its own manufactory), but that the Committee had decided to adopt, with some amendments, a subsequent report drafted by Lord Seymour. The *Gazette* praised Muntz, Geach, Newdegate and Seymour for "their undeviating attention to the interests of the gun trade" and identified some of the more eminent of the local witnesses, including Richard.

In essence, the Committee had rejected the Ordnance Board's ambitious proposals for the establishment of a large Government arms manufactory in favour of maintenance of the status quo subject to suggested modifications of its procurement methods from the private gun trade. The Committee had concluded that the principal impediments to such supply had been: the previous strictness of the view (before Inspector Gunner's appointment); the Board's failure to specify its "pattern" rifle to the different parts of the trade in an effective manner (only one sample rifle was supplied, allegedly, which had to be passed around within the trade), a problem exacerbated by the Board requiring alterations to the "pattern" during manufacture; and the practice of procuring parts from separate contractors for setting up (assembling) by "finishers", citing Whitworth's comment that "the present mode of contracting is absurd" i.e. the Government should contract only with the "finishers" for the fully assembled firearm (as practised by the East India Company).

The report had reviewed the evidence of the Board's witnesses in some detail but the Committee had, clearly, not been convinced by Hastings and Anderson's testimony (nor Nasmyth's) as to the extent that machinery could quickly be usefully utilised in arms manufacture and, in particular, cited the more cautious approach of Whitworth. The Committee concluded that it had "not received evidence sufficient to satisfy them that a Government factory would afford the cheapest, most expeditious, and most efficient mode of providing muskets".

The Committee recommended that the private gun trade should be given the opportunity to show how well it could perform if the Board introduced the suggested modifications to its procurement methods, including limiting its chosen contractors to those with the “means and capital to fulfil their engagements”, which in turn should help address the trade’s complaints as to the continuity of orders from the Board.

Notwithstanding this decision the Committee did support Whitworth’s suggestion that an experimental manufactory be established on a small scale at Enfield both to investigate the advantages of the use of machinery in arms manufacture and to keep the private trade ‘on its toes’ (Richard had made a similar recommendation). As an aside, the significant point was made that the establishment of a larger experimental Government armoury would have risked the “public service” losing access to the private gun trade (and its expertise) to other customers, at a time when those skills were urgently needed.

Richard’s evidence was not amongst the, relatively, few expressly cited in the Committee’s report but, being even more cautious, must have added weight to that of his fellow mechanical engineer, the more eminent, Whitworth. One of his recommendations was mirrored in the Committee’s caveat that the Enfield experimental factory should be required to keep “a debtor and creditor account” to measure profit/loss.

An Unwanted Appointment

At a time when he was exceptionally busy and his own finances were, probably, a cause of some concern, Richard could not have welcomed his appointment on 8th April 1854 as the overseer of the “Moundsley Yield” within the Kings Norton parish. The appointment was imposed by magistrates at the Petty Sessions held in Kings Heath on that day (*Birmingham Journal 15th April 1854*). The duties of an overseer, usually one of the local gentry, were potentially onerous and involved collection of rates and other taxes. Failure to collect taxes could result in an overseer being fined. The Moundsley Yield was a rural tax district to the south east of Kings Norton village and, as such, the overseer’s task may have been less burdensome than that involving a more populated area.

Chapter 42

1854 April - Gunnery: A Government Contract? The Whitworth Effect ?

To Sir Thomas Hastings
 April 29. 1854
 I have just received yours of the 27th inst. and glad to
 I thought the account of the ^{ammunition} Ammunition at Springfield
 would be interesting to you
 It would indeed have saved much trouble
 if it could have been put into the hands of the
 Committee - and I am at a loss to see how
 the ~~part~~ description at page 153 relating to Boycott
 supposes Mr Anderson's views
 The object in offering you the Russian plates before
 the text was printed was to aid the study of the
 subject before you spent ~~any~~ any money on ~~the~~
 shirley - In answer to the latter part of your letter
 I am convinced from the experiments which ~~we~~ have
 made that the whole system of welding ~~the~~ ^{gun} barrels
 & turning ~~the~~ ^{gun} barrels is ~~mechanical~~ ^{mechanical} & can be
 is ~~not~~ capable of great improvement
 I shall be happy to render any assistance
 in my power in carrying out small ~~some~~ ^{some} ~~improvements~~
 R. Prosser
 1854

1st page of Richard's draft letter Sir Thomas Hastings
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It is possible that Richard had attended at least some of the Select Committee's other sessions. A reference he made to Whitworth during his testimony suggests he was present the previous day when his fellow mechanical engineer was questioned. If his attendance was allowed, he would probably have wished to hear the testimonies of the other witnesses for the Ordnance Board.

If Richard had not met the Royal Arsenal's chief engineer, Anderson, when he visited Woolwich, it seems likely that he would have done so and also met his superior, Hastings, at some time during the course of the Committee's enquiry. Hastings, the Ordnance Board's Principal Storekeeper, was second only to Lord Raglan, its Master General, in the Board's hierarchy.

Amongst the few of his firearms' notes passed to Woodcroft and still held by the British Library there is evidence that Richard had been in correspondence with Hastings during the weeks before his death. A rough draft of a letter to Hastings dated 29th April 1854 has survived; in the transcript below the shaded text within square brackets had been crossed out.

To Sir Thos. Hastings
Copy

April 29, 1854 Kings N

I duly received yours of the 27th inst [and glad to] I thought the account of the American armoury at Springfield would be interesting to you.

It would indeed have saved much trouble if it could have been put into the hands of the Committee [and I am at a loss to so however be]

The [part] description at page 153 relating to bayonets supports Mr Anderson's views.

[My object in offering you the Russian plates before the text was printed was to aid the study of the subject before you spend any money on machinery.]

In answer to the latter part of your letter I am convinced from [the] experiments which [we] I have made that the whole system of welding boring and turning [the] gun barrels [is unmechanical and can be] is [and] capable of great improvement

[I shall be happy to render any assistance in my power in carrying out small arms improvements]

[I should be happy to assist your department on something like the following basis]

When General Bentham introduced his improvements into the Portsmouth dockyards he employed among others the late Mr Brunel at an annual salary with an [underst] agreement that he was to have [a certain amount of] a part of any savings which he might effect [by his improvements - he received about £21,000 was (sic) awarded to him by General Bentham as the result of the savings effected by the use of machinery for making ships blocks]

Take the small arms improvement on [the] a similar basis - [let all the (illegible)] ascertain the [price] cost in wages of each operation in making a Minie Rifle and the cost and weight of the material - [then] let me have a portion to be previously agreed upon of any saving which [may be effected by the improvement which I may suggest carry out] I may make in the cost of producing [the Arm] any portion of the Arm.

Pay me a salary and let me have an Office and mechanical draftsmen - to make the necessary estimate and working drawings from which [the] Patterns and Machines could be made when [agreed upon] required - I would multiply those drawings by lithography and you could submit them to the judgement of any persons and obtain their report thereon before spending any money.[Whatever proportion for improvement was made should be [submitted] passed through the Office and the necessary drawings made before the expenditure of any money. Any plans submitted to you I would make complete]

Every proposition for machinery [should] submitted to you would then be analysed and recorded and an estimate made of the cost and anticipated advantages - against which would be registered its actual performance and amount of savings effected - for 2 or 3 years [such a full employment] such an Official would find full employment - he would be in short your mechanical Secretary and responsible to you for the proper discharge of his duties and a check upon [in this way extravagant] unnecessary expenditure in this way.

In the first instance [these require?] the Office should be in Birm. and when the improvements were organised on a small scale they could be multiplied to any extent and then transported to the place where you intend the Small Arms Manufactory to be carried on.

[On making the barrel the lock and the bayonet great reductions [could] can be made in labour Workmen would thus be educated and you would have a staff of superior men - and the machinery together at a very economical rate]

I think I have given proof that I have paid some attention to the subject of [Small] the literature of small arms and I should be [happy] glad to assist you in proving that the Government [would] can make small Arms as well as it may? at less price [and with] in a short time and in any desired quantity

I am dear Sir

Yours Very (illegible)

R Prosser

The hesitancy evident in the alterations to the draft is perhaps an indication that Richard was aware that in seeking any commission from the Board he would be up against two other potential candidates of considerably greater repute - Whitworth and Nasmyth, both renowned mechanical engineers. In addition, he may have known that Anderson had already been sent with two other Board officers and a wood-working engineer on what was to be an

eight month mission to the U.S. to explore the possibility of purchasing rifles and machinery from American firearm manufacturers.

As described above (p.19), in January and February 1854 Anderson and other Board officers had toured England and Scotland visiting British arms manufacturers. They had done so as members of the Board's own Small Arms Committee which had been appointed at the instigation of the War Office in November/December 1853 under the chairmanship of Nasmyth.

In fact, the position of chairman had first been offered by Raglan, the Board's Master-General, to Whitworth, but the more cautious Whitworth had, after consideration, declined the invitation. His reasons for doing so were not given, but he was no doubt aware that the Board was very jealous of its own reputation (and that of the Enfield Minié rifle) and that holding the position of chair could prove an embarrassment if he wished to tender for work from the Board.

In fact, Whitworth had already, in October 1853, been asked to consider undertaking the development of a new rifle manufactory by the Commander-in-Chief of the British Army, Field Marshal Lord Henry Hardinge (1799-1856).

Raglan, subordinate to Hardinge, was not a fan of Whitworth and favoured Nasmyth's involvement in such a project (presumably because he found the latter's relatively unqualified enthusiasm for the adoption of machinery in arms manufacture more in tune with the Board's thinking). In early 1854 Nasmyth thoroughly endorsed the proposed Anderson led trip to the U.S. but did not accompany it; its outcome was to prove the downfall of the American arms manufacturer that contracted to supply just 25,000 rifles to the Board on loss making terms. The order was not repeated as the barrels of the American rifles were found to be of poor quality and did not pass the "view" at Enfield (although in practice, in terms of their accuracy when shot, they were no worse than the Enfield Minié).

The full history of the above episode is told in a 1996 biography of Whitworth by Norman Atkinson: *Sir Joseph Whitworth: "The World's Best Mechanician"* (this includes some criticism of Raglan's scheming and an interesting diversion recounting the alleged corrupt activities of Lovell, the Board's previous (detested) Inspector, Gunner's predecessor).

Atkinson also told the parallel history of Whitworth's venture into experimentation in firearms manufacture that eventually led to the

development and production of the acclaimed “Whitworth” rifle. The following synopsis is based on Atkinson’s account.

Whitworth had already gained some knowledge of firearms technology, not only from his inspections with Wallis of the U.S. armouries in 1853, but also as a consequence of having been consulted in 1852 by William Greener, an inventive Birmingham gun maker. As a result he had, already, concluded that, whilst most of the components of a rifle were capable of mass production with the aid of “labour-saving machines”, the manufacture of accurate and reliable rifle barrels presented a particular difficulty.

Having declined the offer to chair the Board’s Committee, Whitworth, nevertheless, in advance of his giving evidence to the Parliamentary Select Committee, had consulted with Greener and two other gunmakers, both also to be called as Select Committee witnesses, Lancaster and Westley Richards.

At the end of March 1854 Whitworth wrote to Raglan indicating that, subject to agreement as to funding, he was prepared to undertake the commission proposed by Hardinge the previous October. Raglan, who had just been appointed commander-in-chief of the British Forces in the just declared war against the Russians in the Crimea, instead of referring the letter to Hardinge, passed it to the secretary of the Board’s Small Arms Committee who liaised with its chairman, Nasmyth. The prospect of Whitworth’s interference in the Committee’s (and the Board’s) business was clearly not welcome as the reply dated 15th April sent on behalf of the Committee rejected Whitworth’s offer expressing the opinion that “it is not at present desirable to commence a series of expensive experiments such as you have suggested”. This response was referred back first to Raglan’s office and in his absence (he had departed for the Crimea) was forwarded to Whitworth on a complement slip! An, unsurprisingly, indignant Whitworth thereupon contacted the chairman of the 1853 Royal Commission to the U.S., the Earl of Ellesmere, who immediately put an outraged Hardinge in the picture. Hardinge held a meeting with Whitworth on 2nd May at which War Office staff also attended. Whitworth put forward his view that, in effect, the proposed Government manufactory should be put to one side until a method of manufacturing an improved barrel had been developed. He described in detail the current, manual, smithing technique of barrel manufacture for British army rifles and muskets (see also *Tubes etc. Part 1* pp. 9-11). His letter to Raglan was discussed in which he had proposed the construction, at the Government’s cost, of an experimental shooting gallery for his sole use for the trials of barrels developed and manufactured by himself at his

own expense. On 17th May Hardinge put this proposal in writing to the Government with his full backing and, in the face of much scepticism from others, Gladstone, the Chancellor of the Exchequer, also gave his endorsement. The funding for the shooting gallery was formally agreed and announced in June 1854.

What Richard knew before his death on 21st May of all these manoeuvres within the British military high command involving Whitworth and Nasmyth is unknown. Presumably, none of the letters he received from Hastings were passed on to Woodcroft and, as they related to a business proposal, this is unsurprising. The draft letter above was, perhaps, passed to Woodcroft in error. However, Richard's letters to Hastings and copies of the latter's replies may survive in the Ministry of Defence records held by The National Archives at Kew. According to Whitworth's biographer, who quoted extensively from material in TNA's archive, relevant correspondence was "extraordinarily difficult to trace" - a bridge too far so far as I am concerned for the present, at least.

In his testimony to the Select Committee Richard (when being questioned by Muntz about tube manufacture in relation to gun barrels and the need for conformity of dimensions) had testified that as he had "a set of Mr. Whitworth's gauges we know what an inch is" and actually produced one of them for the Committee to inspect. These measuring gauges were "very accurate" (as precise as to one ten thousandth of an inch) - Whitworth is described as a pioneer of precision measurement on one Science Museum webpage. Richard, also, explained that he had sent another set to the U.S. for use in construction of the boilers in which the tubes he exported were to be fitted. Later he was to testify to having, also, purchased a lathe from Whitworth.

Unsurprisingly, there is no mention of Richard in Atkinson's biography, but it seems likely that he and Whitworth were, at the least, acquainted with each other. It, also, seems probable that Whitworth would have been aware that Richard had been commissioned by Woodcroft to write the Appendix to the proposed volumes of firearms specifications; Whitworth would certainly have known of Richard's expertise in tube manufacture.

Whilst Richard may have considered there was, in fact, little prospect of his receiving any government commission, might he have had hopes of being consulted by Whitworth? Much of Richard's testimony to the Select Committee was in agreement with the views put forward by Whitworth cited by his biographer, Atkinson, who had described his long examination by the

Committee as a “record” number of 316 questions. Richard was to answer 275.

Early on in his testimony Richard had revealed he had exported what he described as “rocket tubes” to the U.S.; later this admission was seized on by Lord Seymour who asked some searching questions of Richard (already cited in *Tubes etc* pp.139/140, but repeated here for ease of reference):

You supply the tubes for rockets, do you not? - Yes, to the United States.

Do you supply any tubes for rockets to the Ordnance here? - No.

Are the tubes used by the Ordnance of the same kind as the tube that you supply? - The tubes that I have seen used by the Ordnance are very clumsy things; they are brazed.

At what rate do you supply the tubes to the United States Arsenal? - I have not supplied many rocket tubes; I have sent tubes to the United States.

Have you supplied any other Government? - Yes, the French Government.

Then the French and American Governments have the advantage of your superior tubes, while the English Government are still using their clumsily contrived ones made by themselves? - The French Government gave an order for my tubes in Birmingham, and inspected the process, to see that they were alright; and now they are made in France by my process.

They paid you for the patent, did they not? - Nothing; people never think to pay inventors; I supplied them to the Government; they were prohibited tubes, but as they were for Government steamers, they got over that; I supplied the Government engineer, the late Mr Barnes.

Have you ever offered to supply the Government here? - No I am not a tube-maker; it is my patent, and the Patent Tube Company at Birmingham are working it, and supply the Government.

Richard’s replies are somewhat evasive. Presuming the patent referred to was that for the lap-welded tube machinery, it was about to expire making the invention available to all, including himself.

Rockets had been used as a type of artillery in warfare for centuries - their accuracy had recently been improved by the invention of an Englishman William Hale (1797-1870). Patented in 1844, Hale rockets were first used against Mexican forces by the U.S. army in the 1846-1848 war. The Hale rockets were launched from metal tubes.

The propulsion of rockets and bullets is effected by different technology, but a rocket launched from a tube and a bullet fired from a gun both rely on the

the tube through which they are initially propelled not bursting due to the pressure to which they are subjected by the propellant. Whilst it appears that lap-welded tubes made by the machinery patented by Richard in 1840 (or one of his later patented improvements to it) may have been strong enough for use as rocket tubes, this was clearly not so in the case of gun barrels.

In the draft of his letter dated 29th April to Hastings Richard refers to his carrying out experiments on barrel manufacture. Might these experiments have included development of the idea he had patented in 1852 for a process for making a weld-less (seamless) tube? The background to this patent is described in Chapter 18 in *Tubes etc. Part 2* pp.15-23.

It is reasonable to assume that Richard would have kept some record of these experiments. The reverse of the first page of the draft letter to Hastings does have some notes or calculations written on it, which appear to relate to the manufacture of bayonets (in his evidence to the Select Committee Richard had asserted that the bayonet specified by the Board for its Enfield Minié could not be made by machinery).

It seems inconceivable that the few documents now held by BL in a slim file of papers were the total product of Richard's sedulous researches:

that would have solved for them [The Ordnance Board] the problem of the efficient manufacture of arms by machine-tools, and of a better kind than have yet been produced.... (The Spectator obituary)

In addition to the draft letter to Hastings and the letters from Woodcroft, Johnson (the gun finisher) and the Ordnance Board previously described, the file's contents included:

an article by Jacob Abbott (1803-1879) from the July 1852 issue of an American publication *Harper's New Monthly Magazine* on the armoury at Springfield, probably the "account" sent by Richard to Hastings - Abbott, an academic, was a prolific author now best known for his children's books (a link to the article by Abbott can be accessed [here](#));

a draft of a circular to gunmakers inviting early submission to "R. Prosser C.E." of information on any firearm inventions which had not been patented for inclusion "free of expense" in an Appendix in the soon to be published Patent Office volumes of patented firearms specifications;

several lithographic prints of machinery used in gun manufacture including some attributed to "R.Prosser Lith" but printed in London by the Queen's printers and a "Prosser Lith" print depicting the "Armory (sic) at Springfield United States" and its "Middle Water Shops" (patently copied from Abbott's article);

a pamphlet published by the London gunmakers Deane, Adams and Deane recording the superior performance of one of its revolvers over that of Colt's at "Experiments" at Woolwich on 10th September 1851 attended, amongst others, by Colt, Anderson and Lovell;

Flyers for Colt's revolvers and a price list dated 1st January 1854 for various of his pistols - "Terms Cash";

a packet enclosing six calling cards, which a note on the packet suggests were collected at a "Party" on 8th July 1851 - five were those of military officers (three Spanish, one French and one English) and the sixth was of a Ludwig Renman of the Jernkontoret (The Iron Office) in Stockholm (the English officer was one of the Ordnance Board's Select Committee witnesses, Lt. Col. A. T. Tulloh, the Inspector of the Carriage Department at Woolwich; the Jernkontoret, Sweden's iron and steel industry advisory body, is still in existence);

a print of a map identifying Russian armoury manufactories in and between Moscow and Tula (Tula is about 100 miles due south of Moscow); some other miscellaneous papers including a long letter from a gunmaker; and, a later addition, a document which, in fact, was not part of Richard's papers: the manuscript translation by Von Bach of the description of the Tula arms manufactory by Hamel, which was added to the collection in 1854 after Richard's death (or possibly in 1855 according to one notation).

What of the firearms Appendix which Richard was supposed to be writing for the Patent Commissioners? Allegedly, the Appendix was to include:

original views of his own as to what is still required in the science and practice of projectiles, which Mr. Prosser regarded as being very inferior to what would obtain if progress were rightly directed. (The Spectator obituary)

The papers described above were collated within a collection allocated the reference PU20/15217 by the earlier librarians of the Patent Office Library, they currently (2022) remain unrecorded within the British Library online catalogue. There are two bound volumes within the collection. The larger one, bound more recently in a yellow cover, seems to be an intruder within PU20/15217; it contains printed abridgements of fire arms specifications for 1851-1854, which, rather strangely, has also had a print of Woodcroft's reaping machine Appendix bound within it (presumably by an inattentive librarian). The smaller volume, with an older brown binding, contained what the POL's first librarian, Atkinson, had described as Richard's own "notes" for the Appendix in his own manuscript note inserted before the ten pages of narrative written by Richard discussed in the next Chapter.

How much significance should be given to the observations quoted above by *The Spectator's* unidentified obituarist is a matter of conjecture. However, if Richard had lived and been given the opportunity to take up the challenge of advising the Ordnance Board, it may have proved a 'poisoned chalice'.

Whitworth, at times, may well have regretted his decision to offer his services free of charge to the Board. The history of the development of the Whitworth Rifle is well recorded online, but not in as much detail as in Atkinson's biography which tells of the meticulous experiments carried out by Whitworth at the shooting gallery constructed in his grounds at Rusholme near Manchester. Atkinson described these experiments in ballistics as "the most fruitful two years in the history of gunmaking". Over a year after the cessation of the Crimean war, at trials held in April 1857, the Whitworth Rifle was found to be far superior to the Enfield Minié both in terms of its range and its accuracy. However, the Ordnance Board rejected it on the grounds that its smaller bore was prone to fouling and it cost four times as much to make as the Enfield rifle. The British Army also relied more on the combined fire power of its infantry than the accuracy of the individual weapon. These factors did not deter the French Government acquiring some 'Whitworths' for its Army and, later, the Confederate Army's sharpshooters used them in the American Civil War.

The most innovative component of his rifle was the barrel, the design of which Whitworth developed based on an idea for a polygonal bore that had been in circulation for some years. The bore of Whitworth's barrel was hexagonal and narrower than the Enfield, which combined with the "tighter" rifling created more spin on its smaller calibre bullet (designed by Whitworth) resulting in greater accuracy. In fact, the barrel was not made from one long piece of metal but from six narrow lengths soldered together and held in place by metal hoops; the resulting 'tube' was then heated until red hot and malleable so that it could be twisted to produce the rifling. This description accords with that given by Atkinson. Presumably, the exterior of the resulting 'tube' was finished by grinding back to a smooth surface. This all sounds a rather labour intensive and time consuming operation.

Whitworth had patented his method provisionally in 1854 and filed the complete specification in 1855; the principles he had advocated were subsequently adopted by other gunmakers and, to his chagrin, were eventually recommended to the War Office by a Special Committee in 1869. He was to take out several more patents for armaments and his rifles continued to out perform rivals for many years including one exhibited in 1860, which had a weldless barrel drilled from the solid and was actually

fired by Queen Victoria using “a silken cord attached to the trigger...handed to Her Majesty by me” (Whitworth cited by Atkinson).

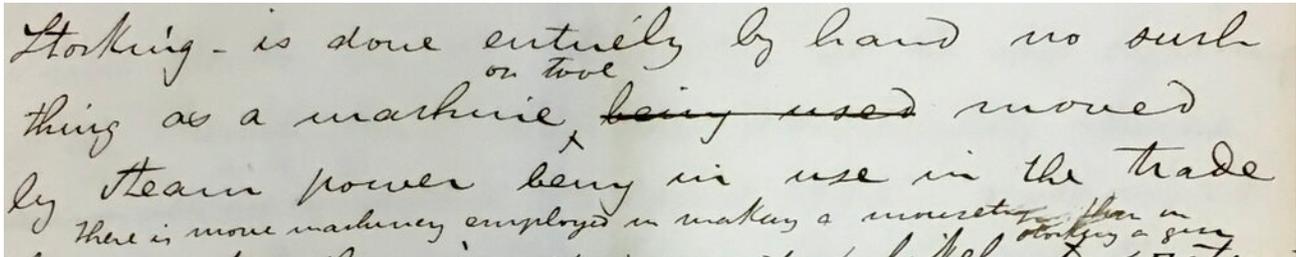
In his evidence in 1854 to the Select Committee Whitworth had testified that, whilst he had never seen a gun barrel bored out of the solid, it could be done but doubted it would be economical to do so (Atkinson citation again). Richard, in his evidence to the Committee on the same point, also confirmed that he, too, had never seen a gun barrel bored from the solid, but that he considered it possible though great care would be needed; he added that he had just bored a cylinder four inches in diameter and five feet in length for a piston to work in (it had taken 14 hours to complete). Richard, also, testified that having examined the steel barrel of the American “Whissom’s” rifle he had concluded it must have been bored from the solid (“Whissom” was probably a mistranscription of “Wesson”, the name is more familiar as one of the founders of the famous “Smith and Wesson” brand of American firearms).

Throughout his experiments pursuant to his 1855 patent which culminated in the rifle showcased in 1857, Whitworth had consulted closely with the Birmingham gunmaker Westley Richards, who was subsequently to make ‘Whitworth’ rifles under licence. The original method of manufacture of the barrel described by Atkinson bore no resemblance to the then mechanised tube manufacture of which his 1840 lap-welded machinery patent was still the most successful innovation according to Richard during his interrogation by Seymour before the Select Committee in March 1854. This machinery was capable of producing pipes at great speed - "two seconds for a pipe ten feet in length" according to the patent’s specification.

In 1854 the Ordnance Board was looking for a ‘quick fix’ to its immediate procurement problems and this would not be provided by the perfectionist Whitworth. *The Spectator’s* obituarist, at least, appeared to be confident that Richard would have been able to provide a practical solution if he had lived. Whether, in practice, he would have been granted the opportunity to do so on behalf of the Board has to be doubtful and whether he could have afforded to do so independently without financial assistance must also be in doubt. As for the possibility of a collaboration with Whitworth, this must remain a mere speculation.

Chapter 43

1854 April/May - Gunnery: The Unfinished Appendix



“there is more machinery employed in making a mousetrap than in stocking a gun.”

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This quote is one of the more colourful statements made by Richard in his “Notes on Firearms”, the description inserted in pencil by a POL librarian in a blank page at the beginning of the bound manuscript. More of a narrative than “Notes”, the 10 pages of writing (excluding crossings out) comprise about 1,500 words, of which a transcript can be found at the end of this Chapter.

The first two pages contain many amendments. Having commenced with the statement “A military gun passes through many hands each of which constitute a distinct trade.”, Richard continued with a description of the improvements that had been made since 1811 in just one trade - that of barrel making. He briefly described the early manual smithing process of turning and welding the flat metal skelp and how the welding part of the process was partially mechanised using rollers in 1811 by a patentee named Bradley (a patent previously undiscovered in my tube researches but confirmed in Google searches which revealed references to Bradley’s invention in two 19th century encyclopaedia). Richard then mentioned the unsuccessful attempts to improve on Bradley’s method before Osborne’s successful method patented in 1817: “the only mode now practised”. Richard had also pointed out that both the named patentees had been incentivised by strikes by their workmen.

The following two pages continue with a list of the “trades” or processes involved in making a gun - 16 in all. Of these the first eight, which include processes relating to the barrel, the lock, the breech and the stock, are stated

to be entirely manual processes with the exception of the application of Osborne's method to the welding of the barrel. The filing by hand of the parts of a lock only produced "a rude similarity" preventing interchangeability. The existing processes of boring, filing and grinding barrels were much criticised, instead Richard advocated that: "the barrel should be turned in a lathe as was proposed by James and Jones in their patent of 1811 whose process was refused by our own and taken up by the Russian government and has latterly been re-introduced into this country". The "mousetrap" comparison was made with reference to the stock. The remaining eight processes were not elaborated on but their titles alone suggest that most of them were carried out by hand.

The next three and a half pages of the "Notes" were an unexpected narration of the history of the contribution made by Brigadier-General Sir Samuel Bentham to the introduction of machinery into the British naval dockyards at the end of the eighteenth and beginning of the nineteenth centuries and a description of the great savings thus achieved. Needless to say the role of Richard's "bête noire", Sir Marc Isambard Brunel, was touched upon, though no mention was made of Henry Maudslay's contribution to 'Brunel's' famous pulley-block machinery, just one of the mechanised improvements Bentham introduced into the dockyards. The background to this obsession of Richard's was told in Chapter 26 "The Bentham Affair" in the previous Story, *The Emancipation of Inventors*. However, the narration written by Richard, presumably very shortly before his death, included additional details which can only have been obtained by Richard from Lady Bentham, Sir Samuel's widow and Richard's "constant" correspondent according to his eldest son, Richard Bissell Prosser.

The eighth page continued with a recommendation that military small arms manufacture could also benefit from mechanisation. Richard claimed that Bentham's 1791 and 1793 woodworking inventions, his "beautiful contrivances", had not been adopted by manufacturers in his own country until "very lately...on a small scale" but that they had been introduced into America as a result of which:

nearly every woodworking machine now in use in America is based upon and described in those Specifications and the machines slowly find their way back here as American inventions.

The tenth and final page commenced with a citation from an 1824 French Government publication, an essay on American steamboats, which had

referred to the British pulley-block machinery and had maintained that “the Americans will be compelled on motives of economy and safety to erect similar machinery”. A brief description of machinery already in use in America then followed, which was probably incomplete and ended:

They now make their own sailcloth and stock their guns by machinery but their machinery for making gun barrels is (like our own) very defective

What was to follow will have to remain unknown. A commentary or overview of existing patented and unpatented firearm inventions was apparently intended. However, it seems unlikely that Richard would have been prepared to disclose in detail his own proposals for mechanisation of the Government’s armouries by “the efficient manufacture of arms by machine-tools, and of a better kind than have yet been produced” as described by *The Spectator’s* obituarist.

Transcript of Richard’s Appendix “Notes”

A Military Gun passes through many hands each of which constitute a distinct trade

The piece of iron from which a gun barrel is made is called a skelp - and was formally forged by hand out of bar iron but in consequence of a strike for an advance of wages - machinery was invented & patented in 1811 by Bradley such effected a great reduction of price produced a better article.

The skelps were turned up into the form of tubes and then welded by hand about 6 inches at a time in an open fire on Smiths hearth this state of things continued until in consequence of a strike among the welders for an advance of wages - Henry Osborne’s patent taken out in 1817 was brought into use & is the only mode now practised. The patent having expired and no improvements have been made thereon

Patents had been taken out before Osborne’s Patent 1817 for making Gun barrels by Machinery but none of them succeeded - viz Cook 1808 - James and Jones 1811- Henry Osborne 1812 - no improvements having been made in the process since the expiration of his Patent in 1831. The process of welding consists in heating the skelp to a welding heat in a reverbatory furnace and passing it in that state through a pair of rollers having many grooves in each roller.

The welding is performed at a single heat & the elongation necessary for bringing it to the length of a musket barrel is performed in the same roll but at a lower temperature.

1. Military barrel welding is not now done by hand and no improvement has been made on Osborne's machinery since his Patent expired in 1831.

2. Lock & furniture forging is carried on by hand no machinery having been applied thereto

3. Barrel boring is a rude & uncertain operation carried on by very inferior tools and such as are not calculated to produce a straight bore. Barrel filing is a rude operation & ought to be superseded by planing & turning Barrel grinding is so coarse & uncertain an operation that it ought not to be allowed - the barrel should be turned in a lathe as was proposed by James and Jones in their patent of 1811- whose process was refused by our own & taken up by the Russian government & has latterly been re-introduced into this Country.

4. Lock filing by hand is not calculated to produce an economical result - or identity of form but only a rude similarity preventing one piece of a lock being substituted for a similar one in another lock.

5. Furniture filing has received no aid from machinery.

6. Ribbing & breeching are altogether hand operations.

7. Stocking is done entirely by hand no such thing as a machine or tool moved by steam power being in use in the trade there is more machinery employed in making a mousetrap than in stocking a gun.

8. Screwing together is at present and likely to continue a hand operation -

9. Detonator

10. Maker off

11. Stripper & finisher

12. Lock finisher

13. Polisher & hardener

14. Engraver

15. Browner

16. Stock Polisher

The Governments of every Country have been Manufacturers of instruments of War - there was such a deficiency of Ships blocks in this Country at the beginning of the French War that the Admiralty under date of 22 April 1795 authorised Brigadier General Bentham to inspect the Dockyards in order to form a judgement of the instances in which any parts of his system of machinery patented in 1791 & 1793 might be introduced with advantage

Brigadier General Bentham made his first report to the Admiralty on the 29 May 1795

In a private conferences with the First Lord the General recommended the introduction of a considerable variety of the machinery of his invention - amongst others an adaptation of it to making blocks and to give motion by steam engines

The Navy Board felt alarmed lest their introduction should cause strikes of operatives, feared that Steam Engines would set fire to the Dockyards & be productive of other evils, so that although many of the machines from the General's habitation were already on their way to Portsmouth - the Admiralty privately advised him to refrain from recommending officially either his machinery or a Steam Engine to work it till the time when new pumping apparatus was required in Portsmouth Yard then on the 21st December 1797 he officially proposed a steam engine with pumping apparatus machinery & machinery. This proposal specified in particular sawing in general both lengthwise and crosscutting edging tonguing & grooving the making of treenails saying that "These amongst various other instances had occurred to me as giving occasion in His Majesty's Dockyards for the substitution of the invariable accuracy of machinery for the uncertain dexterity of more expensive manual labour"

The proposal was adopted several of Bentham's machines were sent to Plymouth as well as to Portsmouth Yard and by degrees put to work the force employed being at first that of men

Some of these machines were seen in operation by the board of Admiralty in 1802 previously to the arrival of the first of Mr Brunel's block making machines The model sent to the Admiralty of Mr Brunel's machine was confined to the cutting and shaping of the shells of blocks (about 1 1/2 inches long) and was in fact a little more than an adaptation to that particular purpose of several of the inventions which General Bentham had specified in his Patent of 1793.

The Block and other machinery introduced by General Bentham into the Woodmills of Portsmouth & other dockyards has been of great advantage to this Country - Brunel receiving by the recommendation of General Bentham as his remuneration about £16,000 being the savings made in one year by the manufacturing of blocks in Portsmouth Dockyard.

Metal mills were also introduced in the Dockyard of Portsea by General Bentham - In Nov 1812 the savings made at the metal mills amounted to the sum of £40,954 -12 - 8 per annum & this before copper bolts were rolled there on which the profits were more considerable than on Sheathing.

In 1807 Messrs Grenfell and Williams caused an enquiry to be made into the Manufacture of Copper in Portsmouth Dockyard – General Bentham stated the cost of re-manufacturing copper & rolling it into sheets in that year was 1 1/2d per lb.

In a letter from Simon Goodrich to the Secretary of the Admiralty dated 23rd June 1807 - he states the cost of re-manufacturing & rolling old copper at Portsmouth yard was 1 1/2d per lb while the price paid to contractors since the beginning of 1805 was 3 1/2d per lb and previously to the establishment of the Government works the price was 4d per lb for Deptford & Woolwich yards - 4 1/4d for Chatham & Thames & 4 1/2d for Portsmouth & Plymouth yards.

After the erection of the Metal mills at Portsmouth the contractors offered to do for 2 1/2d that for which they had previously received 4 1/2d per lb.

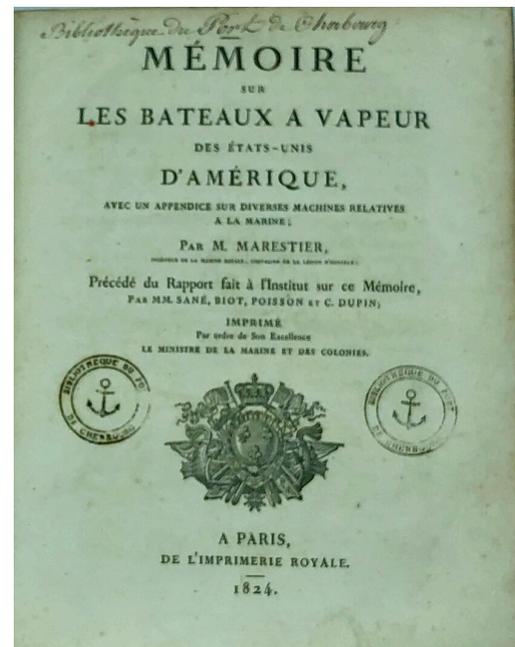
On a sudden large demand for small arms - the Government must at present pay a high price in order to induce workmen to leave other employment – the arms so made are made slowly & at greater expense than when the workmen have been sufficiently long at work to acquire dexterity – but if machinery be adopted - skilled labour is no longer required the arms will be produced all alike and when not required the machinery may be locked up

The workmen who make sporting guns are of no use in making military guns economically - while machinery similar to that employed in the Government works maybe & no doubt would be largely used in the fabrication of sporting guns – and also in the manufacture of guns cheaper for export

Experience has proved that although General Bentham's Patents were taken out in 1791 and 1793 - and part of his inventions have been in use in one Dock Yard since 1802 those beautiful contrivances have not been adopted by manufacturers in this Country until very lately & then upon a small scale - while nearly every woodworking machine now in use in America is based upon & described in those Specifications & the machines slowly find their way back here as American inventions

In 1824 the French Government published a Mémoire sur Les Bateau a Vapeur des états-unis d'Amérique avec un appendice sur diverses machines relatives a la marine Par M. Maristier - in this work page 256 the Block machinery in Portsmouth dockyard is mentioned and it is therein stated that the Americans will be compelled on motives of economy & safety to erect similar machinery - The Arsenal at Washington there contained a steam Engine to move two frame saws to make pullies (sic) for ships blocks & pumps of wood - The American government then also manufactured Ropes & Nails - They now make their own sailcloth & stock their guns by machinery but their machinery for making gun barrels is (like our own) very defective.

Image - online auction site.



Jean-Baptiste Maristier (1781-1832)

Chapter 44

Death and Aftermath

REGISTRATION DISTRICT									
1854 DEATH in the Sub-district of Kings Norton			Kings Norton in the County of Worcester						
No.	When and where died	Name and surname	Sex	Age	Occupation	Cause of death	Signature, description and residence of informant	When registered	Signature of registrar
2701	21st May 1854 High House Kings Norton	Richard Prosser	Male	50 Years	Civil Engineer	Acute Hepatitis 3 days Certified	Hester Prosser Present at the death High House Kings Norton	24th May 1854	George C. L. Registrar

Richard died on Sunday 21st May 1854 - in the morning according to his friend and obituarist Aitken. Presumably he had read or had learnt the gist of the contents of the Select Committee's report in the days immediately preceding his death. The Committee's recommendations were, probably, no surprise and to a large extent accorded with views expressed by Richard in his testimony before it.

The death certificate issued on 24th May recorded that he died at High House, his home in Kings Norton, of "Acute Hepatitis 3 days Certified"; the informant was his older sister Hester Prosser, "present at the death", who in the 1851 census had been residing near his Cambridge Street Tube Works at his town house, 18 Broad Street, with their mother. Hester may have been residing with the family after Eleanor's death in February or was visiting to help care for Richard. The fact that the cause of death was "Certified" is evidence that a qualified medic was in attendance at his death (*A Descriptive and Statistical Account of the British Empire: Exhibiting Its ...* J. R. McCulloch 1854 p.412). The significance of this note on the certificate only came to my attention late in my writing and would seem to debunk the spurious insinuation of suicide alleged by the schoolmaster Hackwood (see *Tubes etc. Part 1* pp.144-146).

Hepatitis, inflammation of the liver, was not an uncommon diagnosis in the 19th century; its causes include a virus, bacteria or excessive alcohol consumption amongst others. The description "Acute" suggests the illness

was of recent origin - if the diagnosis can be relied upon to be accurate, which cannot be certain.

The Spectator's obituarist attributed his death to “inflammation” caused by stress and anxiety over the firearms Appendix commission:

How hard Mr. Prosser worked to get together his materials, and how conscientiously he strove to make his work perfect, his friends were well aware; and to his over-anxiety may be attributed the disease that so suddenly laid him low.

Aitken's long obituary was published in the *Birmingham Journal* on 27th May and was cited in part in the *Illustrated London News* dated 1st July and in the August issue of *The Gentleman's Magazine*; the anonymous obituary in the issue of *The Spectator* on the same date as the *Journal's* was quoted in full in *Aris's Birmingham Gazette* on 5th June. Transcripts of both were included in *Rescuing Richard* (pp. 22-25), but are repeated in the Appendix to this the final Story in his life. No other obituaries have been traced in relevant periodicals and the omission, in particular, of any obituary or even notice in *The Society of Arts Journal* and *The Mechanics' Magazine* is puzzling (notwithstanding that his relations with the editor of the latter may have deteriorated due to their conflicting views on patent law reform).

Notices of Richard's death were placed in London papers and press in Carlisle, Manchester, Sheffield, Coventry, Worcester, Norwich, Stamford, and Oxford. More may come to light as the BNA enlarges its online source material. However, no notice was found on a search in *The Times* digital archive.

Richard's funeral took place on 26th May; he was buried in the churchyard at Holy Trinity Bordesley in Birmingham probably in the same plot as his first wife Sarah and their infant daughter, Sarah Hannah, who had both died in 1848. The church was close to where the family had lived until 1847 and Sarah's mother and some of her siblings were already buried there. *Image from Genuki.org.uk website probably taken in the 1990s.*



Holy Trinity was deconsecrated in the 1970s and a large section of the burial ground was lost when Birmingham's Middle Ring Road was constructed in the late 1980s.

Used as a hostel for the homeless until about 1999, the church has been unused and unoccupied since then. Access to the remaining churchyard is unavailable but in 2022 a search in the BNA revealed that in 1986 the burials that were removed due to the roadworks had been reinterred in Brandwood End Cemetery on the outskirts of south Birmingham - just two miles due east of the site of High House.

A search on the City Council's burial records website revealed that the remains of Richard, Sarah and their baby daughter had all been reinterred at Brandwood. We visited the huge cemetery in early 2022 having located the section in which the several thousands of skeletons exhumed at Holy Trinity were reinterred in a common grave. Most of the remains were unidentified suggesting that those of Richard and his first wife and daughter were identified by a headstone at Holy Trinity, if so we were unable to find it at Brandwood Cemetery. There is no explanation on site for the absence of any grave markers or headstones on the uneven area of rough grass that is the common grave of the Holy Trinity reinterments.



Image - 2022 Common Grave Holy Trinity reinterments Brandwood Cemetery.

It might be expected that the funeral of a Birmingham man of Richard's standing would have been reported in the local press, but this was not the case. The possible reason for this omission has already been considered in the account of his unlawful second marriage in 1850 to Sarah's sister Hannah (see Part 2 *Tubes etc.*) The mourners who attended the funeral are therefore unknown, but it is possible they may have included Woodcroft.

It seems likely Woodcroft would have attended at High House shortly after Richard's death, not only to take charge of Richard's firearms papers but also to be in attendance when a death mask of Richard's face was made for the portrait that Woodcroft intended to commission.

The portrait by Abraham Wivell jun. (1826-1867) is the oil painting on the right of the cover of this Story (also on that of the Third and Fourth Stories). Wivell, only about 22 in 1854, was the son of a better known artist of the same name, who had lived in Birmingham from about 1840 until his death in 1849. Wivell jun. was living in London in 1851, but in 1858 gave his home address as 16 Broad Street Birmingham in a trade directory, where he was still living with his widowed mother in the 1861 census (his studio was at 60 New Street in 1858). In 1851 his mother had been living in King Alfred Place just around the corner from Richard's townhouse at 18 Broad Street. The Wivell and Prosser families were neighbours in Birmingham and therefore probably at least acquainted, if not friends. Wivell jun. was admitted to a lunatic asylum six months before his death in December 1867 and was buried in the churchyard of St. Bartholomew's Edgbaston, where Richard's brother Thomas had been married forty years previously and situated just half a mile from our own home.

Image Abraham Wivell junior Copyright Sandwell Museums Service Collection / Supplied by The Public Catalogue



Wivell's portrait of Richard now forms part of the Science Museum's collection (acquired in 1903 as part of the "Bennet Woodcroft Bequest" following the death of his widow). According to the Museum's attribution the portrait was "Painted from a plaster death mask obtained upon the sitter's death by Bennet Woodcroft, and to Woodcroft's commission".

The Bequest included many other portraits from the obsessive Woodcroft's own collection, which he had accumulated in pursuance of his projected "National Gallery of Portraits of Inventors, Discoverers and Introducers of the Useful Arts". He loaned the collection to the Patent Office Museum and the 1859 Fifth Edition of the Catalogue of "The Gallery" of such Portraits etc. (published by the Commissioners of Patents) described 190 likenesses. In addition to the Wivell portrait, two other of these depictions were of Richard: a "Photograph from a daguerreotype" and a "sepia drawing on a photograph by W.Walker", neither have been traced. Wivell's portrait remains in storage but does now appear on the Science Museum's [website](#).

Following the announcements of his 'marriage' to Hannah earlier in October 1850, Richard had executed a Will on 19th October that year in which he had appointed Hannah and, "upon his attaining the age of 21 years", his eldest son Richard Bissell Prosser his executors. Richard Bissell was still only 15 at the date of his father's death; only Hannah was therefore initially entitled to apply for a Grant of Probate to administer Richard's estate in accordance with the instructions he left in his Will.

The Will, as is still usual, first required his Executor to raise funds from Richard's estate to settle all his debts, if necessary by selling assets. Subject to this, the remainder of his estate, after payment of funeral and other costs incurred in its administration, was left to Hannah for life and after her death it was to be divided equally between all his children - he was careful to stipulate that he meant his children by both Sarah and Hannah (there is no evidence that Hannah had any). He also made provision for the share of any child who predeceased Hannah to pass to the deceased child's children or, if there were none, to their surviving spouse, if any - the latter seems a surprising provision nowadays.

The addition of Richard Bissell as a second Executor appears at the end of the Will and may have been an afterthought as all the earlier provisions envisage that Hannah was the sole person in charge of the administration of the estate. Richard gave Hannah wide powers to realise his assets and reinvest proceeds during her lifetime and to receive any income generated "subject to her maintaining bringing up and educating all and every of my children including those by my former wife that shall be then living until as being a son or sons they shall have attained the age of 21 years or as being a daughter or daughters have attained that age or previously married". He also gave Hannah authority to expend up to half of their contingent capital share on each of his children during their respective minorities or (in the case of daughters) their earlier marriage.

When he made his Will in 1850 Richard's finances were probably in a very healthy condition and he would still have been harbouring hopes of great financial rewards from his "anti-weld" tube invention. He must have had great regard for Hannah's business and financial acumen to put her in sole charge of his estate and/or a considerable distrust of involving any of the other usual advisers that a wealthy husband might then have been expected to appoint as an Executor to support a comparatively young widow - Hannah was 33.

By the date of his death in May 1854 Richard's fortunes had deteriorated to such an extent that it was initially thought his estate was insolvent. So certain was this thought to be the case, that Hannah had wisely renounced her executorship at some point in the months immediately following Richard's death. The Grant of Probate issued to her before a judge in London on 26th October 1854 declared that she had, with the consent of the Court, first retracted "her former renunciation". (The Grant also reserved the right for Richard Bissell to apply to be added as an executor when he attained the age of 21 - he did not do so.)

What had persuaded Hannah to change her mind and accept the responsibilities of the executorship is unknown. Her advisers must also have reassessed the situation. If she had not done so any of Richard's creditors could have applied for a grant to act as administrator of his estate. Who the creditors were is unknown, they were possibly numerous and it might be expected that a bank was one of the largest. A creditor led administration would probably have resulted in a 'fire sale' of Richard's assets. Some re-evaluation of these must have occurred, which persuaded Hannah to decide to avoid this eventuality.

As to his estate, Richard's Will had expressly described this as including "my Letters Patent Patent Rights interests in Letters Patent Royalties under Letters Patent" but otherwise did not particularise the remainder of his assets.

His four, probably, most remunerative patents, granted in 1840, all expired in 1854 - those for the lap-welded tube machinery, the (un-renewed) dust-pressed process and the "Vesta" stove (that for the, less ornamental, "Chunk" stove had expired in 1853). His nail machinery patents had expired some years previously and had, probably, been overtaken by improved machinery during their continuance in any event. His 1845 tube machinery patent and that granted in 1850 for "Supplying steam-boilers with water, and clearing out the tubes of steam-boilers." still had some years before their 14

year terms expired. His 1850 “anti-weld” tube patent had been a very expensive failure. The two so-called “provisional” patents taken out shortly after the passing of the 1852 patent law reform Act could not have had any realisable value. Richard’s last patent granted in 1853 for improvements in the rollers of calico-printing machinery was, possibly, more valuable than its description suggests.

What value could be attributed to and was realised from Richard’s surviving patents is unknowable but it was unlikely to be significant. Richard could, of course, have developed successful inventions which he did not patent and which were still earning royalties under subsisting licences.

All Richard’s known property interests (in the Cambridge Street Tube Works, 18 Broad Street and High House) appear to have been short leasehold and, as such, were more a liability than an asset.

It seems likely that Richard’s most valuable assets were the machinery and equipment at the Cambridge Street Tube Works and his extensive library (part of which was on loan to the Patent Office).

The issue of *Aris’s Birmingham Gazette* dated 6th November 1854 carried a notice under the heading “RICHARD PROSSER DECEASED” dated 31st October inserted by Thomas Slaney of 2 Newhall Street, Birmingham “Solicitor to the Representatives”. The notice required all creditors of Richard to notify their claims “forthwith” to Slaney and all persons indebted to Richard to pay the debts due to Slaney “without delay”.

In 1850 Slaney had been one of the witnesses to Richard’s Will and had, probably, drafted it for him; his name will also be familiar to readers of *Tubes etc.* as the solicitor who had been heavily involved in all the litigation over Richard’s lap-welded tube machinery patent. This had put Slaney in the position of an opponent to Richard and his licensees in the litigation instigated after 1845 by Richard’s rival (and erstwhile business partner) Job Cutler, notwithstanding Slaney’s dual position as a trustee of both Richard’s 1840 patent and an 1841 patent of Cutler’s. Slaney’s appointment had occurred in 1842 at a time when Richard and Cutler were on good terms. Slaney, nevertheless, appears to have retained Richard’s confidence and, presumably, that of Hannah (and, perhaps also, that of Richard’s creditors) for him to be instructed to act in the administration of Richard’s estate.

In the 1851 and 1861 census returns Thomas Slaney (c.1811-1861) “Solicitor” was recorded as living with his wife and family at 73 Wellington

Road, Edgbaston in a substantial, detached gentleman's residence, only a few doors away from a, more modest, Regency semi which is now our home.

It is possible that another person of significance may have come on the scene to advise Hannah. Richard's older brother Thomas had crossed the Atlantic from New York, ostensibly to attend the 24th annual meeting of the British Association (for the Advancement of Science), which had commenced on Wednesday 20th September 1854 and was held in Liverpool that year. The formal sessions of the meeting took place over six week days concluding on the following Wednesday 27th September. The venue for most of the sessions was the recently opened St George's Hall with its magnificent Minton tile floor, the encaustic tiles of which were made by a process perfected by Minton with Richard's help (according to Richard in the evidence he had given to the Privy Council in 1843 in support of renewal of the patent). Thomas was reported in the press as attending a soiree given by the mayor of Liverpool in the town hall on 23rd September and of reading an essay on 27th September which was reported at length in the *Morning Chronicle* on 29th September:

On the use of Surcharged Steam particularly in reference to some experiments which were made previous to its introduction into the American steamer Arctic, with some remarks on the great advantages possessed by steam over every other medium, and suggestions for an improved application of it to Ocean Steamers.

(When referring to the tubes used in the Arctic's boilers Thomas did not acknowledge that they were "Prosser's lap-welded" imported by his firm and sold to the ship's builders - see *Tubes etc. Part 1* p.161. Thomas must have been rather disconcerted when he later learnt that the Arctic had collided with another ship off the coast of Newfoundland and had sunk with the loss of 300 lives on the very day that he gave his talk in Liverpool.)

While he was in England Thomas applied for two patents both relating to steam engines, he gave his residence as Birkenhead in Cheshire (Birkenhead is located on the Wirral peninsula on the opposite bank of the river Mersey from Liverpool). The dates of the patent applications for provisional protection and subsequent notices to proceed suggest that Thomas remained in England during October and for at least most of November 1854.

Can it just be coincidence that Thomas's presence in England occurred at the time that Richard's widow was advised to retract her renunciation of her executorship of her late husband's potentially insolvent estate and the

Birmingham solicitor Slaney was persuaded to undertake its administration? Had the astute and now, comparatively, wealthy Thomas stepped in to negotiate with Richard's creditors and underwrite Slaney's costs having re-assessed the value of Richard's assets? This seems more than likely - if so Thomas expedited steps to realise what were probably the most valuable of those assets.

Hannah's appointment was dated 26th October, Slaney's notice to creditors dated 31st October was advertised in *Aris's Birmingham Gazette* on 6th November. On 11th and 13th November respectively *The Birmingham Journal* and the *Gazette* each included a notice announcing the "Peremptory Sale" by auction of the "very costly Machinery and other Tools and other Property" at the Cambridge Street Tube Works. The auctioneers Chesshire and Gibson declared that they had "received instructions from the Representatives (sic) of the late Richard Prosser, Esq., C.E." for the sale which was to be held at the Tube Works over a period of six days: 12th to 15th, 19th and 20th December. The notice continued with an extensive description of the more important lots commencing with the "COMPOUND STEAM HYDRAULIC PRESS (*the only one of its kind in existence*) invented by the late Mr. Prosser, and capable of giving an instantaneous pressure of upwards of 900 tons"; other machinery and tools "by Prosser" were mentioned and the names of Whitworth, Nasmyth, Roberts, Shanks, Fairey and even Brunel featured in some of the other descriptions which extended to mathematical instruments and the lithographic and other presses in the printing workshop.

The notice's heading identified the prospective buyers it was intended to target. It was repeated in each weekly issue of Birmingham's *Journal* and *Gazette* up to the first auction date and was also inserted more than once in the *Glasgow Herald*, *Liverpool Mercury* and *Herapath's Railway Journal*.
Image: *Aris's Birmingham Gazette* 27 Nov. 1854
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TO MECHANICAL ENGINEERS, MACHINISTS, TUBE-MAKERS, MANUFACTURERS, LITHOGRAPHIC PRINTERS, MECHANICAL DRAUGHTSMEN, TOOL BROKERS, AND OTHERS.

PEREMPTORY SALE,
AT THE TUBE WORKS, CAMBRIDGE STREET, BIRMINGHAM.

MESSRS. CHESHIRE and GIBSON have received instructions from the Representatives (sic) of the late Richard Prosser, Esq., C.E., to OFFER by AUCTION, on Tuesday, Wednesday, Thursday, and Friday, the 12th, 13th, 14th, and 15th days of December next, and on the Tuesday and Wednesday in the following week—the very costly MACHINERY and TOOLS and other Property belonging to the above Works.

THE MACHINERY comprises a COMPOUND STEAM HYDRAULIC PRESS (*the only one of its kind in existence*), invented by the late Mr. Prosser, and capable of giving an instantaneous pressure of upwards of 900 tons; a valuable PLANING MACHINE, by Shanks and Co., to plane a surface of 16 feet 6 inches; two others, by Collier and Co., to plane a surface of 16 feet 6 inches by 3 feet each; two SKELP HOLDERS and compound tools (on a modern principle, by Prosser), belonging thereto.

VERY SUPERIOR SLIDE AND OTHER LATHES, with cast iron beds, varying from 20 feet to 3 feet, for turning, drilling, screwing, cutting, hydraulic taper and conical boring, and other similar work, by Whitworth, Shanks, Prosser, Rowan, and others, with the valuable tools belonging thereto; two powerful DRILLING MACHINES, by Nasmyth and Shanks, and the tools belonging thereto; punching presses, costly LAPPING MACHINES, powerful SHEARING and SLITTING MACHINES, by Prosser, with circular cutters belonging thereto;

EIGHTY SINGLE-SIDED PRESSES, two double-sided presses, with dies and tools; pair of flattening rolls, with frame, pinions and couplings, and duplex rolls; notching machine, wire fattening and iron testing machines, a portable five-horse

DIAGONAL STEAM-ENGINE, on Brunel's principle, and a two-horse DISC ENGINE, stationary TUBULAR BOILER, 4 feet 6 inches diameter, and 7 feet 5 inches long, containing thirty-two 3-inch tubes, STEAM DONKEY, by Nasmyth, for feeding boiler; water and steam indicators and vacuum gauges, two valuable ENGINE COUNTERS, superior bright shafting of various diameters and lengths, with their couplings and carriages, turned iron driving and speed pulleys, mitre, barrel, and other wheels, ten sets of very massive cast iron moulds, for making anti-welded tubes, from 1½-inch to 4-inch diameter; cast iron dies, for drawing copper tubes, and for drawing copper; two cases of

WHITWORTH'S SCREW STOCKS AND DIES, and two cases of Whitworth's external and internal gauges; case of expanding and boring bits, by Shanks, and case of screwing apparatus, for gas tubing; a large quantity of expensive button tools and dies; portable smith's forge, vice, anvils, hammers, and smith's tools; useful wrought iron scrap, spelter, brass and copper scrap, TRAVERSING CRANE, weighing machine, &c. &c.

The sale also includes the valuable LITHOGRAPHIC and PRINTING PRESSES AND MACHINES, consisting of a rotary lithographic printing machine, by Sharpe, Roberts, and Co., three lithographic printing presses, nine fonts of type, imperial lithographic stones, numbering machine, tracing apparatus, &c.

MATHEMATICAL, MECHANICAL, AND OTHER INSTRUMENTS, including an ELIPTOGRAPH, by Fairry, an eidograph, four PENTAGRAMS, sextant, theodolite, perspective and other drawing instruments, mountain barometer, electric machine, fourteen of Dr. Biot's automatic calculators, barometers and thermometers, by various makers, &c. &c.; also the stock of

VALUABLE WOOD PATTERNS, and expensive models, casting boxes and other fixtures, and a variety of miscellaneous property; the whole of which will be described in catalogues, 1s. each, to be obtained fourteen days prior to the sale, at the offices of Mr. Thomas Slaney, Solicitor, 2, Newhall-street; of Mr. F. Wills, Solicitor, 22, Temple-row; or of the auctioneers, 11, Bennett's-hill, all of Birmingham.

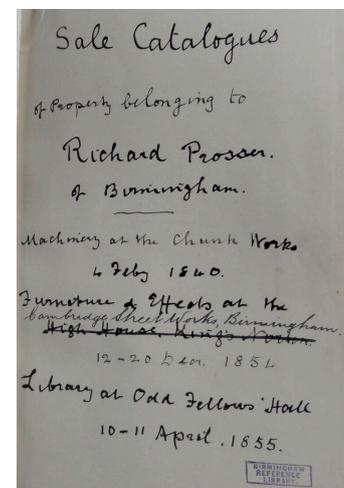
The sale will commence each morning at eleven o'clock to the minute.

The catalogue for the sale ran to 44 pages and described 1,121 lots; a copy survives in The Library of Birmingham Archives within a bound volume also containing the 1840 sales particulars of the “Great Lathe” (see *Rescuing Richard* p. 136) and the 1855 sale catalogue for part of Richard’s library. According to the attribution note inserted at the beginning of the volume, the three sets of papers were donated to the Birmingham Public Libraries Reference Department in August 1917 by Richard Bissell Prosser then aged 79 (he was to die on 26th March 1918). Richard’s eldest son had also donated three pages of notes written by himself and dated 15th February 1902. The beginning of the note, relating to the “Great Lathe”, was described in *Rescuing Richard* (p.99) and it then continued with a reference to the family’s move from Birmingham to Kings Norton in the latter part of 1847, where “we” lived for 14 years. Richard Bissell then continued:

My father died on 21st May 1854 & his effects were sold by order of the Trustees, one of whom was Mr. G. F. Muntz M.P.

This statement is clearly not an accurate reflection of the legal position bearing in mind that Hannah in accepting the executorship had become responsible for the administration of Richard’s estate - a problematic and onerous task in the light of his indebtedness. If Muntz did have a role he may have been acting in some impartial capacity or as a representative of Richard’s creditors and may even have been one of them; if Hannah had not retracted her renunciation of the executorship, a creditor or some of them would have had to apply to be appointed the estate’s administrator/s to realise Richard’s assets and share out the proceeds - a messy undertaking and potentially an embarrassment, particularly for the likes of Muntz. Hannah through her advisers must have come to some agreement with Richard’s creditors that included some safeguards of her and the family’s position. An agreement which perhaps also reflected the regard in which Richard was held by the business associates to whom he was indebted.

One curious aspect of the papers is the description initially given to the 1854 catalogue on two additional pages within the bound volume. The original wording in Richard Bissell’s writing had been amended in a different hand from “Catalogue of the Furniture and Effects at the High House Kings Norton” to “Catalogue of the Machinery and Effects at the Cambridge Street Works Birmingham”. In his 1902 note Richard Bissell had crossed out his original statement that he had no copy of the Works catalogue and had inserted “& a catalogue is bound up in this book”. (Image - Reproduced with the permission of the Library of



Birmingham: ref. L78.1PRO/279287)

Most of the furniture and effects of the well appointed High House together with a horse and three carriages, pleasure boat, farm machinery and stock were sold by auction on 30th March 1861 “by direction of Mrs. Prosser, who is changing her residence” - no catalogue of this auction has come to light (but see *Tubes etc. Part 1* pp.156/157). Hannah appears to have lived in considerably less style after she left High House.

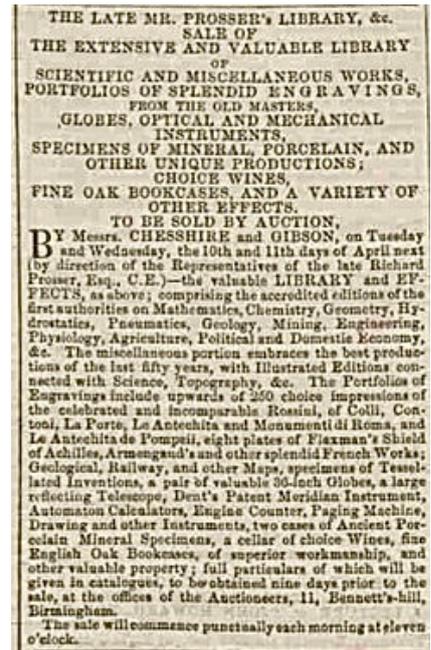
Nothing was reported of the results of the auction at the Cambridge Street Works. The 1,121 lots must by their very number have realised a considerable sum and many of the lots were of of valuable machinery and machine tools. In his 1902 note Richard Bissell specifically mentioned Lot 318, the star lot of the auction, the mighty compound steam hydraulic press estimated to weigh 50 tons - “the first ever made”. This was sold on the second day of the sale to Henry Smith of the Vulcan Works, West Bromwich, a manufacturer of railway wheels according to his note (the link above is to the Vulcan Works entry in *Grace’s Guide*). PDFs of the Cambridge Street Tube Works catalogue are downloadable on the Pictures page of the prossertheengineer.com website (*Reproduced with the permission of the Library of Birmingham: ref. L78.1PRO/279287*).

Not everything sold apparently as on 19th March 1855 the *Gazette* contained a notice of a further sale conducted by Chesshire and Gibson at the Works on 22nd March of “all the EFFECTS remaining” on the premises including a surprising amount of household furniture - possibly some of the contents of Richard’s rented townhouse at 18, Broad Street. No surviving catalogue of this sale has come to light. The notice ended by calling attention to the impending sale in a “few weeks” of Richard’s “very valuable LIBRARY” (and “choice wines”) at a future date to be announced. *Images © The British Library Board all rights reserved*

TUBE WORKS,
CAMBRIDGE-STREET, BIRMINGHAM.
SALE OF HOUSEHOLD FURNITURE, IRON-SAFE,
MOWING MACHINE,
A LARGE QUANTITY OF GAS-PIPING & FITTINGS,
QUANTITY OF RULED AND PRINTED PAPERS,
AND EFFECTS.
TO BE SOLD BY AUCTION,
BY Messrs. CHESHIRE and GIBSON, on Thursday
next the 22d day of March (by direction of the Repre-
sentatives of the late Richard Prosser, Esq., C.E.)—the
whole of the EFFECTS remaining upon the above pre-
mises; comprising a set of metallic bedsteads, mahogany
and painted chests of drawers, bed-steps, wash stands, and
toilet tables, set of mahogany dining tables, mahogany
sideboard, mahogany chairs, card table, what-not, Ameri-
can clock, patent refrigerator, washing machine, mangle,
&c. &c.; also the excellent
GAS-FITTINGS
in the Mill, Warehouses, Workshops, and Offices; two
Steam Gauges, Budding’s Patent MOWING MACHINE,
Canvas Tent and Poles, Spring Trap, and numerous mis-
cellaneous effects; particulars of which are given in cata-
logues.
The sale will commence at eleven o’clock in the morning.
N.B.—The very valuable LIBRARY of BOOKS, pair
of 36-inch GLOBES, OPTICAL MATHEMATICAL,
and MECHANICAL INSTRUMENTS, two Cases
of Ancient PORCELAIN MINERAL SPECIMENS,
choice WINES, English Oak BOOKCASES, &c., belong-
ing to the late Richard Prosser, Esq., C.E., will be
OFFERED, in the course of a few weeks, at the Odd
Fellows’ Hall, Temple-street; full particulars of which
will be given in future advertisements.

The date of the library sale was quickly fixed as it was announced in an advert in the *Gazette* dated 26th March and repeated in the two following weekly issues (the notice also appeared in the *Bristol Mercury* issued on 31st March). Chesshire and Gibson were again the auctioneers at a sale that

actually took place over two days on 10th and 11th April at the Odd Fellows Hall in Temple Street Birmingham. Apart from the wines (over 350 bottles) globes and other miscellaneous items, including two pairs of pocket pistols, the lots in the sale have already been discussed in other Stories of Richard's life: the books in *Emancipation of Inventors* pp. 29/30; the pottery and engravings in *Tubes etc. Part 1* pp.154-156. Altogether there were 714 lots including many which were of multiple items. A PDF of the 28 page catalogue can be accessed on the Pictures page of prossertheengineer.com.



As previously noted the sale was, in fact, only of part of Richard's entire library; it excluded the 707 volumes on loan to the Patent Commissioners and those of his books included in the "upwards of 350 volumes" included in the sale at High House in March 1861.

Again, no results of the sale were reported. Richard Bissell had also inserted a note that some of the pottery sold for about £10 (a surprisingly large sum - c£1000 relative value 2021 (purchasing power (RPI)/relative average earnings c£8000 - measuringworth.com).

In 1856 the Patent Office Commissioners purchased the books on loan to them for an undisclosed sum.

The only clue as to the financial outcome of the realisation of all Richard's assets is contained in the death duty record of his estate, which we inspected in The National Archives at Kew at the outset of our researches in December 2012.

The record was maintained over a period commencing with the grant of probate in October 1854 and ending with a note added on 23rd August 1907; the latter appeared to relate to enquiries addressed to Richard's married daughter Marianne (Ellis) with whose family Hannah had been living at various times until her death on 12th December 1904, which had also been noted on the record. Earlier notes on the record indicate that the revenue made enquiries of Hannah herself every ten years or so. The reason for doing so would have been that no charge to death duty would have

arisen on his estate while her life interest in Richard's estate subsisted; on Hannah's death the then value of the trust fund would be aggregable with her estate to calculate any death duty payable. In 1889 Hannah was recorded as stating that the "Settlor died insolvent", but the authorities were clearly not convinced. In fact, another note on the record suggests that in October 1854 the value of Richard's net estate had been estimated to be £7000 (2021 purchasing power (RPI) c£700,000/relative average earnings c£5.7million - measuringworth.com).

The outcome of the enquiries of Marianne in 1907 is unknown. No grant of probate of a will or letters of administration of Hannah's intestate estate has been found, suggesting that she had left no meaningful assets of her own.

However, until she vacated High House in 1861 Hannah was able to maintain a gentrified existence and in 1855 was named as a member of the Kings Norton "Gentry" in *Billing's Directory & Gazetteer of Worcestershire* (as had Richard in the 1850 Post Office directory). In 1855 Hannah had opened the school described in *Tubes etc. Part 2* pp.36/37. She had probably left High House by the date of the auction of most of its contents on 30th March 1861; on 7th April Hannah, "Governess", was recorded as living at Griffins Brook in Northfield in the 1861 census living with her stepdaughter/niece Marianne, just one servant and with two young children boarding with them. (The boarders, a sister and brother, were the children of a wealthy Birmingham grocer, a widower.)

It would appear that Hannah was living in reduced circumstances after the move to Griffins Brook, then a rural agricultural area but now within the Bournville Village Trust, a pleasant suburb of south Birmingham founded by the Cadbury family in the early 20th century to provide houses for the workers at its new chocolate factory following its relocation from the centre of Birmingham. The proceeds of the sale of the 1861 auction may, in any event, have been insufficient to support Hannah and her dependent step-children, but might creditors of Richard also still have had claims on the assets so sold? In later census returns Hannah was described as a visitor or lodger and seems to have spent periods living with her Bromfield cousins in Barlows Road Harborne (where she died) when she was not living with Marianne's family in Wychall, one of the ancient manors of Kings Norton.

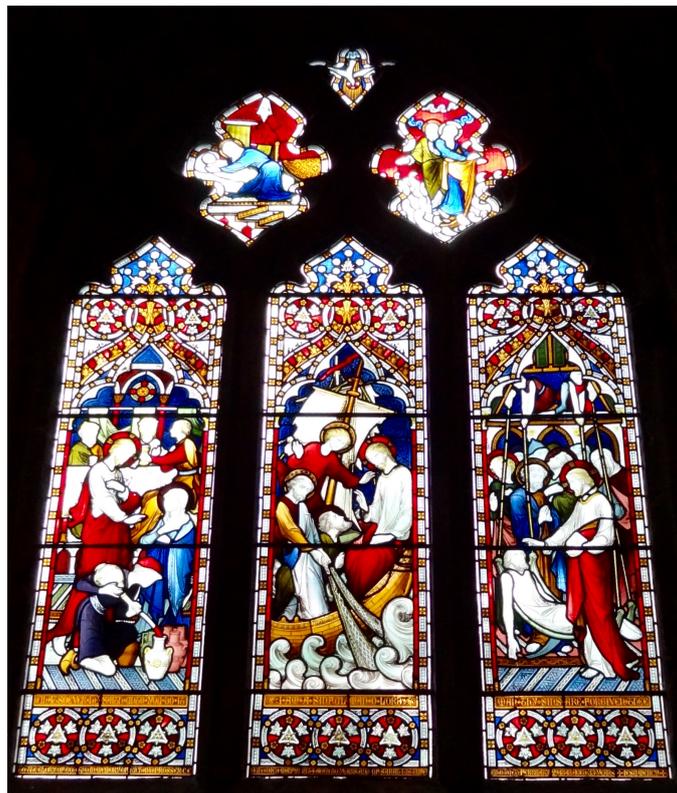
All that is known of Hannah has now been told, as described in *Tubes etc. ibid* her remains lie buried in a grave with two of her Ellis in-laws in the churchyard of St. Nicolas Kings Norton, only two miles from those of Richard

and his first wife, her sister, which were reinterred in Brandwood End Cemetery in 1986.

What became of Richard's descendants?

Chapter 45

About Richard's Descendants & a Stained Glass Memorial



Prosser Memorial Window St Nicolas Church Kings Norton

George Rippon (1840-1860)

As already briefly recounted (*Tubes etc Part 2 p.37*) Richard's third child and second son, George Rippon Prosser, had died aged 20 in Italy on 23rd October 1860 having joined the Birmingham contingent of the British "Garibaldi Volunteers".

Enthusiasm for Garibaldi's cause, the unification of Italy, had been especially evident in Britain from May 1860 when Garibaldi had launched the final campaign in a series first commenced in 1848. In 1860 he was seeking to achieve independence for the "Kingdom of the Two Sicilies" (in effect roughly the southern half of Italy including Sicily) from its ruler, a descendant of the Spanish House of Bourbon. In August 1860 a "Captain Styles" arrived in England purporting to be a British envoy sent by Garibaldi to encourage

English (and Scottish) supporters to travel to Italy on what was soon described as an “Excursion” - to enable the British Government to turn a blind eye to the otherwise unlawful recruitment process. To maintain this pretence it was emphasised that any participants would be armed for defence purposes only and that the flamboyant uniform they would be given to wear was to facilitate their ready identification in their “unsettled” destination. The press had already reported extensively on the fund raising events for Garibaldi’s campaign that had taken place throughout Britain that year and, also, gave Styles’ project much publicity; it was reported that many of the, mostly young, men who had been attracted to enlist on the “Excursion” were from the upper classes - some even paying their own way, although Styles was also seeking donations to finance the endeavour. Most of the press accounts were uncritical, but a few commentators were clearly sceptical of the enterprise and evidently viewed it as an escapade.

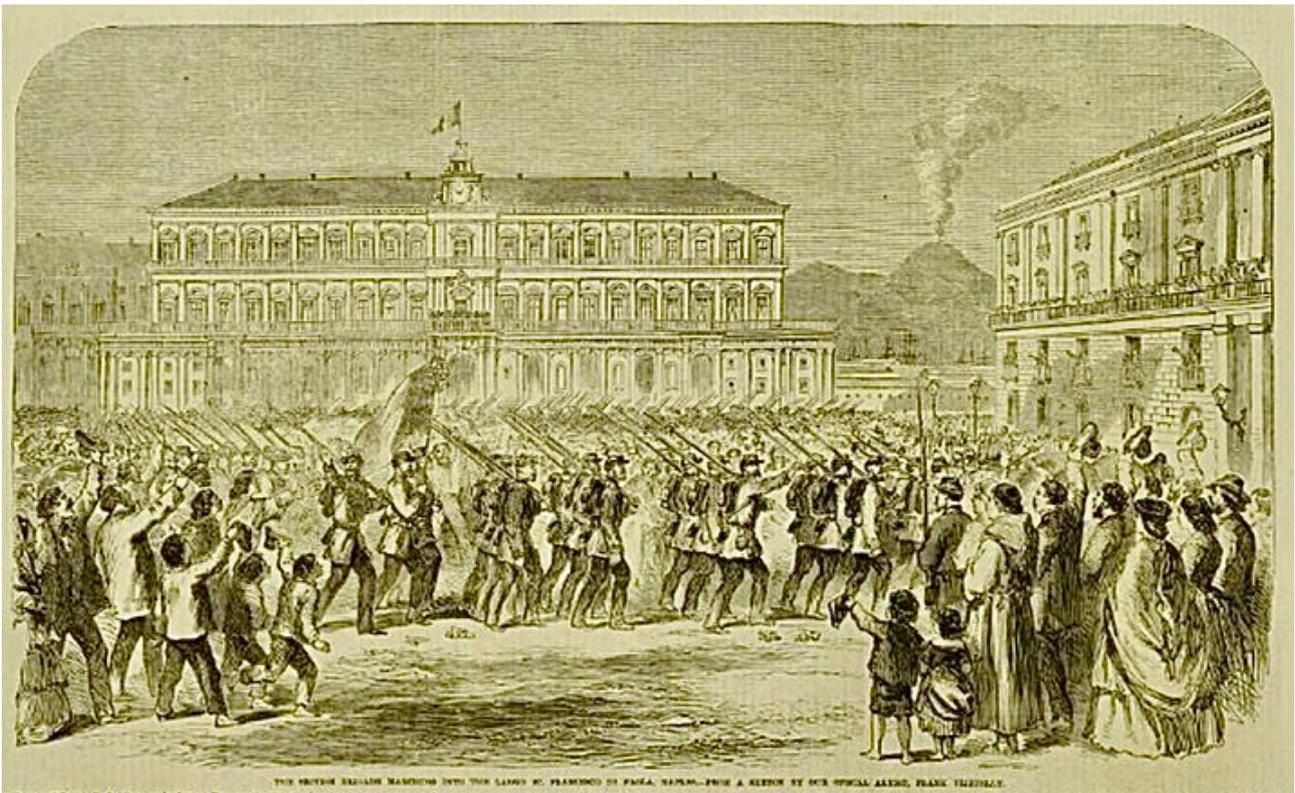
In Birmingham a fund raising committee was formed in early September to “aid the Italian Cause” with a view to “Equipping a Company of young Men desirous of visiting Garibaldi” (*The Birmingham Journal* 8th September). The *Journal* dated 29th September reported that the “greatest enthusiasm was manifested” when the 42 “young men” who formed the Birmingham “Company” had assembled at the Coach and Horses public house in Dale End and marched to Snow Hill station to catch the train to London on 19th September; the *Journal* also noted that they had been preceded the day before by “Ten gentlemen...who paid their own fare”. George was amongst the larger mixed group of tradesmen and others including several, George included, who each described himself as a “Gentleman” in the muster roll prepared by Mr. George, the chairman of the organising committee.

No.	Name	Age	Address	Occupation
1	John Roberts	25	St Pauls Church	Gentleman
2	George Rippon	23	St Pauls Church	Gentleman
3	John Roberts	23	St Pauls Church	Gentleman
4	John Roberts	23	St Pauls Church	Gentleman
5	John Roberts	23	St Pauls Church	Gentleman
6	John Roberts	23	St Pauls Church	Gentleman
7	John Roberts	23	St Pauls Church	Gentleman
8	John Roberts	23	St Pauls Church	Gentleman
9	John Roberts	23	St Pauls Church	Gentleman
10	John Roberts	23	St Pauls Church	Gentleman
11	John Roberts	23	St Pauls Church	Gentleman
12	John Roberts	23	St Pauls Church	Gentleman
13	John Roberts	23	St Pauls Church	Gentleman
14	John Roberts	23	St Pauls Church	Gentleman
15	John Roberts	23	St Pauls Church	Gentleman
16	John Roberts	23	St Pauls Church	Gentleman
17	John Roberts	23	St Pauls Church	Gentleman
18	John Roberts	23	St Pauls Church	Gentleman
19	John Roberts	23	St Pauls Church	Gentleman
20	John Roberts	23	St Pauls Church	Gentleman
21	John Roberts	23	St Pauls Church	Gentleman
22	John Roberts	23	St Pauls Church	Gentleman
23	John Roberts	23	St Pauls Church	Gentleman
24	John Roberts	23	St Pauls Church	Gentleman
25	John Roberts	23	St Pauls Church	Gentleman
26	John Roberts	23	St Pauls Church	Gentleman
27	John Roberts	23	St Pauls Church	Gentleman
28	John Roberts	23	St Pauls Church	Gentleman
29	John Roberts	23	St Pauls Church	Gentleman
30	John Roberts	23	St Pauls Church	Gentleman
31	John Roberts	23	St Pauls Church	Gentleman
32	John Roberts	23	St Pauls Church	Gentleman
33	John Roberts	23	St Pauls Church	Gentleman
34	John Roberts	23	St Pauls Church	Gentleman
35	John Roberts	23	St Pauls Church	Gentleman
36	John Roberts	23	St Pauls Church	Gentleman
37	John Roberts	23	St Pauls Church	Gentleman
38	John Roberts	23	St Pauls Church	Gentleman
39	John Roberts	23	St Pauls Church	Gentleman
40	John Roberts	23	St Pauls Church	Gentleman
41	John Roberts	23	St Pauls Church	Gentleman
42	John Roberts	23	St Pauls Church	Gentleman

Image - Muster Roll of Birmingham “Excursionists” - George Rippon second on list.

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Also known as the British Legion and British Brigade, the “Garibaldi Excursionists” recorded as arriving in Italy numbered just 666 out of the 2,000 or so who had initially expressed an interest in joining up. Some applicants had a change of heart but lack of funds was also put forward as a reason for the reduced number that actually sailed to Italy on the two ships, the Milazzo and the Emperor, that left separately on 16th and 26th September 1860. The Birmingham contingent must have boarded the second sailing, but the Milazzo had waited for the Emperor at some point on the voyage to enable both ships to sail into the harbour at Naples on 14th October. Garibaldi had already entered Naples in early September after it had been abandoned by the Bourbons. On the following day the “Excursionists” disembarked and marched through the city greeted by a cheering, flag waving and flower throwing crowd according to the many reports that later appeared in the British press. Hopefully young George Rippon Prosser enjoyed this experience.



*Image: The British Brigade Marching into ...Naples - Illustrated London News
10th November 1860*

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The accounts in the press of the action in which George was mortally wounded a few days later are not always consistent. The report of his commanding officer, Colonel Peard, maintained that he was wounded on 19th October in the battle for the town of Capua, some 17 miles to the north of Naples, to where the Bourbon king had retreated following a series of indecisive battles that had taken place before the arrival of the Excursionists in Italy. However, one report suggested that George's wounds were incurred on 17th October when a small party of the British volunteers became involved in a skirmish with the Neapolitan Bourbon troops outside Capua.

The following account appeared in *The Evening Standard* dated 30th October and is an extract of the diary entries maintained by its unnamed "Correspondent" over the period 12th to 22nd October; the extract is from the entry dated 17th October:

The English corps were sent out today to skirmish with the enemy, under the walls of Capua. What the object has been in making this attack I cannot understand, unless it was intended to draw out the Neapolitans from the town. This was not effected to the extent intended. I am glad to say the display of English courage was highly applauded by the Sardinian troops. These soldiers of yesterday did all in their power to get at the Neapolitans with their bayonets, but did not succeed. Three companies only were engaged, the light company, and the 1st and 2nd companies. The loss to the English was one officer and one private killed, and six privates wounded. The officer killed was a Mr. Tucker. He acted as interpreter to the corps, and was in some way connected with the Illustrated London News. He was shot through the head very early in the day. He is much regretted, by both officers and men, who all speak of him in the highest terms. Private Mitchell was also killed. The wounded are - privates, John Clark, severely, not likely to recover; Macarthy, severely; George Ripon (sic) Prosser; Alfred S. Bates, severely; James Mathew, and Corporal George Charles Bennett, slightly. I have spoken to several of the Sardinian officers on the subject of this foolish, for I can call it by no other term, exposure of soldiers, and they all expressed their admiration of the courage displayed by a set of, as they called them, raw recruits.

The "Correspondent's" entry for 22nd October recorded that he visited a hospital and spoke with wounded men including "George Prosser of Kings Norton" who, although he had "a bad wound in the groin, is improving". George died the following day.

Some of the other reports of the “skirmish” also describe it as a reckless and ill advised sortie but most concur with Col. Peard that it took place on 19th October. One report revealed that George’s wound was caused by a gunshot.

Peard’s “official” account of the action was widely reported throughout the British press:

THE BRITISH BRIGADE.

The British regiment has fought before Capua in a manner worthy of its native land. Colonel Peard has testified to their high soldierly qualities in action. They advanced with courage in skirmishing order, and retired with steadiness. Colonel Peard says, in his report to Garibaldi, "I cannot speak too highly of the conduct of my soldiers and officers. Mostly men who have never seen an enemy before, and who have, the greatest part, been enrolled only a few weeks, they not only advanced under a heavy fire in the most gallant manner, but retired, when I thought it necessary that they should do so, with the steadiness and precision of veterans."

Two were killed and eight wounded.

Nominal list of killed and wounded on the 19th of October, 1860— Killed; Ensign Benjamin Tucker, interpreter ; Private Lewis Mitchell, No. 7 company. Wounded : Privates John Clark, William Ritchie, G. Prosser, McCarthy, Wilson; Corporal Rennet; Privates Mathews and Bate.

Captain Styles, Privates Monday, Walker, Wilson, and Prosser are specially distinguished.

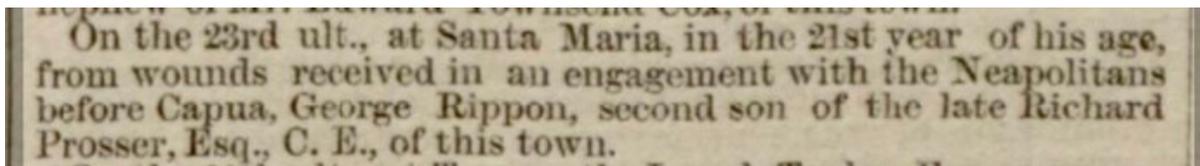
So George was mentioned in Peard’s dispatches which otherwise put a rather different gloss on the conduct of the foray that led to George’s death. In fact, many accounts of Garibaldi’s campaign in 1860 describe it as badly organised and his troops an ill disciplined rabble. The British volunteers, late arrivals to the conflict, and not all men of “gentlemanly” status or conduct, were said to have been poorly paid and even unfed to the point of starvation leading to poor conduct and even mutinies. Their participation, however, was short lived as the conflict was effectively ended with the defeat of the Bourbons at Capua following the arrival of Piedmontese forces from the north of Italy.

On 21st December the *Birmingham Daily Post* reported that Peard had chartered two ships to return the surviving Excursionists to their homeland

and included a translation of a long article from an Italian newspaper which praised the performance of the British volunteers at Capua and inferred that “some few disagreeable incidents” in their subsequent conduct were due to poor leadership. John Whitehead Peard (1811- 1880), “Garibaldi’s Englishman”, was a lawyer by training and his military experience appears to have largely been gained under Garibaldi. As for Styles, later press reports revealed he was probably not British at all and that he was accused of defaulting with the monies raised to fund the “Excursion”. The Government came under criticism for not preventing it taking place.

These and other subsequent adverse press reports must have dispelled any comfort that George’s family may have derived from Peard’s commendation of his conduct. His death was entirely unnecessary.

Notices of his death appeared widely in the British press; the image below is of that in *Aris’s Birmingham Gazette* dated 10th November 1860:



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The press reports from Italy had contained brief references to the wounded English volunteers being treated by “Jesuits” in a hospital near Capua. Santa Maria Capua Vetere (Santa Maria Old Capua) is a town approximately three miles south east of Capua itself. Where George was buried, and whether there is any surviving headstone recording his sacrifice in the cause of Italian nationalism, remains unknown.

On 10th January 1861 *The Birmingham Daily Post* printed a letter to its editor from Edwin George, the chairman of the Birmingham ‘Garibaldian’ committee, concerning the welfare of the returned Birmingham volunteers, which included the following reference to their fallen comrade:

... but allow me to pay a tribute of respect to the much lamented Mr. Prosser, who fell before Capua. This gentleman was one of the first on my roll, and the sympathy which has been accorded to the oppressed Italians cannot be excelled by the regret at the loss of this amiable and talented gentleman.

Eleanor Jane (1837-1919)

At the date of George's death his oldest sibling, Eleanor Jane, was the mother of two infant children living at Grovelly Hall in Cofton Hackett about five miles south west of High House.



Grovelly Hall 2021 (Sale Particulars)

In July 1857 her stepmother/aunt, Hannah, had advertised for a student teacher to assist at her school for “Young Ladies”, presumably in anticipation of the impending marriage of her current assistant. Eleanor Jane, aged 20, married Joseph Sharp Stock, aged 26, on 9th September 1857 at St. Nicolas’ Kings Norton. The groom was one of two sons of a wealthy Birmingham glass and lead merchant of Bourn Brook Hall (demolished c1930) in Bournville situated about one mile north west of High House. Joseph’s father was to die in 1858 leaving an estate valued at about £60,000.

Eleanor and Joseph had four children but the two eldest, a daughter and son, both died in October 1864. The family had moved to Yardley a suburb of south Birmingham by 1871; by 1881 Joseph had retired from the family business and he, Eleanor and their two surviving daughters, aged 20 and 18, were living at the seaside resort of Ramsgate in Kent. The daughters never married and were still living with their parents in 1891 in Kent but now further along the coast to the south at Walmer. Joseph died there in February 1910 leaving an estate of c£48,000 (2021 purchasing power (RPI) c£5million/relative average earnings c£20.4 million- measuringworth.com).

Throughout their long marriage the couple had always employed servants, as many as six (including two nurses) in 1861, although by 1911 there was only one maid servant looking after Eleanor Jane and her middle aged younger

daughter, Maude Emily (her older daughter, Nora Beatrice, was then living away boarding in Penzance).

The first to be born but last to die of Richard's children, Eleanor Jane, aged 82, died in Walmer on 13th March 1919 and probate was granted to Nora; she left c£18500, less than might have been expected - perhaps Joseph had bequeathed part of his wealth directly to his daughters.

Maude was only 57 when she died on 26th May the following year having previously acquired a "charming" six bedroom house on the seafront in Deal according to an estate agent's subsequent adverts in the local press. Her estate was valued at c£17,000 and, unusually, probate of her will was granted to the Public Trustee; one explanation for this might be that Nora was unavailable to act for some reason.

Nora was certainly an inveterate traveller from at least 1925 to 1933 when she cruised to South Africa, New York, Australia and New Zealand (perhaps meeting up with some of her wealthy Prosser cousins in New York). During this time her permanent address was in Bournemouth where she died, aged 81, in 1942 a relatively wealthy woman, leaving an estate valued at c£56,000 (2021 purchasing power (RPI) c£3 million). Who her beneficiaries were I have not bothered to find out - it seems unlikely that she left anything of value to my late mother-in-law, a first cousin once removed. However, the daguerreotype presumed to be of young Eleanor Jane and Richard Bissell Prosser (with the name of Nora's father written on the back) was amongst the heirlooms passed on by my mother-in-law (see *Rescuing Richard* pp.155/156). *Image Darby Collection.*



Richard Bissell (1838-1918)

Much has already been told of the career at the Patent Office of Richard's second child and eldest son, Richard Bissell Prosser, who, from late 1856, spent the rest of his life living in north London until his death on 26th March 1918, aged 79. His estate was valued at a meagre c£1700 (2021 purchasing power (RPI) c£88,000).

However, grant of a very generous pension of £520 per annum on the early termination of his employment with the Patent Office in 1888 meant he must

have been able to lead a leisurely and comfortable life throughout most of his long retirement. (2021 purchasing power (RPI) c£62,000/relative average earnings c£280,000 - measuringworth.com).

His marriage, aged 27, in 1865 to 23 year old Ann Ostell, a daughter of a printer in Bloomsbury, produced five children: Annie Ostell (1866-1962) who never married; George (1868-1925) who became a solicitor, whose marriage in his mid-thirties appears not to have lasted and was childless; Robert Meredith (1870-1871), who died in infancy; Richard Ellis (1873-1935), my late mother-in-law's father, who became a much travelled mining engineer working abroad for long periods; and William Arthur (1878-1942), who became an accountant and whose marriage, aged 63, to his housekeeper was also childless. *Image Richard Bissell c.1865 - Darby Collection.*



Richard Ellis had also married later in life aged 38 and there was only one surviving child - a daughter, my husband's mother, the only grandchild of Richard Bissell Prosser, whose three children have however produced his seven living great great grandchildren. (Images of Richard Ellis, his daughter and sister Annie appear on the Pictures - People and Places page of the prossertheengineer.com website.)

All four of Richard Bissell's surviving children died in very reduced circumstances notwithstanding, in the case of the sons, their seemingly sound occupations.

Richard Bissell was buried in Highgate Cemetery in a grave already occupied by his wife, their infant son and his aunt Hester (Richard's older sister) and, later, also by his sons George and Richard Ellis. His wife's burial record was only found in late 2022; this confirmed that she was also buried in the "Prosser family plot" under the small Celtic cross in the closed and overgrown section of the Cemetery seen on the family visit in 2009 and described in *Rescuing Richard* (pp.9/10).

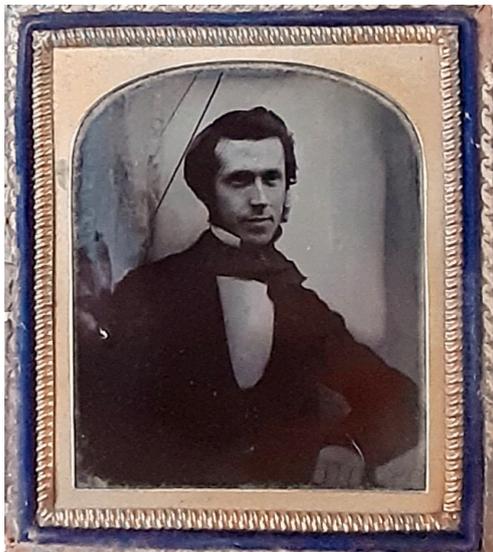
In 1878 Hester had been the second interment in the Highgate plot, which must have been purchased by her nephew on the death of Robert Meredith; she had died in a house on the same street and close to Richard Bissell's then home having moved to London by the 1861 census (see *Rescuing*

Richard pp. 10 and 27). Hester had made a will appointing Richard Bissell and his brother William Henry her executors and had left them her residuary estate but they renounced probate - presumably because there was nothing left after the bequests she had made to the children of her youngest brother, William. (William, as next of kin, took out the grant instead; he died in Birmingham in about 1888 - see *Rescuing Richard* p.40.)

An updated (2013) biography of Richard Bissell Prosser is available on the online [ODNB](#) . The question raised at the outset of Richard's life story, as to why his eldest son did not include a biography of his father in his numerous writings, remains unanswered except for speculation that it might relate to his father's second unlawful marriage and other skeletons in his father's closets

Marianne (1842-1918)

There is not much more to tell of Richard's fourth child, Marianne, who in September 1861, aged 19, had married the Wychall Rolling Mill metal dealer Alexander Adcocke Ellis, a 29 year old widower, in Kings Norton at St Nicolas' church where they are both buried (as already related in *Tubes etc. Part 2* pp. 35-37). Alexander left an estate valued at about £21,000 when he died in 1903 (2021 purchasing power (RPI) c£2.4 million); Marianne, who died aged 76 on 11th July 1918 left just over £2800 - little more than her oldest brother, Richard Bissell, who had died earlier that year.



Images - Ancestry website

The couple had five sons and one daughter; the youngest son died in infancy and the daughter, Agnes Mary born in 1870, remained unmarried (she died in 1956 leaving c£1400).

Only two of the sons had children. Philip Meredith (1865-1943), the second son had inherited the Mill and left a daughter who married late in life, who was childless and died in 1994 leaving about £665,000 (in 1943 her father had left c£17,400 (2021 purchasing power (RPI) c£800,000).

The eldest son was the cleric Richard Prosser Ellis (1863-1936 - estate £12,200/2021 c£900,000). He had two sons in his fifties by his second wife, one of whose living descendants provided the photographs on the previous page of Marianne and Alexander (through the Ancestry website)p.

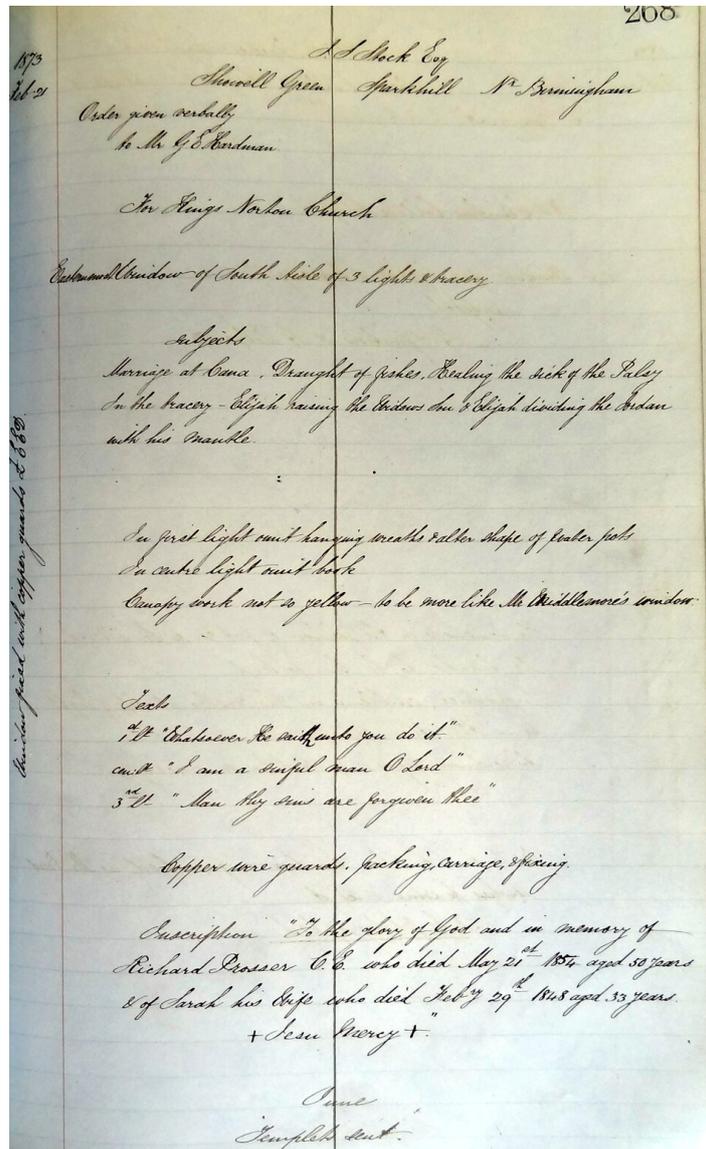
The two younger, childless sons, Walter Devonshire Ellis (1871-1957), a senior civil servant in the Colonial Office, and Bernard Pemberton Ellis, (1875-1949) a well regarded mechanical and civil engineer, each left somewhat smaller estates than their older brothers.

The “Prosser” Window 1873

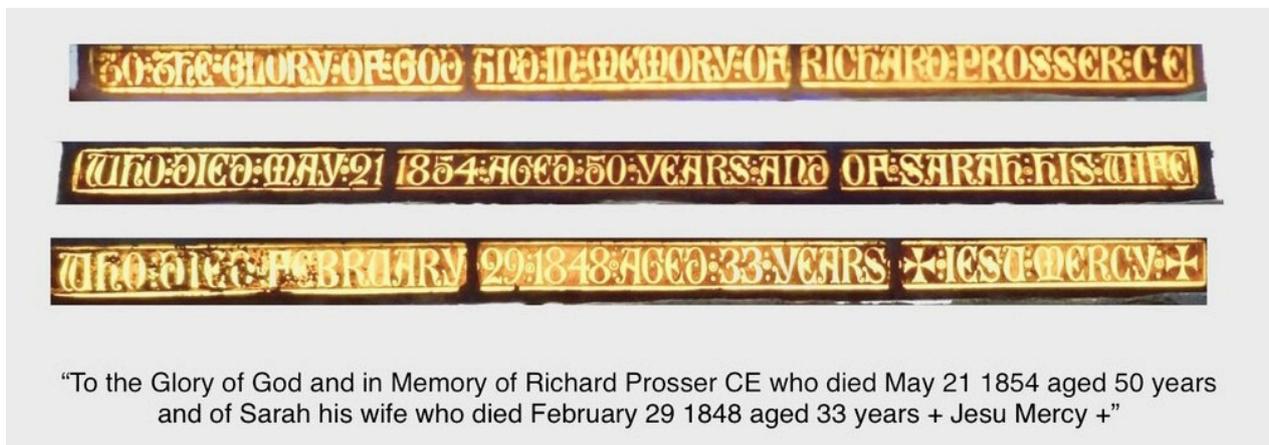
Both Marianne and her older sister, Eleanor Jane, had married well and it was probably their husbands who paid for the stained glass made by John Hardman and Co. (the Birmingham renowned stain glass and ecclesiastical fittings manufacturers) that was installed in a window in the south aisle of St. Nicolas’ church in 1873.

Correspondence between Eleanor’s husband, Joseph Sharp Stock, and Hardmans held in the Hardman Collection in the Library of Birmingham Archives actually commenced with his letter dated 30th April 1872 confirming his promise to pay for the stained glass in a little window in the north chancel and asking Hardmans to see the vicar within a week to agree the subject matter and then send “me” the design and estimate as soon as possible. Hardmans appear not to have dealt with the matter as quickly as Eleanor’s husband requested. An order sheet dated June 20th confirms that the vicar decided that the subject should be of an “Angel sounding the last trumpet”; on 24th June Eleanor’s husband returned a drawing to Hardmans commenting that the vicar did not like the face of the figure and this is confirmed by a note added to the order sheet: “Angel too juvenile & feminine”. A revised design must have been quickly agreed as Stock wrote accepting the estimate on 26th June. However the window was not installed until sometime after 15th October 1872 when he wrote demanding to know when “...it will be ready. I thought it had been fixed long ago”. The chancel window can be seen on this [link](#) on the church’s website; the young angel is very beautiful and suitably androgynous.

Despite the frustration experienced by Eleanor's husband in his 1872 dealings with Hardmans, before the end of that year Richard's family and presumably, in particular, his two daughters had instigated the gift of the stained glass for a much larger window, the easternmost of the three in the wall of the south aisle of St Nicolas', as a memorial to their father and mother. On 2nd January 1873 Joseph Stock wrote to Hardmans asking that the still awaited "promised design" for the, later designated, "Prosser" window be sent "as soon as possible". Hardmans' order sheet, dated 21st February 1873, image below, details the proposed subject matter, five depictions in all, and some amendments to the original design were presumably noted after discussion with their customers; the sheet also detailed the inscriptions including the commemoration to Richard and Sarah (Reproduced with the permission of the Library of Birmingham: ref. MS175A/4/3/2/5 & 6).



Progress was again slow, in early April in separate letters from Eleanor and her husband they each emphasised to Hardmans that the commemoration must be incorporated in the glass of the window and not on a metal plate affixed below it (as had been done apparently in the case of the 1872 ‘angel’ window). Joseph’s letter referred to a visit made by Eleanor and Marianne to Hardmans when they had made this requirement clear in accordance with the wishes of the majority of their ‘family’ after consultation on the issue. Two further letters from Joseph both dated 27th May referred to Hardman’s not meeting “promised” deadlines; the longer letter required Hardmans to give a firm date for the window to be “fixed” within the following week so that the “Mr. Prossers from London” could be invited to stay to view it when attending the service on the following Sunday. A note has been added to the letter in a different hand - “Sunday June 15”.



Memorial to Richard and Sarah across the foot of each of the 3 lights

The existence of the “Prosser” window was an early chance find in my online searches when I came across a brief reference to it in an old travelogue; my late mother-in-law had mentioned that Prosser ancestors had been buried at Kings Norton but nothing more.

William Henry (1843-1894)

The “Mr. Prossers from London” must have been Richard Bissell and his younger brother William Henry, Richard’s fifth child, both resident in London in 1873. William became a well regarded marine engineer (Woodcroft may have had some influence over his chosen field) as evidenced by his obituary in the 1894 Proceedings of the Institution of Mechanical Engineers:

WILLIAM HENRY PROSSER was born in Birmingham on 28th October 1843, being the third son of Richard Prosser of Birmingham, an engineer and the inventor of several improvements in machinery for welding tubes, of the steam-hydraulic press, and of the dust process

for making tiles.

He served his apprenticeship with Mr Walter May at Suffolk Works, Birmingham, and was simultaneously a student at the Midland Institute evening classes. In 1864 he went to London and entered the service of Messrs Brown & Harfield. He took a considerable part in working out the various improvements in ships capstans, windlasses and steering gear, with which Messrs Harfields' name has long been associated. In 1886-93, he had charge of the firm's works at Blaydon-on-Tyne. He retired to London in late 1893 because of his 'enfeebled state of health' and died there on 21 Feb. 1894. He became a Member of the Institution of Mechanical Engineers in 1874.

In 1867 William Henry, aged 24, married 22 year old Maria Mary Ostell, the younger sister of Richard Bissell's wife, they had 11 children over the next 20 years - six of whom died in early childhood, one daughter died unmarried aged 27 in 1901. At his death in 1894 William, like his father, was aged only 50; he had left an estate of c£5000 (2021 c£600,000), enough to provide his widow with a comfortable standard of living for herself and her, still young, four surviving children. Of these two sons and a daughter married leaving living descendants.

The only surviving daughter Maria Mildred (1879-1959) married a silversmith's representative named Metherell and had three children.

One of the married sons, Stephen Thomas (1882-1965) a bank official, provided the family tree referred to in *Rescuing Richard* (p.26) which was crucial to the tracing of Richard's ancestry. As their mothers were sisters it is unsurprising that William's children appear to have been close to those of his brother Richard Bissell as evidenced by photographs of Stephen's two sons and the Metherell family in my late mother-in-law's albums.

Another of William's sons, his second, remained unmarried and he was the only one to become an engineer.

Robert Walter Ostell Prosser (1877-1935) has an [entry](#) in Grace's Guide where his IME obituary is transcribed. In a letter dated 9th April 1935 to the Science Museum he clarified the provenance of various scientific instruments that he had loaned to the Museum and which had originally belonged to Richard, his paternal grandfather. These included the slide rules designed by Richard described in *Rescuing Richard* (p.148) and, also, other instruments which, in his 1935 letter, his grandson attributed to originally belonging to Brigadier General Sir Samuel Bentham having been gifted to

Richard by his widow, Lady Bentham. This attribution was re-confirmed by Robert Walter Ostell Prosser after “going through stacks of letters” following an earlier request by the Science Museum for evidence of such provenance. The “stacks of letters” were, presumably, passed down to him by his father, who may have taken custody of some or all of Richard’s correspondence. In April 1935 Richard’s grandson had alleged that his previous attempts over a number of years to interest the Museum in these papers had been to no avail and he had “put them away” where they, presumably, remained until his death in December 1935.

The Science Museum Library holds the Museum’s records relating to the loaned instruments including the 1935 letter and correspondence from the Public Trustee Office in 1836 confirming that it was acting in the administration of the estate of the deceased “R.W.O.Prosser” and that ownership of the loaned instruments had passed to an army officer then serving in the Royal Engineers in India. The named officer was Lt. John Freeman Godwin who, in fact, was the husband of Marguerite Ostell née Prosser a daughter of RWOP’s married older brother William Richard (1880-1959), a brewer who lived and worked in India for over 40 years. (William Richard’s three daughters were all born in India and married British Army officers; his only son, William Brian Ostell Prosser born in England, also became a professional soldier in the British Army in India and in 1842 was awarded the Military Cross for gallantry in action when in command of an anti-tank squadron of the 3rd Indian Motor Brigade in Egypt during the Second World War.)

In 2003 the loaned instruments were still in the Museum’s possession and an internal memorandum recorded that, as Lt. Godwin had never contacted the Museum to claim ownership and attempts to trace his descendants were unlikely to be successful, the Museum should be deemed to have “Assumed Title” to the instruments until a lawful claim was made. (Brigadier J. F. Godwin survived his wife and died in Maidenhead in 1989, probate was granted to executors who could make such a claim; at least two children of the Godwins, both sons, have been found on the Ancestry website.)

As for the “stacks of letters” dating back to Richard’s lifetime that the Public Trustee officer dealing with R. W. O. Prosser’s estate in 1936 may have found stored away when clearing out his home - it seems inconceivable that they have survived.

None of William Henry’s children left a large inheritance.

William Henry may have named his second son 'Robert Walter' after his younger brother, Richard's sixth child (named after his grandfathers), who had been living in the U.S. for nine years when his namesake nephew was born in 1877. The nephew had probably met his uncle and at least one of his American second cousins when he worked in the U.S. for a period in his thirties (in June 1911 R. W. O. Prosser was recorded as disembarking in Liverpool from a ship sailing from New York). The American second cousins were the grandchildren of Thomas Prosser, Richard's older brother.

Robert Walter (1845-1913)

Robert Walter Prosser was only eight when his father died. Virtually nothing is known of his childhood thereafter. On 7th April 1861, in the census taken that night, he and William Henry were recorded as lodging with a coachman and his wife in West Heath, then a rural and mainly agricultural area between Kings Norton and Cofton Hackett where his eldest sister, Eleanor Jane, and her family resided. In fact, the two teenage boys, the older an "engineer's pupil" and the younger a "scholar", were living about the same distance (2.5 to 3 miles) from their step-mother/aunt Hannah and their elder sister Marianne in Griffins Brook.

Less than seven years later Robert Walter claimed he was an "engineer" when, shortly after his 22nd birthday, he boarded the steamship *Atalanta* in one of the London ports and sailed "cabin class" to New York arriving there on 22nd January 1868 (source immigration record on *FamilySearch* website). He was, no doubt, aware of the enormous success since 1851 of his uncle Thomas's U.S. import business following Thomas's fortuitous meeting with the German iron and steel producer Alfred Krupp at the Great Exhibition.

Thomas's fortune had largely been made from the expansion of the American railway system and the huge demand for the rails, axles, "tires" and wheels manufactured by Krupp - for which Thomas had the exclusive importation rights. Whether Robert Walter was hoping to be employed by his uncle is not known, if so he was to be disappointed or perhaps that was never his intention. It may well be that his involvement would not have been welcomed by Thomas's son (and only heir), Thomas Prosser jnr., who had been in partnership with his father since at least 1852 and was, by 1868, a 40 year old married father of five sons (and one daughter).

The two large mansions in which Thomas senior and junior had been living since about 1857 and their, presumably, opulent lifestyles, must have impressed young Robert Walter notwithstanding his upbringing amongst the Kings Norton gentry. The mansions had been built on just a small part of a

large tract of land that Thomas senior had acquired, perhaps jointly with his son, only five miles from their business base in Pratt and Gold Streets, Manhattan. The land was in Brooklyn, then a city in its own right over the East River from Manhattan, in the area now known as Stuyvesant Heights.

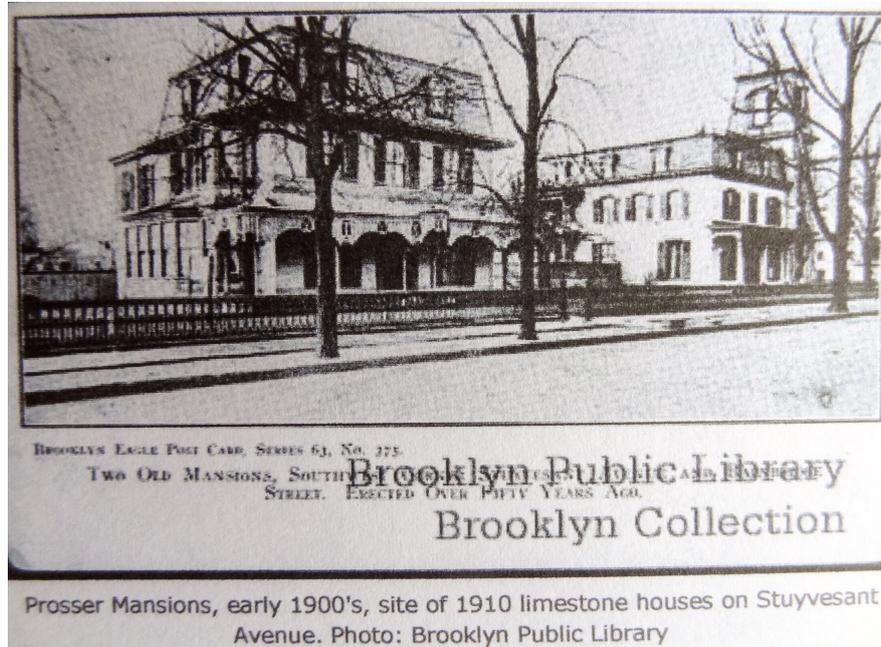


Image 406 (TP jnr.) and 414 (TP snr.) Stuyvesant Avenue Brooklyn

Searches on the *FamilySearch* website for Robert Walter revealed nothing that could be ascribed to him with certainty until 1885. No entry for him in the 1870 U.S. census came to light. A New York trade directory for 1873 did have an entry for a Robert W. Prosser a “superintendent” working at a location on the corner of Ferris and Dikeman Streets in Brooklyn where Lidgerwood Manufacturing Company, a large engineering firm, was founded that year according to one local history [website](#).

In the 1880 U.S. census recorded on 6th June a “Robt. W. Prosser” aged 35, single and born in England was a boarder at Smith’s Boarding House in Cornwall, Orange County, New York State about 50 miles north of New York City; no occupation was mentioned. In fact, Cornwall, with its “beautiful river scenery”, was a popular summer holiday resort at the time and the Smith “family boarding house” was recommended in an 1888 holiday [booklet](#). It seems probable that in June 1880 it was Richard’s youngest son who was enjoying the facilities provided by the Smith family and the “beautiful rides and walks” that could be indulged in from its “first class” accommodation. If so, it would suggest that Robert Walter was not impecunious but, perhaps,

still not financially secure enough to take on responsibility for a wife and family.

In 1885 an event was recorded of which I had first become aware in 2012, very early in my genealogical 'Prosser' researches, another chance online discovery; it was of a "wedding invitation or announcement" that had been donated to Norfolk Museums Service in 1970 relating to the marriage of "Robert W. Prosser and Mary Prosser Brooklyn 1885". I was aware that Stephen Thomas Prosser, a son of Robert Walter's brother William Henry, had lived in Norfolk and subsequent genealogical research confirmed my suspicion that this discovery was not just a coincidence. (Regrettably attempts in 2022 to view or obtain a copy of the invitation have not been successful.)

On 1st June 1885 Robert Walter, aged 39, married Mary, the oldest daughter of his, by then, very wealthy first cousin Thomas Prosser jnr; the groom was 13 years older than his bride, who, aged 26, may then have been considered to have been rather late in acquiring a husband. Thomas Prosser jnr., who I shall call Thomas Prosser II from now on, had become the sole proprietor of Thomas Prosser & Son following the death of his father in 1870; as described in Chapter 37 he had married in 1854 and had 11 children (seven sons and four daughters) with his wife Elizabeth (née Woodward), the first born, a son, is known as Thomas Prosser III by the descendants of his father and paternal grandfather, Richard's brother.

Mary's home since her birth had been the mansion on Stuyvesant Avenue, Brooklyn with its extensive grounds; numbered 406 it was on a corner of the Avenue with Bainbridge Street. Her father still owned other land in the area and in about 1888 her brother, Thomas Prosser III, was to have a large three storey house built on the opposite corner for his family's occupation.

Through research on the *FamilySearch* website (in U.S. trade directories, census and bdm records) I discovered that Robert Walter appeared never to have been employed by his father-in-law; he may have been self-employed. His entries in trade directories described him as an "engineer" (once a "gas engineer") without disclosing the identity of any business or employer until 1899 when he was described as a "Manager 100 Bway" (presumably Broadway in Brooklyn close to the U.S Navy Yard); the only other business address disclosed (between 1892 and 1895) was 15, Wall Street in New York City, which would have been close to that of Thomas Prosser and Son. He appears to have retired in about 1900. The trade directories often also gave the residential address of each named individual.



In 1887 Robert Walter and his wife were living at 1177, Bushwick Avenue, about a mile from Mary's old home. According to one NY City [web page](#) "Bushwick Avenue, the street of mansions for brewers and doctors, was developed between 1880 and 1913". It is possible that the terraced house currently numbered 1177 is the one that was inhabited by the newly married couple, but it was hardly a mansion.

The couple's address recorded in the 1890 census was 65, Bainbridge Street and this was to remain their home for the rest of their marriage. If the house numbering has not changed, the growing family had moved to within a four minute walk of the "Prosser Mansions" on Stuyvesant Avenue. Whether the larger three storey terraced house now numbered 65 in Bainbridge Street is the one where Robert Walter died in 1913 is speculative.



In 1904 Robert Walter, by then retired, may have visited England. Travelling alone, a Robert W. Prosser "Gentleman", aged 59, sailed from Dover on 5th November bound for New York on the ocean liner SS Vaderland in a "First Class" cabin. The voyage took 28 days during which period Robert Walter would have celebrated his 59th birthday.

It seems probable that the land on which the couple's Bainbridge Street house was built was part of the large tract bought by Thomas Prosser (I) in the 1850's as, probably, were the homes of Mary in MacDonough and Decatur Streets after her husband's death.

Robert Walter died on 6th August 1913 having made a will appointing Mary his executrix and leaving an estate valued at c\$60,000 (2021 c\$1.7 million real wage or wealth using U.S. Consumer Price Index/c\$3.6 million household purchasing power - [measuringworth.com](#)). Robert Walter had died a relatively wealthy man. The terms of the will are not disclosed in the Probate record but it is reasonable to assume that his widow was the principal beneficiary in her own right or with a life interest; their children were then aged from 23 to 12 years.

Whether the small fortune Robert Walter left was entirely self made or to some extent derived from his wife is unknown. Mary's very much wealthier father, Thomas Prosser II, had died in 1896 and her mother had died in 1909.

The Brooklyn Times dated 8th August 1913 published a short obituary for Robert Walter, which reported that:

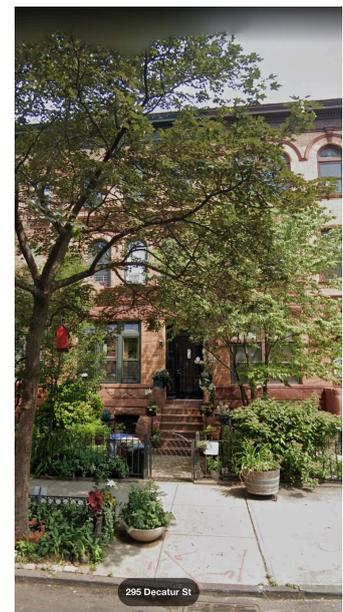
Robert Walter Prosser, who died Wednesday from arterle (sic) sclerosis, after a long illness at his home, 65 Bainbrldge street, was an expert in the making of gas holders, and for many years employed as such by the firm of Bartlett and Hevward. of Manhattan. He had traveled over this country making gas retainers for illuminating companies. Mr. Prosser was born at Birmingham, England, November 24, sixty-eight years ago, and had been a Brooklynite for forty-five years...

Robert Walter was buried in Brooklyn's Evergreens cemetery.

Mary died in 1927 - no record of her wealth at death has been found, but 295 Decatur Street (her then abode) appears to have been a genteel residence.

Robert Walter and Mary had six children, five sons and a daughter, of whom the second, Herbert Woodward born in 1887, died in infancy in 1889.

The daughter, Ella Woodward (1889-1966) remained single and became a teacher in Brooklyn; she probably did not need to work for a living and her name regularly appeared in the society columns of the Brooklyn press into the 1930s. She disappears from view in records after the 1930 census until her death in the affluent village of Ridgewood, Bergen, New Jersey, about 30 miles north of Stuyvesant Heights. Her wealth at death was not disclosed in her short obituary in the *Ridgewood Sunday News* dated 22nd May 1966.



Ella's oldest brother Walter Richard (1886-1938) became an electrical engineer owning his own manufacturing business; he continued to live in Brooklyn, married and had two sons and two daughters (the youngest son died "of wounds" aged 20 in 1944 serving in the army in Germany). An obituary in *The Brooklyn Daily Eagle* dated 8th January 1939 revealed he left an estate valued at c.\$50,000 (2021 c\$1million (CPI) - purchasing power about double).

Ernest Frank (1890-1958) had become a farmer in the town of Goshen, Orange County in New York State (about 70 miles north of Stuyvesant Heights) by the time of his marriage in 1918 and was a widower when he died; his only child a daughter married and had a daughter and a son. No obituary has been traced.

Alfred Lincoln (1893-1957) stated his occupation was “manufacturer wire” in the 1920 census and was “Manufacturing” when he married in 1926, he was still living with his mother at 295 Decatur Street but in the 1930 census he (a part owner of a manufacturing business) and his wife were living elsewhere in Brooklyn; before 1940 he moved to Goshen too; in the 1940 and 1950 censuses he had no occupation recorded and was living on a property adjacent to his brother Ernest’s farm with his wife and two daughters, both of whom later married.

Arthur Ellis (1901-1983) was also living in Goshen in 1922 when he married, then a “clerk” he became a poultry farmer on his own farm in Chester, Orange County where he died leaving his wife and four surviving children (their youngest son predeceased him earlier in 1983).

Chester is only about five miles from Goshen so the families of the three younger surviving sons of Robert Walter were all living close to each other by 1940. They all outlived their oldest brother by many years; their sister Ella may have moved to New Jersey in her latter years to be close to one of her nieces, the daughter of Ernest Frank, who was living in Waldwick, Bergen in the 1950s.

Whether it is significant that none of Robert Walter’s children were named Thomas (after his wife’s father, Thomas Prosser II, and paternal grandfather, Thomas Prosser, Richard’s older brother) is mere speculation; his wife Mary’s maternal Woodward family was recognised. However, their first born, named Walter Richard must have been so named after his own father and his paternal grandfather and great grandfather. Their last child’s middle name suggests that the couple remained in touch with Marianne’s family in Kings Norton.

How close their children remained to their American cousins, the children of Mary’s siblings is unknown, but my investigations on Ancestry suggest that most of their respective descendants with accessible trees on the website have little knowledge of the linked ancestry of their families.

In England at least one of Robert Walter's siblings must have kept in touch with his American cousins. The family tree that her father's cousin Stephen Thomas, a son of William Henry, had lent to my mother-in-law and which had been transcribed by my sister-in-law Elizabeth when still at school, is evidence of this.

The invitation to Robert Walter's wedding to Mary in 1885 was probably donated to the Norfolk Museums Service by the older of Stephen's two sons, who had not married and had moved with his parents to a village near Norwich where he continued to live after his parents' deaths. The invitation was presumably sent to William Henry without any realistic expectation that he would be in a position to attend his younger brother's June wedding which took place shortly after the birth of William's tenth child. The family tree recorded Robert Walter's marriage to his "cousin" Mary and gave the birth dates of the first four of their five surviving children. It also identified the ship on which Thomas Prosser I emigrated to the U.S. in 1838 with his (unnamed) wife and son Thomas II and referred to the latter's marriage to "Betsy" (Elizabeth Woodward) and listed the first names of 10 of their 11 children (omitting the second who had died in 1877 aged 20) continuing with the following comment: "The Prossers of N. York were agents for Krupps of Essen. This may account for their Germanic names." The tree contained more information on Richard Bissell's children than those of Eleanor and Marianne but was, unsurprisingly, most informative about the descendants of William Henry, ending with details of Stephen's grandchildren by his younger son, which it was noted had been added by his wife.

Stephen died in 1965 and it would have been around this time that young Elizabeth copied the tree; his sons, friends since her childhood of her mother (my mother-in-law), died in 2002 and 1988 but were no longer in touch. The original tree may survive with one of the younger son's descendants. The tree's contents suggest that the English descendants of Richard probably lost contact with their American relations before the commencement of The Great War (World War I) in 1914 when the German forces went into battle in the trenches of northern France armed by "Krupps of Essen" for whom Thomas Prosser & Son was still the U.S. agent.

Of Richard's five children who survived into adulthood, the four who remained in England all led relatively financially sound lives. The two daughters Eleanor Jane and Marianne, who had both married well were, in fact, quite wealthy and their children also appear to have been 'comfortably off' in their adult lives. Richard Bissell and William Henry, thanks to their careers, were financially secure but their children do not appear to have

prospered. In the U.S. Robert Walter, the youngest of the five siblings. seems to have fared well in his chosen career and to have been considerably wealthier than his two older brothers, but he too had married into money; his and Mary's children probably received considerable inheritances, not only from their parents but from other members of the American Prosser family as revealed in the next chapter.

Chapter 46

Thomas Prosser: a Civil War Letter & the Krupp Inheritance

As early as 1851, the firm of Prosser & Son represented Krupp in New York. Rolls, tool steel and railway axles were the first articles sold in the United States. After the invention of the weldless tyre, the American business quickly assumed great importance, and has remained very brisk until the present day. The Prosser family, like most of the Krupp agents of old times, are on terms of personal friendship with the owners of the Cast Steel Works, as well as on a business footing; the agency in the United States is now in the third generation of the Prosser family.

KRUPP A CENTURY'S HISTORY OF THE KRUPP WORKS 1812 1912
TRANSLATED FROM THE COMMEMORATIVE VOLUME
EDITED BY THE KRUPP WORKS

A Fortuitous Meeting

In his history of the Krupp family, *The Arms of Krupp 1587-1968* (1964), William Manchester maintained that by 1866 “the U.S.A. couldn't get enough railroad wheels - some American orders now were worth \$100,000 each” and, later, that by 1877 “the volume was running into several millions of dollars annually” - all through the exclusive agency of the New York firm of Thomas Prosser & Son.

Earlier in his massive work Manchester had explained how in the growing industrial town of Essen, situated in Prussia within the Ruhr coalfield, Alfred Krupp (1812-1887) was already developing a weldless steel railroad tyre when in 1851: “In the ante-rooms of the Crystal Palace he met a Mr Thomas Prosser an American, who would set the tyres spinning across a continent.”

In a footnote Manchester revealed that Krupp and Richard's brother (who had applied for United States citizenship in 1843 after his immigration in 1838) had cemented their business relationship before they returned to their homelands:

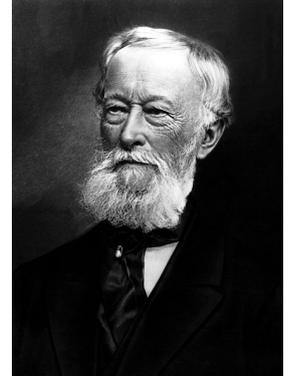
Their subsequent contract dated August 16, 1851, is still in the business files of Prosser's great grandson. Prosser's family represented Krupp in the United States until World War I. After 1918 the two firms reached a new agreement. Since World War II there has been no association (Roger D Prosser to the author, September 23, 1963).

This image is from an online antiques website which I came across in 2012, the old attribution note on a label on the reverse read: “Thomas Prosser who emigrated to the US in 1851 (sic). The portrait was painted on board the SS Scotia of the Cunard line en route from Liverpool to New York.” If the silhouette was, in fact, painted in 1851 on his return voyage after attending the Great Exhibition with the Krupp contract in his pocket, it might explain the self satisfied expression I thought was evident on the much clearer website image (since removed). Priced at \$750 the portrait was rather too expensive to buy.



I read Manchester’s footnote in late 2021, it was confirmation that some early records of the American business had survived and might still be held by one of the descendants of Thomas Prosser - a suspicion I had harboured from early on in my researches when I learnt that correspondence to his firm occasionally appeared for sale on eBay.

There is an abundance of information on the internet about Alfred Krupp and the evolution of his iron and steel works into what was claimed to be the largest industrial concern in Europe, if not the world, by the 1880s. One of the more interesting (from my viewpoint), but not disinterested accounts, can be found on this [link](#) to a tribute published in New York by Thomas Prosser & Son in September 1888 following Alfred Krupp’s death the previous year. *Image Alfred Krupp - Wikipedia: public domain.*



Alfred Krupp: A Sketch of his Life and Work was a translation from the German of a short biography by [Victor Niemeyer](#) (1863-1949) then a young lawyer in Essen, who appears to have written little else and whose main claim to any fame, apart from his legal career and involvement in local politics, was for his interest in aviation and as a successful balloonist. Handsomely bound, in what appears to be blue leather or cloth with its title emblazoned in gold leaf, the biography was accompanied by a translation of a description of “A Visit to the Krupp Works in Essen”, first published in January 1887, written before Krupp’s death by a French army captain. There is no mention of the New York firm in the texts but the volume concludes with three pages of adverts of the products that could be

purchased from Thomas Prosser & Son starting with those of “The Cast-Steel Works of Fried. Krupp, Essen, Germany” ((Fried Krupp was the business name retained by Alfred Krupp after the death of his father, Friedrich, the firm’s founder; on Alfred’s death his son, Friedrich Alfred Krupp 1854-1902, had inherited the business); the products advertised on the other two pages included boiler tubes (lap-welded and weldless). The publication was a presentation volume endorsed “Compliments of Thomas Prosser & Son” in print before the title page; original copies do survive in libraries (mainly in the U.S.) and other eBook versions are available online.

Richard’s brother, from hence named Thomas Prosser I, had died, aged 70, on 15th September 1870 and by 1888 the firm he founded would have ostensibly been solely owned by his son, Thomas Prosser II, since his father’s death. Two of the sons of Thomas Prosser II, Thomas Prosser III and Richard, were also shown as associated with the firm in trade directories about this time. The firm was still located in Manhattan but after 1851 its premises in Platt Street had been extended by the addition of adjoining premises in Gold Street.

The ties of “personal friendship” between the Krupp and Prosser families, acknowledged in the centennial history published by the Krupps Works in 1912 and quoted at the beginning of this chapter, were forged as a result of the bond that quickly formed between Thomas Prosser I and Alfred Krupp in London in 1851 - an immediate mutual liking according to some accounts. It is easy to understand why Richard’s brother would be attracted to an association with the emergent Prussian industrialist, whose impressive steel exhibits had made such an impact at the Great Exhibition.

By 1851 Thomas Prosser I was still a relative newcomer in New York’s business community having only opened his hardware store in Platt Street in Manhattan in about 1844 following his relocation from Paterson in New Jersey. Initially he was probably best known as an importer of Minton’s “Prosser’s Patent Agate” buttons (made under Richard’s English patent) after the settlement in 1844 of the dispute recounted in *The Dust-Pressed Process* (pp. 47-53). Relations with Richard having apparently been repaired after this and their earlier dispute that led to his bankruptcy and emigration, by 1846 Thomas I was also importing lap-welded tubes made under Richard’s 1840 patent, which became his principal product after Minton ceased manufacturing the buttons in 1848. His trade directory entries and adverts described them as “boiler tubes” for use in “Locomotive, Marine and other Steam Engine Boilers”. (See *Tubes etc. Part 2* pp. 46-51)

So what persuaded the 39 year old Krupp that 50 year old Thomas Prosser I, an English born and recent arrival in New York, had sufficient influence in the U.S. to be given sole import rights over his products? Whilst younger than Thomas I, Krupp was, probably, a no less experienced businessman, having taken charge at the age of just 14 of his deceased father's small steel foundry in Essen. From Manchester's and other accounts he also appears to have been an extraordinarily driven, somewhat eccentric, but principled character. A workaholic himself, Krupp demanded discipline from his employees and total allegiance to his unquestioned authority but, nevertheless, was to introduce practical measures to provide for their welfare, including housing, health and retirement benefits - philanthropy that also acted as an inducement to attract and retain employees.

In London in 1851 Krupp no doubt had his eye on opportunities to export into the U.S. market and, in particular, its rapidly expanding railway industry. In Thomas I he would have found a clever and knowledgeable man with some credentials in engineering and a particular interest in steam technology (as evidenced by his long paper published in 1849 in *The Journal of the Franklin Institute*). Thomas I was also a distributor in New York already supplying the U.S. rail industry with Richard's lap-welded "boiler tubes". Krupp may have heard that in 1848 Thomas I had been entrusted by the renowned British engineering firm of Maudslay Sons & Field to act as their U.S. agent, although this may have been short lived. Since mid-1849 Thomas I had been acting as the New York agent for the London patent agent Robertson, the publisher and editor of the *Mechanics' Magazine*; Robertson had been on very good terms with Richard throughout most of the 1840s, although by 1851 their conflicting views on patent law reform had, probably, soured the relationship. The fact that Thomas I was still a relatively small player within the U.S. based import market may have been a factor that influenced Krupp - someone whom Krupp thought he could control and demand allegiance from.

May Richard have played a part in Krupp's decision?

Thomas I must have had several meetings with Krupp at the Exhibition and it therefore seems most unlikely that Richard and Krupp would not have met with each other at some time during Krupp's stay. I have previously speculated that they may already have become acquainted during Krupp's exploratory visits to England in the 1840s and that Richard might have visited Essen in 1850 when on his way to or return from the university town of Marburg then in the Grand Duchy of Hesse (see *Tubes etc. Part 2* pp.

39-45). It would have been in Richard's own interests to encourage an alliance between Krupp and his older brother.

A Civil War Letter

By 1851 Krupp was already, also, making armaments and later in his life was to become known as "The Cannon King". There is no evidence that Thomas Prosser & Son ever imported Krupps's arms into the U.S. but in 2013 Jody Behrbaum, my American collaborator in my research on the "Prosser" buttons history, had sent me scans of a three page letter written by Thomas Prosser I in 1861, which suggests that he was open to doing so - if the opportunity arose. The letter is also evidence of the risks that, the by then relatively elderly, Thomas I was prepared to undertake to curry favour with his Prussian client and in furtherance of his own business interests.

The letter is dated 13th April 1861 and was found by Jody online within the digitised resources of The National Archives of the U.S. in a catalogue described as: "the "Citizens File," these original records pertain to goods furnished or services rendered to the Confederate government by private individuals or business firms."

Thomas I wrote the letter in the Exchange Hotel in Montgomery the state capital of Alabama and then the provisional capital of the newly proclaimed Confederacy. The letter was addressed to "His Excellency the President of the Confederate States". Jefferson Davis (1808-1809) had been inaugurated in February 1861 in

Montgomery as the provisional President of the six southern states who had seceded from the Federal Union during the preceding two months (seven more were to follow).
Image: Court Square in downtown Montgomery, Alabama, looking



down Commerce Street toward the Alabama River, Exchange Hotel on left c1867 - Alabama Department of Archives and History website.

In his letter Thomas I explained that he had already been waiting 8 days in Montgomery seeking an interview with Davis - obviously to no avail. He may not have been prepared to confide the purpose of his 1,000 mile journey from New York (in the Union north) to those of Davis's subordinates that he had approached and was prompted to write his letter by the event that had occurred the previous day on 12th April, when Confederate forces opened hostilities by attacking Fort Sumter on South Carolina's coast - then still occupied by Union forces. The Civil War had begun and Thomas I was probably anxious to return to the safety of New York.

Thomas had declared his reason for wishing to see Davis in person in the first sentence of the letter:

...for the purpose of presenting, on behalf of Fried Krupp of Essen in Rhenish Prussia, a Book, which, may be useful to his Government as a work of reference on Cast Steel Guns & also on Mint works & Rollers.

The manufacture of its own armaments and its own currency were both matters of immediate concern to the Confederacy. Some regional branches of the U.S. Mint were located in Confederate states but, as noted on a [webpage](#) for the Springfield Armory (sic) of the U.S. National Park Service (headed "The Arms of the Confederacy") "most of the modern arms-making equipment and most of the raw materials were located in the industrialized North."

Thomas I stated that he would remain two more days in Montgomery as he was expecting to receive "further information ... on the subject of Cannon & also a list of their prices" from Europe.

The letter then continued by purporting (by the insertion of quotation marks) to cite observations by "Mr. Krupp" himself to the effect that Krupp was "not allowed" to disclose the specifications of "the breech loading & rifling systems executed here (at Essen) for the Governments of Germany, Belgium & others". Krupp was then quoted as stating that he could only accept orders for arms if they were accompanied by "exact Drawings of their [required] construction".

The NPS webpage cited above states that the Confederacy was to import over 340,000 arms from Europe. As narrated above these would have included English "Whitworth" rifles (p.48). In the Springfield Armory's own collection of Confederate arms most of the European arms are "British and Austrian". Britain's Enfield is named as one manufactory but there is no mention of Krupp's, but the list of manufacturers of arms in the collection is

not exhaustive; on other relevant websites I have found no reference to the use of Krupp armaments by the Confederates (nor by Manchester in his history).

Having briefly raised the subject of arms procurement from Krupp the remaining two and a half pages of the letter began with a brief reference to the account of Krupp's "Mint works & Rollers" in the book to be presented to Davis. Thomas I then turned to the subject of a pamphlet he had enclosed with the letter "On Cast Steel Tires" which endorsed the quality of Krupp's steel. This was one of his own firm's pamphlets and he referred to "Thos. Prosser & Son of New York" importing the 'Krupp' tires that had been sold to the Central Railway of Georgia, one of the southern states that had already seceded. Thomas then continued:

In future they [his firm] will import direct to the Confederate States & have several orders under weigh (sic), for that purpose from Charleston & Savannah.

Thomas I had, also, included another pamphlet with the letter - one of his own articles on a theory that he had been promoting since about 1854 "On a New Method of applying and condensing steam"; his comments on this took up the larger part of the letter. He referred to the tests carried out by Isherwood, the Chief Engineer of the U.S. Navy, and others in 1859 on the steam engine boiler he claimed to have invented and to Isherwood's endorsement of it (previously described in *Tubes etc. Part 2* pp. 46-51). Thomas failed to mention that Isherwood's support was qualified as to one feature of the boiler (the arrangement of the boiler tubes vertically rather than horizontally), which the Chief Engineer stated was not as innovatory as Thomas claimed (see *Tubes etc. ibid* and my speculation as to its derivation from one of Richard's patented inventions). Thomas contended that notwithstanding the Navy officers being "strongly prejudiced in favour of the Air Pump" method (currently in use in their marine steamers) they "had their views very much modified by the truths elicited" by the results of the tests on his boiler. He continued by asserting to Davis:

The "recuperative supply system" is acknowledged both by Mr Isherwood & Mr Archibald (the present & late engineers in charge U.S.N.) to be peculiarly and undeniably my Own. Although I have long since ceased to think of it as a source of probable emolument to myself, this feature will - must be, eventually adopted by the Engineering World & may secure to its inventor the honor due to him, dead or alive - most probably the former.

To this Confederacy it may be of immense importance to commence her Steam Navy on correct principles. High pressure steam is the Grand

desideratum & Mr Archibald appears to have a good engine for its effective application.

But where can he obtain his high pressure steam?

Except by my process high pressure steam can only be produced by the production also of scale [i.e. boiler scale which blocked the tubes] to an enormous and dangerous extent.

So Thomas I, whose boiler had, in effect, been rejected by the U.S. Navy was presumably hoping to obtain some recognition and, no doubt, financial reward by introducing it to the Confederacy Navy, whose heavily outnumbered fleet was in urgent need of enlargement.

Whether the trip to Montgomery was on his own initiative or at the behest of Krupp is unknown; whichever, Thomas I was taking a considerable risk. If it had become public knowledge back in Unionist New York and Brooklyn, its impact on his business might have been catastrophic in the light of the outcome of the Civil War. What is more in 1853 his only son, his partner in the business, had married into a prominent Brooklyn family and one of his daughter-in-law's brothers was to become a well regarded officer in the Union army (John Blackburne Woodward 1835-1896).

The letter was held within a collection of "Blockade Runner" Confederate papers according to an accompanying handwritten note in the U.S. Archives.

Thomas I concluded his letter as follows:

The undersigned has been near New York for 23 years where for the most part he has engaged in importing.

A civil engineer by profession - English by birth but of Welsh descent - his mother's maiden name being the same (Davis) as that of his Excellency.

The desire of the undersigned is to be useful to the Confederacy in the matter pertaining to the subject of this letter, which he hopes will be a sufficient apology for its tediousness.

May he request the favour of a short note of acknowledgement (Cannon particularly) which may possibly stand him in need as a passport in case of commotion in passing through the Confederacy where [he] is for the most part a stranger.

I am no politician but have always been a true Republican all my life & a Democrat as understood in New York & therefore I bid God Speed the Confederacy and your Excellency.

Thos. Prosser

to have a good Engine for its effective application,
 But, where can he obtain his high pressure steam?
 Except by my process - high pressure steam
 can only be produced, by the production also of
 scale to an enormous & dangerous extent,
 That involves the secret, of why it has never
 been used at sea, although Engineers have for
 years been pointing out its advantages.
 The undersigned has been near New York for 23 years,
 where for the most part he has engaged in Shipbuilding,
 a Civil Engineer by profession - English by birth
 but of Welsh descent - his mother's maiden name
 being the same (Davies) as that of his Excellency.
 The desire of the undersigned is to be useful
 to the Confederacy in the matter pertaining to the
 subjects of this letter, which he hopes will be a
 sufficient apology for its sedition.
 May he request the favor of a short note
 of acknowledgement (Common particularly) which may
 possibly stand him in need as a passport in case of
 commotion, in passing through the Confederacy where
 is for the most part a stranger.
 I am no politician but have always been
 a true Republican all my life & a Democrat
 as understood in New York & therefore I
 bid God Speed the Confederacy & your Excellency

Thos Prosser

Image - Final page of Letter from Thomas Prosser I to Jefferson Davis

Thomas probably knew his mother's maiden name was actually Davies not "Davis". The final, apparently, incompatible statement as to his allegiance to both Republican and Democrat values is, possibly, nevertheless a reflection of the conflicting views held within each of those parties at that time. In particular, the abolition of slavery was not supported throughout President Abraham Lincoln's Republican party in 1861 and was certainly not supported by northern Democrats.

Whether Davis had the time to read the whole or any part of the letter is debatable. It would appear that there were no repercussions for Thomas I

and his firm arising from the letter, which was presumably not discovered within the Confederate papers until after the Civil War ended in 1865 - maybe long after.

However in the 1870 U.S. census recorded on the 23rd July, the householders had to declare the values of their real and personal estates; no values were attributed to the older Thomas I, a "Civil Engineer", but against his wife Elizabeth values of \$60,000 and \$20,000 were entered. Likewise their son and neighbour Thomas Prosser II, a "Steel Merchant" was apparently penniless but his wife, also Elizabeth, was said to own realty worth \$20,000 and personalty worth \$10,000. Had the father and son taken precautionary steps to divest themselves of assets when it became apparent that the Confederacy would not survive? In the 1860 census both had valued their real and personal estates at \$18,000 and \$2,000 respectively; their wives declared no assets. (1870 \$10,000/2021 \$214,000 (purchasing power CPI) but \$3.54 million (per capita GDP) - [measuringworth.com](https://www.measuringworth.com))

Thomas Prosser I (1801-1870) - Death

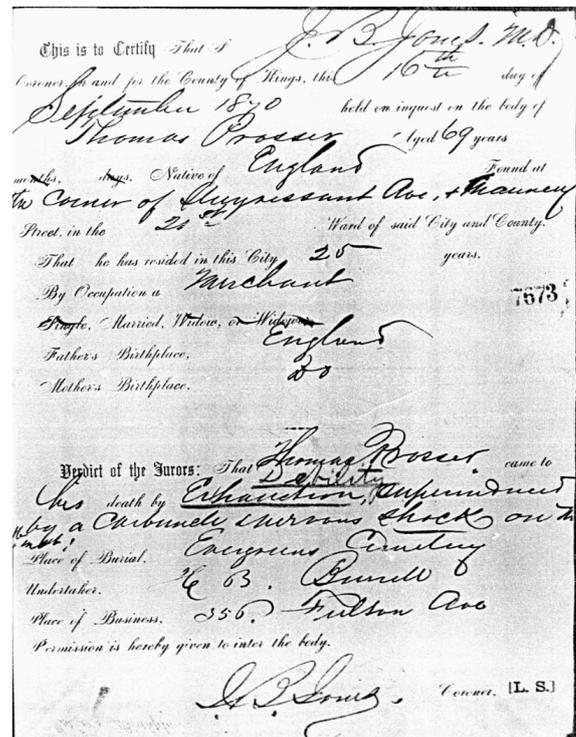


Thomas Prosser I and his wife Elizabeth - source: Ancestry tree of descendant

Before his death Thomas I may have made at least one more visit to England (after that made in 1854 following Richard's death). In 1866 a Thomas

Prosser, a “Merchant” aged 64, was recorded as arriving in New York on 22nd March on the SS Australasian sailing from Liverpool. The purpose of any such visit is unknown - no particular events have been found to account for it unless it was to do with the Yorkshire Fine Art and Industrial Exhibition that took place in York later that year (which seems unlikely). Perhaps, he had been on a longer journey - to see his import agency’s German principal.

Richard’s brother Thomas Prosser I died four years later on 15th September 1870 aged 68 and was buried in the Evergreens Cemetery in Brooklyn, where later his widow and many of his descendants were also interred. An inquest had been ordered which found that he died of “Exhaustion Debility illegible by a Carbuncle & nervous shock”. *Image right - FamilySearch website*



Short obituary notices were placed in the *Times Union* and *New York Tribune*; both described him as “a prominent member of the American Society of Civil Engineers” - the *Union*’s added that “his influence always tended to the liberalization of the Society and the elevation of the profession”. Thomas I, the Worcester “Architect” and/or “Builder”, had claimed to be a “Civil Engineer” for many years.

At his death Thomas I was still living in the mansion on Stuyvesant Avenue (numbered 414?) on the corner with Chauncey Street next to that of his son Thomas Prosser II. His widow was still living there when she died on 22nd February 1871 aged 77; a short notice of her death appeared in the *The Brooklyn Union*.

I have found no probate record for Thomas Prosser I on the FamilySearch website, but a search against his widow’s name revealed images of the grant to their only child of Letters Testamentary to her estate on 11th April 1871 in the King’s County Surrogate’s Court. The application to the Court by Thomas Prosser II revealed that Elizabeth Prosser (the former Elizabeth Skeats née Hartwright) had left a valid will dated 11th December 1869 together with a later codicil; her son, whom she had appointed her executor in the event of

her surviving her husband, had to swear as to the value of her estate which he estimated at less than \$100,000. It was the practice to calculate the valuation at the upper limit of the estate's value; Elizabeth had died a very wealthy woman worth in the region of \$37 million relative to per capita GDP in 2021 ([measuringworth.com](https://www.measuringworth.com))).



414? Stuyvesant Avenue, Brooklyn probably pre 1900 - source: Ancestry tree of descendant

For reasons unexplained Thomas Prosser II failed to complete the administration of his mother's estate - probably, because under the terms of her will she had left a life interest in her entire estate to her husband, his father, with a gift over on his death (or if he predeceased her) equally between her grandchildren (specifically describing them as the children of Thomas Prosser II and his wife Elizabeth).

Why his mother had, in effect, disinherited Thomas Prosser II, who was probably very wealthy through his wife (if not of right), is a matter for conjecture; in 1871 his eldest child (then of nine) was still only 16 years old. His father, who presumably had some say in the terms of her will, had probably expected to outlive his older wife for some time. After the death of Thomas Prosser II in January 1896 an application was made to King's

County Surrogate's Court for a grant of letters of administration of the unadministered parts of their grandmother's estate which was granted, with the signed consent of his siblings, to her grandson Richard on 14th May 1896. The papers lodged with the application in April 1896 revealed that the then value of her estate still unadministered was said to be about \$168,000 (\$52.9 million 2021 relative wealth per capita GDP) of which over \$100,000 dollars was attributable to real estate in New York and Brooklyn earning a gross yearly rental income of about \$6,300 (2021 \$1.98 million). The application alleged that \$40,000 was due to the estate of Thomas Prosser II for monies paid out by him in the administration of his mother's property interests, a "large part" of which was "vacant and unproductive"; the rental income was also alleged to be subject to taxes and other charges which consumed most of it.

According to Manchester the firm of Thomas Prosser & Son continued to thrive throughout the 19th century notwithstanding competition from U.S. 'railway barons' (naming, in particular, the Vanderbilt family) and a later downturn in the railway industry in the 1890s. It has to be said that the Prosser family's wealth based on the figures cited above was on a minor scale compared to the likes of that of the Vanderbilts, the Rockefellers and Andrew Carnegie.

Thomas Prosser II (1828-1896)



Thomas Prosser II and his wife Elizabeth - source: Ancestry tree of descendant

Thomas Prosser II and his wife Elizabeth (née Woodward) continued to reside in the mansion at 406, Stuyvesant Avenue throughout their lives. Thomas II died on 10th January 1896 and Elizabeth on 17th November 1909; both were buried in the Evergreens cemetery. His death record stated that

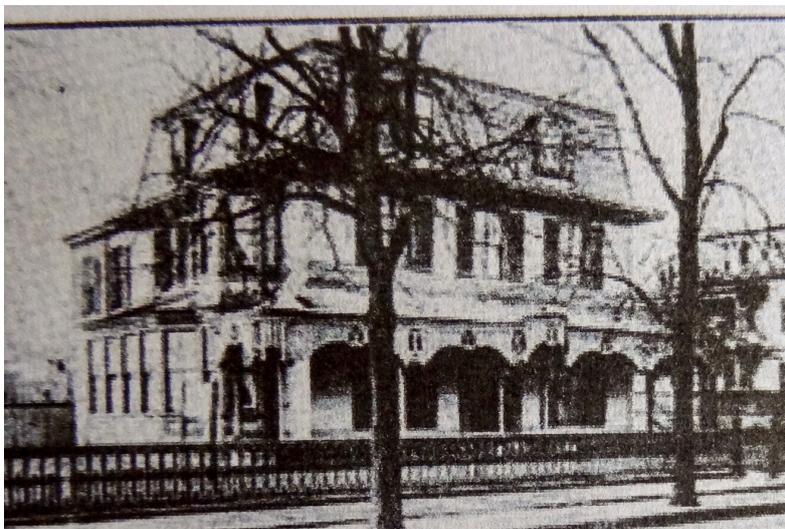
his father had been born in Birmingham (rather than in Hereford, which I had argued seemed unlikely in *Rescuing Richard* pp.37/38). It is reasonable to assume that news of Thomas II's death was sent to his relations in England by his son-in-law and, also, his first cousin Robert Walter Prosser - Richard's youngest son, who had married his daughter Mary.

A long, informative and mainly accurate obituary for Thomas II in *The Brooklyn Times* dated 11th January 1896 reported that he had died at his home "after a lingering illness. The cause of death was a general breaking down. He had not been able to work for about a year." The obituarist then described how his father, Thomas I, had emigrated to the U.S. and set up in business initially in Paterson, New Jersey, allegedly setting up "in the steel business there", before moving to New York; the obituarist's informant thus glossed over the early business ventures of Thomas I in Paterson and New York - initially as an architect and, subsequently, as the owner of the hardware store in Platt Street, Manhattan, from where, amongst other goods, he sold the imported agate buttons and lap-welded iron tubes made under his younger brother Richard's English patents. The obituary concentrated on the family firm's association with "the Krupp Gun Works" and how this came about due to the "lasting friendship" that formed between the "senior Prosser" and "Herr Krupp" when they met at the Great Exhibition. Significantly, the obituary explained that the New York firm "never dealt extensively in war materials" manufactured by Krupp, its "business being mainly with railroads, steamship companies and machinery manufacturers... [the] dealings were at times of unusual proportions". The obituary continued:

In 1850 Mr. Prosser [i.e. TP II] moved to Brooklyn, and in about 1855, in company with a number of other English families, he bought a large plot of farm land in what is now the Twenty-third Ward. The intention was to make a permanent English colony on a small scale. The scheme was found to be impracticable, and Mr. Prosser was about the only one of the coterie who remained in the Twenty-third Ward. He built a typical English house on what was then the old Jamaica plank road at Stuyvesant avenue, near Bainbridge and Chauncey streets. Here he had lived ever since, occupying nearly an entire city block with his yard and gardens. A high wall partly surrounded his estate. Mr. Prosser's membership in the Board of Education was his only public office. He belonged to no club, and his tastes all ran along quiet lines. He is survived by a widow and ten children. His eldest son, Thomas Prosser, who will probably succeed him as the head of the Gold street house.- lives almost directly across the street from the old homestead at No. 387 Stuyvesant avenue. The dead merchant was a prominent member of the

Third Unitarian Society at Gates avenue and Irving place, of which the Rev. S. H. Camp is pastor. The funeral and the burial will be private.

Another shorter obituary in the *Times Union* dated 13th January ended with the comment that whilst others of the English land owners had left Brooklyn: *Mr. Prosser held on to the ground, however, and as the city expanded his property increased in value. Up to a year or two ago he refused to part with a foot of his ground, and for many years kept one immense square bounded by Stuyvesant and Lewis avenues and Decatur and Bainbridge streets fenced in as a park....He was very wealthy.*



406, Stuyvesant Avenue, Brooklyn (probably pre 1900)

The probate papers for Thomas II did not reveal any valuation of his wealth other than a statement that it exceeded \$10,000; the 1883 will and 1890 codicil referred to are not included in the online Court file so his instructions as to the distribution of his estate are not known - the Court file does however reveal that he appointed his wife and two of his sons his executors: Thomas III and Richard. When his wife made her will in 1890, she had left a life interest to her husband with a gift over to all her children in equal shares and appointed her husband and sons Thomas III and Richard her joint executors (the latter two were granted probate in December 1909). Her obituary in the *Times Union*, whilst mentioning that she was the widow of Thomas II “who was the New York representative of the Krupp Iron Works, of Germany”, spoke more of her Woodward relations - she had died of “pneumonia”.

The couple, who had married in 1853, had 11 children between 1854 and 1875, seven boys and four girls named in order of birth: Thomas III, Walter, Mary, Elizabeth, Robert Woodward, Richard, George, Edith, Frank, Bertha and Herman Alfred. Many of the names are familial and can be connected to either or both of their parent's families. The two youngest children were undoubtedly named in deference to the Prosser import agency's principal in Essen; 'Bertha' was the name of Alfred Krupp's wife.

In 1873 Thomas II was recorded as returning first class to New York on a ship sailing from Bremen, a port now in north west Germany; he was accompanied by his two oldest sons Thomas III and Walter, aged 19 and 17 respectively. From about this time the Prosser firm's entry in New York trade directories was expanded and enlarged to expressly describe itself as "AGENTS FOR KRUPP'S CAST STEEL WORKS".

Thomas II's Children

Walter, born in 1857, was to die in 1877 aged 20, a student, he too was buried in Evergreens cemetery. He was presumably named after his great grandfather, the father of his paternal grandfather Thomas I and his deceased great uncle Richard. 'Walter' does not appear to be a name adopted within his mother's Woodward family. No report disclosing the cause of his early death has been traced.

At least three of the surviving sons worked in the family business - Thomas III, Richard and Frank; Thomas III from about 1887 and Richard from 1889 were named in trade directories from these dates. Of the three Richard appears to have been the dominant partner.

Thomas Prosser III (1854-1934)

Thomas III married Annie Louise Sieber (1856-1925) of 133, Herkimer Avenue Brooklyn in 1879. Her father variously described himself as a "Merchant", "Broker" or "Bookkeeper" and German or Swiss in census returns; her mother was French. The newly marrieds initially lived with her parents and her three siblings, they had no live-in servants; perhaps a more suitable connubial environment than living with his parents and his nine (some much) younger siblings and aunt Maria Woodward in the mansion on Stuyvesant Avenue, notwithstanding the three live-in servants employed there (1880 censuses).

In about 1888 the couple moved to the newly built house on the opposite corner of Stuyvesant Avenue/Bainbridge Street to his parents. Number 387

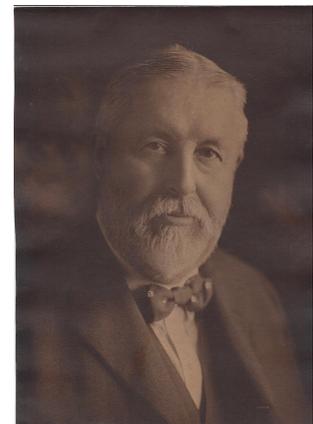
Stuyvesant Avenue is still standing. The couple were still living there in 1920; they had two children Elsa (1881-1972) and Thomas Harold (1887-?1958). *Image 387 Stuyvesant Avenue, Brooklyn c2012.*



Thomas III was widowed in 1925 and in 1930 he was living in Park Avenue, Manhattan and still described himself (as he had since at least 1880) “a steel agent”; he was the head of a household that included his daughter Elsa, her husband John Good (“Inventor”), their three surviving children (their first had died aged five) and two female servants. The Goods had been living with him and his wife in Brooklyn in 1910 and 1920.

Thomas Harold married and had two sons, he was still alive in 1940 when he sailed to San Francisco but then disappears from the records (he may have been the “Thomas H. Prosser” who died in 1958 near Cincinnati, Ohio, where his younger son was then living); he had previously worked for his brother-in-law and is recorded as the secretary and a Vice President of “Good Inventions” in 1920 and 1930 when living in Nassau County in New York state - I have not been able to trace this business.

Thomas III had died on 23rd December 1934 at his home at 260, Stewart Avenue in Garden City, Hempstead, Nassau County, in the centre of Long Island (Brooklyn is situated at its west end). Garden City is close to Westbury in Hempstead where his widowed son and the Goods were living about 17 miles north of famous Long Beach. Reports in the New York press during his life had referred to Thomas III having a summer home at East Neck on the north coast of Long Island. *Image Thomas Prosser III - source: Ancestry tree of descendant*



His obituary in the *Times Union* dated 24th December 1934 reported that Thomas III died after “a long illness of ailments associated with his age of 80 years”. The obituarist described him as the “senior member of Thomas Prosser & Son metal dealers” and in giving details of his children and siblings named his brother Richard as the new head of the firm. The assertion that his grandfather, the founder of the firm, had a similar business in Birmingham, England may have been a family fiction created by his father or by Thomas I himself. The association with Krupp was mentioned (dating it

wrongly from 1848) and, also, that “Mr. Prosser” had supplied “much of the material for the rails of the Great Northern Railroad” (which covered a distance of over 1,600 miles from St. Paul, Minnesota, to Seattle, Washington).

Thomas III’s wealth was undisclosed when the Nassau press reported that the “prominent Brooklyn manufacturer” had left his estate on what must have been complicated trusts if the report is correct (to his son and daughter for life in equal shares and then to their children for life unequally - 22% to the son’s and 78% to the daughter’s, the ultimate beneficiaries were undisclosed) - *The Nassau Daily Review, January 14, 1935*.

Whilst living in Brooklyn Thomas III and his wife crossed the Atlantic on at least two occasions in 1892 and 1905, on the latter returning with Elsa on a German steamer.

Richard Prosser (1864-1937)

Richard was the sixth child and fourth son of Thomas II and was 10 years younger than his brother Thomas III. Was he named after his great uncle who had died in Birmingham England ten years previously? This seems a possibility as ‘Richard’, also, does not appear to be a Woodward family name.

In 1891 he married Gertrude Lincoln Derby (1864-1952) in Brooklyn; on Ancestry family trees of her descendants she is recorded as a descendant of a branch of the prestigious Derby family of Salem in the state of Massachusetts, early New England settlers who acquired great wealth through maritime trade. Gertrude’s father described himself as a “Commission Merchant” in the 1880 census when living with his wife and their family at 396 Vanderbilt Avenue in Brooklyn having relocated there from Massachusetts sometime after Gertrude’s birth.

Following their marriage Richard and Gertrude lived at 125, Bainbridge Street barely 100 yards from his father’s mansion at 406 and oldest brother’s new house at 387 Stuyvesant Avenue. By 1900 the couple were living in Chestnut Street Englewood, Bergen in New Jersey, her parents were living in the adjoining property in this now (and probably then) exclusive residential suburb; her father was “Retired” and Richard was a “Steel Wire Merchant”. Richard and Gertrude continued to live in Chestnut Street, probably in the same house (numbered 241 in the 1930 census).

They had three children, two daughters (Mildred 1892-1970 and Eleanor Derby b/d1896) and a boy (Roger Derby 1898-1989). Gertrude died in Englewood in 1952 having survived her husband by 15 years. *Image Richard and Gertrude with their two surviving children c1911 - source: Ancestry tree of descendant.*



Richard Prosser had died on 12th July 1937 aged 73 at the couple's "summer home" at Weekapaug on Rhode Island according to his obituary in the *Brooklyn Daily Eagle* dated 14th July - it was produced so quickly that his death may not have been unexpected. It is interesting for its fulsome description of the firm of which the deceased is declared to have been the head ("the huge...business of Thomas Prosser & Son, Krupp agents on this continent") and also for other aspects. His son, Roger was announced as the "new chief" and the firm's succession, seemingly within the ownership of Richard's family, as secured by his having left five grandchildren. The exaggerated fiction that the firm's founder had owned steel mills in Birmingham before emigrating to the U.S. can perhaps be put down to the desire of the informant not to be outdone by the Derby side of the family. Richard's already deceased oldest brother, Thomas III, is mentioned as a previous head of the firm but in a rather dismissive fashion (his relationship to Richard is not explained and his name was confused with that of his son); their father Thomas II was suggested to be the founder of the firm. The obituary ended with a recital of some of the "many" other businesses in which Richard had held interests and of the prestigious clubs of which he was a member.

Of the many other obituaries for Richard nationwide, that in his local paper, *The Record* of Hackensack, New Jersey, on 14th July 1937 was more restrained in its language than that in the *Brooklyn Daily Eagle* and more accurate in at least one respect in identifying Thomas I as the founder of the family firm (without mention of his having had any similar business in England). The knowledgeable informant, presumably a family member, had also told the obituarist of the importance to the firm of the lap-welded tube invented by the deceased "Mr. Prosser's great uncle" and of the "Prosser tube expander" (perhaps deliberately omitting the identity of the inventor)

before making any mention of the Krupp connection. The commencement date of the latter was correctly dated to 1851 and the obituary claimed that the firm had imported a “large percentage” of the steel tires and wheels used on, not only American railroads, but Canadian ones as well and, in addition, steel used in early automobiles. Another product, only recently “introduced” by the firm, was also briefly mentioned, a “new cutting tool material” - of which more later. This obituary also listed Richard’s other business interests and club memberships and concluded by identifying his son Roger as his successor.

In October 1911 Richard and Gertrude, travelling with their two surviving children, had returned from Southampton in England to New York; a voyage repeated on their own in June/July 1927 on the S.S. Olympic. Whether these trips were on their return from visits to relatives, or just holidays, in England and/or to the Krupp family in Germany is unknown.

Frank Prosser (1871-1932)

Frank appears to be the only other son of Thomas II to have had some active involvement in the firm founded by their grandfather.

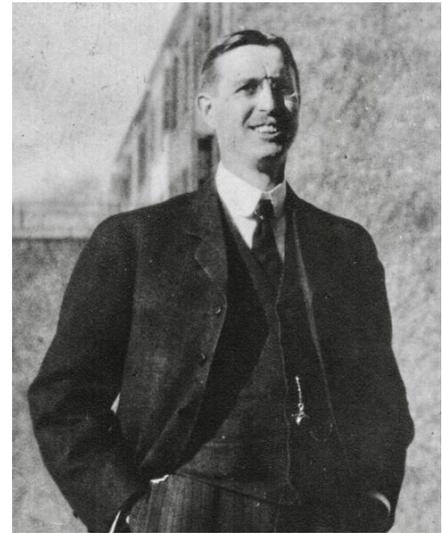
Frank (the ninth child and sixth son of Thomas II) although seven years younger, also predeceased his brother Richard. In 1900, aged 29, he was still living with his mother and two of his sisters at the mansion at 406, Stuyvesant Avenue - his occupation was entered as “clerk - steel importer” in the census that year.

He married 30 year old Sarah Marie La Tourette (1876-1967) in 1906; the bride’s father had been an “Oysterman” and her mother “a dressmaker” in Port Richmond, Staten Island, New York, where Sarah was born.

The couple started their married life on Fifth Street, Bayonne only about three miles from Port Richmond over the Hudson river and about 10 miles from the Prosser family firm’s headquarters in Manhattan across another stretch of the Hudson. The family, now plus two sons (David La Tourette 1907-1997 and Frank Woodward 1911-2010), were still living in Fifth Street in 1920 and Frank was still a clerk (employed).

By 1930 they had moved to Englewood living very near to his brother Richard and Frank was able to call himself a “director & investor steel Co.”, the family also had a live-in servant. On the face of it Frank’s fortunes appear to have improved.

Frank died on 19th September 1932, predeceasing both Thomas III and Richard. His obituary in a local Englewood paper mentioned his graduating from Brooklyn Polytechnic in engineering but was otherwise discrete about his early career prior to his devoting “his talents and abilities” to the family business. He was described as having “a genial personality and possessing a rare capacity for friendliness and friendship”. Another obituary in the *Times Union* was even briefer. Possibly an amenable but unambitious man. *Image Frank - source: Ancestry tree of descendant*



Frank’s alleged personality is reflected in the photo of him in the three images of these brothers. Thomas III, photographed in his later years, also looks a fairly benign character. Richard, over six feet tall according to a passport application, seated left with his wife and son and daughter looks a more forceful individual.

The other three surviving sons of Thomas Prosser II had very different careers and two of them escaped entirely from the business world of iron and steel.

Robert Woodward Prosser (1863-1958)

Robert was the fifth child and third son of Thomas II.

Aged only 17 and one of the large family still living at 406 Stuyvesant Avenue, he was already a “Farmer” in 1880 in that year’s census. Presumably, his farming activities were then on a small scale, perhaps, on some of the vacant land in his deceased Prosser grandmother’s estate, but this very soon changed as indicated in the following tribute from a, younger, fellow Texas rancher found on the FamilySearch site:

Pioneer Texas Rancher,

Mr. Prosser came to Texas at the age of 19 in 1880. His family was in the iron business, selling and furnishing, wheels and rails to the railroad in the 1800's. He at one time, in his long life, owned well over 300,000 acres in Comstock, Del Rio and Dryden Texas areas. His great nephew Robert L. Prosser (Bob) was named after Mr. Prosser and inherited the Prosser # 2 Ranch (18,500) acres north of Comstock, TX. Bob's dad Roger Derby Prosser (106452918) had a life estate on the ranch. #2 was the last of the Prosser owned ranches... The thousands of acres of ranch

land Mr. Prosser owned were sold to many different people who at one time worked for him. To say Mr. Prosser was a generous man would be an understatement. Many ranching families got there start from Mr. Prosser as well as me through an indirect way... At one time Mr. Prosser and my great grandfather W.E. Weathersbee(50065165) were on the Del Rio National Bank Board together. R.W. Prossers reposed in 1958 and the Running W sold in 1973, after the death of his wife Edna Hurt Prosser. His great nephew Robert L. Prosser sold the Prosser #2 Ranch in 1999 thus ending over 120 years of Prosser Ranching in Texas.

Robert remained single until, aged 56 and a “rancher” of Comstock in Texas, he married Edna Pearl Hurt (1883-1967), a widow, in San Francisco in 1919. They were living about 40 miles south of San Francisco with her daughter in the 1920 census on a farm he owned at Los Altos, but in both the 1930 and 1940 censuses he and Edna were living on his ranch in Texas in Val Verde County where Comstock, a very small and remote township, is located close to the border with Mexico.

The longest lived of the seven brothers, he died aged 95 in San Francisco in 1958 where his remains were interred in the Cypress Lawn Memorial Park at Colma to be joined by those of Edna in 1967. They had no children of their own but he was obviously close to his brother Richard’s son, Roger Derby Prosser, as indicated in the quoted tribute; Roger wrote an unpublished biography of his uncle which is still in the possession of one of his descendants. *Image: Robert Woodward on Find a Grave website.*



Photographs taken by Robert on two of his Texas ranches have been posted on a University of Texas [website](#) some with short extracts from the biography on the photo’s page; the contributor was “Bob”, Roger’s son (Robert Lowe Prosser). Brief obituaries commenting on his ranching career appeared in the local press in Texas and in California, where, allegedly, he had, in fact, spent much of the last 20 years of his life.

George Prosser (1867-1944)

George, the seventh child and fourth son of Thomas II, followed his older brother Robert into farming but considerably closer to his birthplace.

The 1890 U.S. census records were largely destroyed in a fire which accounts for the absence herein of any mention of them so far, but an article on the website linked at the end of this section recorded that George's father Thomas II purchased a 239 acre farm on Long Island in 1889 where George was to live for the rest of his life.

The 1900 census recorded George as farming in Brookhaven in Suffolk County towards the eastern end of the main body of Long Island, close to its south shore and about 60 miles due east of his childhood home on Stuyvesant Avenue.

In 1910, aged 43, he married Nellie Gordon, aged 18, of Yaphank, even now described as just a hamlet, four miles to the north of Brookhaven; George, occupation "Farming", gave his address as Middle Island another hamlet so named for being located in the centre (east-west) of Long Island (if the longest of its eastern peninsulas is included). Middle Island is about four miles north of Yaphank.

The farm was located on the road between the two hamlets, accurately named Yaphank Middle Island Road; in the 1940 census for the Brookhaven division George estimated its value as \$50,000. It and another farm valued at \$65,000 were by far the most valuable holdings and, presumably, therefore by far the largest in the return.

George died on 10th May 1944 and was buried in Yaphank Cemetery where Nellie, who died in 1967, was also buried. His obituary in the local paper made no mention of his background before his arrival in Middle Island; he was described as being greatly interested in public affairs and of frequently voicing his views in its letter column.

The couple left no children but their name is preserved in that given to a 15 acre wood of rare white pines which they carefully conserved during their lifetimes; it is now owned by Suffolk County and designated the Prosser Pines Nature Preserve. The County purchased 50 acres of land on which the wood is situated in 1967 and a contemporaneous account of the event is preserved as part of Long Island's history on a local school's website. The same site has another page with further details and photos of George's farm and of George and Nellie (the photo right of George is said to be of him with



two of his brothers, farmer George in his working clothes is on the right - the man on the left of the trio looks like his brother Robert Woodward but the younger man in the middle is probably a nephew).

Herman Alfred Prosser (1875-1958)

Herman was the last of the 11 children and the seventh son of Thomas Prosser II. His christian names were sufficiently unusual (for a 'Prosser') to readily reveal a number of references to him on a Google search.

In 1893 he was attending the Adelphi Academy in Brooklyn when he appears to have read an essay on "Wealth or Culture?" on its graduation day in June of that year; an interesting topic considering his family background. Nevertheless in 1897, a year after his father's death, he was awarded degrees in electrical and mining engineering by Columbia University in New York. He was working as a mining engineer when a boarder with a Baltimore family in 1900. *Image Herman Alfred - source: Ancestry tree of descendant*



He married (Maud) Winifred Walker née Sprague (1875-1975) a, probably wealthy, widow in Salt Lake City in 1908 and the daughter of a leading member of the Mormon church; Herman's mother, brothers and a sister attended the ceremony from their "eastern home", which took place at the bride's "home, "Idlewild", one of the most beautiful spots on the Walker estate" (*Goodwin's Weekly*, September 12, 1908). The Walker family had built a business empire based in the Utah City founded mainly on banking but which also included significant mining interests - perhaps Herman's introduction to the family. Mormon converts when the family emigrated from England, their business interests were later deemed incompatible with the Church's belief's by its founder, Brigham Young, and the Walkers were excommunicated.

The Walker's success story contrasts with that of another immigrant Mormon convert, a relation of Herman's through his Welsh great-grandfather Walter Prosser (the father of Thomas I and Richard), told in *Rescuing Richard* pp. 34-36.

In February 1908 Herman had been granted a patent jointly with another engineer for "Improvements in apparatus for charging furnaces", he had given his address as the Alta Club in Salt Lake City, but did not settle there. In the 1910 census he was living on the recently developed Riverside Drive in Manhattan with his wife and seven year old step daughter, an "Engineer Consulting *illegible*".

This was also his address in 1917 on his military draft registration card, which revealed the residence was at number 410 an apartment block known as Riverside Mansions built in about 1910 and still standing; the card also gave his occupation as "Metallurgist" and named his employers as American Smelting & Refining Co. of 120, Broadway, New York City, then controlled by the Guggenheim family - it still exists (Asarco LLP).

By 1920 his family was living in another newly built apartment block at 1000, Park Avenue (still standing) before moving to a five storey terraced house at 41, East 76th Street, their home in 1930 and 1940. An article about the early owners of the house was published online in 2019, it included the following about the Prosser occupants:

In the meantime, the 76th Street house had become home to Herman Alfred Prosser and his wife, the former Winifred Sprague. Born in 1876, Prosser was the vice president of the American Smelting and Refining Company. Their children included a son, Robert Woodward, daughter Elizabeth, and Winifred, from her mother's former marriage to the late Albert E. Walker.

The family's country home, Idlewild, was in Greenwich, Connecticut. Living with them in their city home were two servants.

Like Elizabeth Fahnstock, [an earlier occupant] Winifred had turned her attention to war efforts. In 1917 she had been chairman of the Emergency Committee of the Women's Auxiliary of the American Institute of Mining Engineers. Calling it a "fine patriotic society" in July that year, Mining and Metallurgy noted that she "is in close touch with Major Arthur S. Dwight, ready to act when necessity arises."

The first of the children to leave the 76th Street house was Winifred. Her engagement to Donald M. Lovejoy on May 4, 1930 was covered by newspapers as far away as Utah's The Ogden Standard-Examiner.



Robert was next, his engagement to Mary King Smith announced on October 12 1933.

Elizabeth was not so quick to marry. It was not until twelve years later, on December 27, 1945, that the Bronxville Review-Press commented "One of the loveliest of the pre-Christmas brides was Miss Elizabeth Woodward Prosser, daughter of Mr and Mrs. Herman Alfred Prosser, of East Seventy-Sixth Street, New York City, who on Friday, became the bride of Captain Francis Falconer Sanford, Army Air Forces."

Now empty-nesters, the Prossers soon left the 76th Street house, moving to No. 1001 Park Avenue. The 76th Street house has remained a single-family home, its unusual Spanish-meets-Italian facade unchanged after more than a century. Daytonian in Manhattan blog

The article revealed information not found elsewhere: the senior position held by Herman at his employers and the country home in Connecticut (untraced). However, only two of the four children of Herman and Winifred are mentioned; in addition to (another) Robert Woodward (1910-1987) and Elizabeth (1920-?2001) they had two older daughters, twins Edith (1916-? 1950) and Ethel (1916-2002).

Herman died in Stamford in Connecticut on 24th November 1958. Obituaries appeared in the New York and Salt Lake City press.

Passport applications indicate he had travelled to Mexico to inspect American Smelting & Refining's plants there on at least two occasions. It seems unlikely that Herman even knew of the existence of his fellow mining engineer and second cousin Richard Ellis Prosser (1873-1935), a son of Richard Bissell Prosser and my husband's maternal grandfather, who, amongst his many foreign assignments, had spent ten months in Venezuela in 1929.

As for the four daughters of Thomas Prosser II, as already recounted (pp.85-92), the oldest **Mary (1858-1927)** married her English first cousin once removed, Robert Walter Prosser in 1885.

Elizabeth Prosser (1861-1943)

The second daughter married Herbert Fitzgerald (1858-1932), a farmer from Massachusetts, in 1887; they continued to farm there until about 1898 when they relocated to a ranch in Roswell in Chaves County, New Mexico, where they were living in 1900; in 1910 they were on a ranch in Sligo, Yoakum County, Texas but had returned to Roswell by 1920 where they remained for the rest of their lives. They had eight surviving children, four boys and four

girls; two of the boys ran the ranch after their father's death. No obituary notices have been traced for Elizabeth.

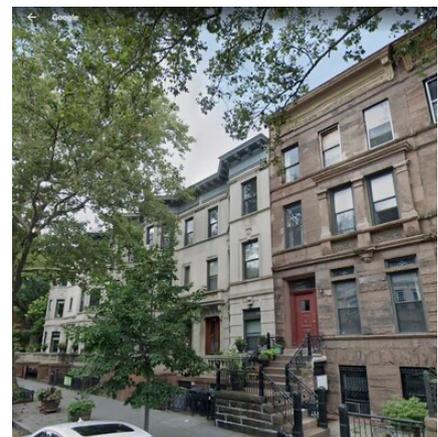
Edith (1869-1953) and Bertha (1873-1972) Prosser



Image: Edith and Bertha in the gardens of 406 Stuyvesant Avenue - source: Ancestry tree of descendant.

The two younger daughters, remained single. They were still living with their mother at 406, Stuyvesant Avenue when she died in 1909 having left her estate equally between her children. Decisions must have been quickly made as by April 1910 Bertha was lodging elsewhere in Brooklyn; Edith's whereabouts have not been traced.

Some Brooklyn history websites suggest that both of the 'Prosser' mansions were demolished in 1910, but the census return for that year indicates that the residence of Thomas I (number 414) was demolished sometime after the death in 1871 of Elizabeth Prosser née Hartwright, his widow, as its site appears to be occupied by several other houses in 1910. This recent image shows the grey limestones built on the site of 406 and the first of the 'brownstoners' built on the site



of 414 at the other end of the block (now comprising numbers 391 to 409 Stuyvesant Avenue). The Brownstoner website has a page with an (on the whole accurate) article written in 2013 on the history of the 'Prosser' mansions, the 'Krupp' factor and the family's ownership of land in the Stuyvesant Heights district.

In 1920 Bertha was lodging with Edith in an apartment in Manhattan; Edith was still living in Manhattan in the 1930 and 1940 censuses (at different addresses as a servant and as a lodger - the 1930 occupation attribution seems unlikely). Bertha had returned to Brooklyn in these censuses where she was described as a lodger in both returns - in 1930 lodging with her niece Ella Prosser the daughter of her oldest sister Mary who had married her English first cousin (once removed).

Both sisters relocated to Yaphank on Long Island in the 1940s possibly at about the time of their brother George's death there in 1944. A search on the NYS Historic Newspapers website revealed an article in November 1945 in the local paper (*The Patchogue Advance*) reporting that George had left a net estate valued at nearly \$95,000 (2021 \$1.46 million purchasing power CPI) to his widow for life and that after her death it would be divided between the four of his eleven siblings who had survived him and 21 nephews and nieces (presumably children of those siblings who had predeceased him). The surviving siblings were named: Robert Woodward, Edith, Bertha and Herman Alfred. George's widow, Nellie, died in 1967; both Robert Woodward and Edith predeceased her.

Edith died in 1953 at her home in Yaphank and left Bertha her bungalow together with its furnishings and a third of her personal estate (value undisclosed but in excess of \$10,000); the remainder of her personal estate was bequeathed in equal shares between five named relatives: two nieces, a grand-niece, a sister-in-law and her brother Herman (*The Patchogue Advance*). Edith obviously had her favourites.

Bertha lived on at Yaphank and appears to have taken over as custodian of the 'Prosser Pines', a responsibility which she and Nellie shared during Nellie's life. According to a note on the Ancestry family tree of a descendant of her brother Frank, she had refused one year to cut down one of the pines for display as the Christmas tree at Rockefeller Plaza. Bertha died in 1972, aged 98, in Yaphank at her residence on Middle Island Road and she, Edith, George and Nellie were all buried in Yaphank cemetery - a short obituary appeared in *The Patchogue Advance*. No details of her estate were traced in the local press.

Bertha knew something of her ancestry. In 1945 she had written a letter to a daughter in law of her brother Frank the first page of which is posted on his descendant's Ancestry tree. In it she told of the marriage of Thomas I to Elizabeth Hartwright and the latter's birth on 12th February 1794. Interestingly, Bertha also stated that their son Thomas II had not been their only child: "Two had died in England" before the family emigrated. In 2016 I had to visit the Worcestershire Archive & Archaeology Service in Worcester to trace the baptism of Thomas II, the only child of the couple so far as I was then aware. Since 2016 Worcestershire baptisms have been added on Ancestry and in 2022, as a result of reading Bertha's account, I quickly traced the births of Thomas Walter (1827-1828) and Elizabeth (1830-1835). Baby Thomas Walter, named after his father and paternal grandfather, had died about ten months before the birth of the Thomas who was to become known as Thomas II.

In researching the 'Yaphank' Prossers I came across an intriguing fact about this small rural community on Long Island. In the 1930s the German American Bund, an organisation formed to promote a favourable view in the U.S. of the German government's Nazi ideology, acquired land in Yaphank for one of the many summer camps it founded across the U.S. at this time. Siegfried Camp in Yaphank was actively used for several years until it was shut down by the authorities when the U.S. declared war on Germany. A first hand account of the history of the Camp is featured on the website of the local [Longwood Central School](#). It is tempting to speculate whether there might be any connection in the Bund's choice of Yaphank for the location of its camp serving New York city's German community to the coincidence that one of Yaphank's largest landowners at the time was a member of a family which was still intimately connected to Germany's main armaments manufacturer.

Thomas Prosser & Son - Succession

George Prosser and his two spinster sisters may no longer have had any financial interest in the firm of Thomas Prosser & Son by the 1930's and were unlikely to have had any involvement in its management. Trade directories suggest that Thomas II was the sole proprietor of the firm for a few years after his father's death in 1870; by 1887 Thomas III was also named in the firm's entries and the name of Richard, one of his younger brothers, was added by 1889.

The family's wealth had been derived from the success of the firm in the four decades that followed the meeting of Thomas I with Alfred Krupp at the Great Exhibition in 1851. Much of that acquired in the earlier years had been invested in property in the names of Thomas I and Thomas II as was disclosed in declarations required in the 1860 census return, but in the 1870 return it was then held by their wives (later returns did not require wealth disclosure). The reason for this transfer of assets is unknown but, as previously speculated, may have been connected to the outcome of the Civil War and the incriminating letter that Thomas I had written to, Jefferson Davis, the President of the Confederacy, in 1861.

After Thomas II died on 10th January 1896 it must have been realised that action needed to be taken urgently to regularise the administration of the family's assets, much of which had remained vested in Thomas II as his mother's executor. Since her death in 1871 he had, in fact, been managing those assets on behalf of his ten surviving children, the beneficiaries under the terms of his mother's will, notwithstanding that all but one, Herman, had come of full age (21) before his death - some, many years before. In 1896 Thomas III, the oldest child, would be 42 and the youngest, Herman, was to attain his majority.

In April 1896 two grants of probates were applied for and it was Richard who was appointed to administer his grandmother's estate with the express acquiescence of all his siblings. In addition, Richard had been appointed an executor of his father's will jointly with his mother and his oldest brother, Thomas III. Richard was, also, appointed an executor of his mother's will, made in 1890, jointly with Thomas III and his father, who predeceased his wife. The court files of each of the three probates contain forms signed by all the children and the signature of Thomas III stands out as being less assured, more immature, than those of his younger siblings.

Richard had been put in charge of the distribution of the assets in his grandmother's estate and the online record of a building agreement in about 1900 relating to land in Bainbridge Street reveals that each of her grandchildren bar one were by then part owners of the property - the exception was Mary, the wife of Robert Walter Prosser, perhaps she had been paid out her share of her grandmother's estate in other assets. It is reasonable to assume that Richard was also predominantly in charge of the administration and distribution of his father's estate, in which his widow may have had a life interest, and, in 1909, his mother's estate when the remainder of his parent's assets were, presumably, finally distributed amongst their ten surviving children.

What arrangements Thomas II had made during his lifetime or in his will for succession to the family business are unknown, but Thomas III and Richard were the only brothers who appear to have played a significant role in its management before and in the decade and a half following their father's death. According to the Krupp historian Manchester, it was "Mr. and Mrs. Thomas Prosser" who bid farewell to the younger daughter of Friedrich Krupp, Barbara von Wilmowsky, when she and her husband embarked on board the ship taking them on their return voyage to Europe following their tour of the U.S. in 1909/1910.

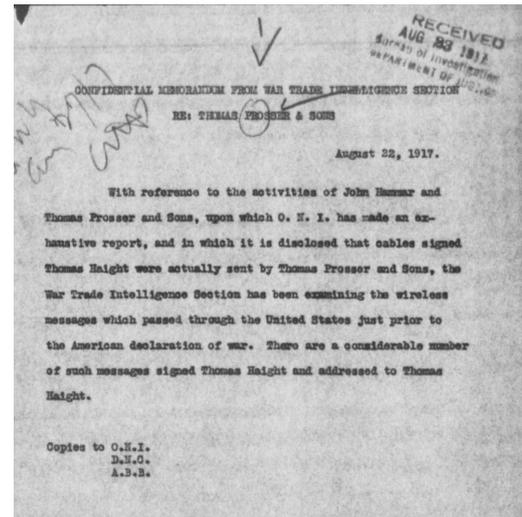
In 1900 Thomas III had described himself as a "Steel Merchant" in that year's census but in later returns he changed his position to that of a "Representative" or "Agent" and in 1920 indicated he was an employee rather than a proprietor of a business. In 1920 Richard a "Merchant, Steel" declared he was an owner. Also in 1909 when completing the probate forms for his mother's estate (signed by both brothers) Richard had given both his home and his business address (the latter at 15, Gold Street, Manhattan), whereas Thomas gave only his home address at 387, Stuyvesant Avenue. (Unfortunately U.S. trade directories for the 20th century are not available on FamilySearch.)

When he died in 1934 Thomas III was described as the head of the firm by *The Nassau Daily Review* (ibid) but this was probably inaccurate. Richard appears to have been the sole owner by 1920 and his only son, Roger Derby Prosser (1898-1989), described himself as a "proprietor" of an "importing" business in the 1930 census. Certainly, when Richard died in 1937 the firm's proprietors were himself and his son, the role of his deceased older brother was downplayed and the ownership of the firm was said to devolve on Roger Derby Prosser (see p.112).

It was, therefore, probably Richard who had to steer the firm of Thomas Prosser & Son, still the sole agents of Friedrich Krupp of Essen, through the difficulties it encountered during and following the First World War which had commenced in Europe in mid-1914. The U.S. was not to declare war against Germany until early April 1917.

In addition to the images of the letter to Jefferson Davis from Thomas I, Jody Behrbaum had also sent me an image of a short note that she had found online in the U.S. National Archives in an FBI file: "Investigative Reports of the Bureau of Investigation 1908-1922". The note, dated August 22nd 1917, commenced "With reference to the activities of John Hammar and Thomas Prosser and Sons (sic) upon which O.N.I. [Office of Naval Intelligence] has

made an exhaustive report...” and went on to refer to cables/wireless messages sent and received by a Thomas Haight, which were actually communications on behalf of Thomas Prosser & Son “just prior to the American declaration of war”. The note was circulated to the O.N.I., the D.N.O. (Department of the Director of Naval Ordnance) and the A.B.B. (unidentified). John Hammar, a Swede, was the managing director of the Swedish Export Association based in New York, who was suspected of seeking to evade the blockade of export of Canadian nickel to Germany for use in the manufacture of armaments (*Smart Globalization The Canadian Business and Economic History Experience* Andrew Smith and Dimitry Anastakis 2014). Thomas Haight remains unidentified and the outcome of the investigation is unknown.



The firm had been based in the buildings on the corner of Platt Street and Gold Street Manhattan for over 60 years (over 70 in the case of the part that was the original hardware store in Platt Street). In the light of the other investments in property he made at the time, it seems likely that Thomas I had bought the freeholds of the buildings. In about 1917/1918 they were sold to a Seig Goldstein, an insurance adjuster cum property investor, who ‘made over’ the buildings, which were “badly in need of modernising”, and then rented them out at profitable returns, including the three upper floors of 15 Gold Street to Thomas Prosser & Son (*The New York Sun* 19 May 1918). It was also about this time that the firm entered into a new agreement with its German principal according to Manchester.

In December 1937, when Roger Derby Prosser was in sole charge of the firm following the death of his father, Richard, earlier in the year, a report appeared in the *New York Times* dated 8th December headed “92 YEARS IN BUILDING, IMPORTERS TO MOVE; Thomas Prosser & Son, Long at 15 Gold St., Leases Larger Space in 120 Wall St.”. The firm’s new headquarters were in a “wedding cake” sky scraper built in 1930; still one of Manhattan’s iconic buildings. The move had followed what had been a partial severance on 1st May 1936 of another of the firm’s equally long held associations - that with the, by then, incorporated Fried. Krupp Aktiengesellschaft.

The background to this major development was revealed in the judgement of John Clark Knox, Chief Judge of the United States District Court, S.D. New York, delivered on 8th October 1948 in the case of United States v. General Electric Co. (GEC) and others. In the course of his long judgement Knox described the proceedings as the “first criminal patent pool anti-trust case” brought in the U.S. against participants in a business collaboration which amounted to a “monopolistic price-fixing scheme“. The other defendants were two subsidiary companies of GEC, three individuals (officers of GEC and one of the subsidiaries) and, but in name only (being outside the Court’s jurisdiction), Fried. Krupp Aktiengesellschaft (Krupp) “which is not before the Court”. The defendants were found guilty on all counts.

The proceedings had, in fact, been commenced some years earlier but had been put on hold due to the Second World War. The price fixing related to an invention the rights to which had been acquired under license by Krupp in the 1920s and which had been patented under the name “Widia” meaning “like diamond”. “Widia” was a new material, an alloy composed of a type of tungsten carbide, which proved to be particularly effective in use as an industrial cutting tool. Thomas Prosser & Son had been one of Krupps’s two distributors of “Widia” in the U.S. until 1st May 1936.

On 7th January 1929 *The Evening Star, Washington* had published an article headed “NEW ALLOY CARVES STEEL LIKE CHEESE”. The sub-heading read “Krupp composition for tool edges cuts metal at high speeds”. The article explained, however, that although the materials were cheap the alloy was costly to manufacture, which was why Krupp had fixed an exorbitant price of \$500 per lb. on this revolutionary product, more than twice that of gold. Krupp imposed its minimum price requirement on its licensees as well as its own distributors. The article revealed that Krupp had licensed three U.S. companies to manufacture “Widia” but only one, GEC, had gone on to market its product which it called “Carboloy”, the name of one its co-defendant subsidiaries in the anti-trust case. Roger Derby Prosser of Thomas Prosser & Son “the American representative of Krupp” had been interviewed by the reporter and was quoted at some length on the merits of “Widia”; Roger Derby emphasised that the price demanded by Krupp for the product was justified due to the “difficulty of manufacture” - a comment disputed by other interviewees.

To return to the judgement of Chief Judge Knox. In brief it revealed that Krupp had agreed to deal solely with GEC with respect to “Widia” in the U.S. and as part of the agreement Thomas Prosser & Son and the other U.S. distributor for Krupp were bought out by Carboloy:

On May 1, 1936, Prosser sold all its assets and good will to Carboly upon the following terms, to wit: a down payment of \$13,000 for the purchase of the inventory, and the balance, amounting to almost \$300,000, payable over seven years, the annual payment being contingent on Prosser's not competing with Carboly.

Later Knox commented:

There is no doubt, however, that Simons [the other distributor] and Prosser did a proportionally large business. For the seven years preceding the sale, the two companies between them sold an average of 935,000 grams [2061lbs] per year;

Simons was paid out more, \$1 million, but had held out longer and this sum may not accurately reflect the amount of sales being achieved by each of the two distributors. "Simons' profits were estimated to be at least \$254,000 per year, and perhaps as high as \$482,000."; Knox had apparently not been furnished with the equivalent information for "Prosser".

There is an inconsistency in Knox's description of the terms on which "Prosser" was bought out - it suggests that Carboly bought out the whole of the "Prosser" business but I believe he was actually referring to its "Widia" import arm only; Thomas Prosser & Son importers continued in business as evidenced by the clipping I had discovered online from the *New York Times* report of its move to 120, Wall Street in December 1937.

When I obtained a full image of the report through a NYT subscriber, an American friend, it confirmed what I had suspected. The reporter had obviously spoken to Roger Derby Prosser who was described as now being in charge of the management of the firm of "importers, engineers and steel dealers" founded by his "grandfather" (sic), which was "also the American representative of the Krupp Steel Works of Germany". The report mentioned the firm's early success with lap-welded tubes without identifying their inventor and attributed the invention of the 'Prosser' tube expander "still in use...throughout the country" to Thomas II (it was invented in England by Richard and patented in 1846). The firm was also credited with introducing Krupps's tungsten carbide cutting material into the country but omitted any mention of it ceasing to be a supplier.

What other Krupp products Thomas Prosser & Son still imported remains untraced but presumably the Second World War and its outcome would have put a stop to any continued association with the discredited armaments supplier to the Nazi regime. Twelve Krupp officials were subsequently charged with using forced labour and other war crimes at the post-war trials in Nuremberg.

Press reports in the U.S. in April 1942 had revealed that Thomas Prosser & Son was just one of many businesses subpoenaed to produce its records to a Senate Committee studying the effect of patent controls on war production.

Roger Derby Prosser did remain in business, probably until about 1960. From June 1943, having, presumably, received the final payment from Carboloy under the 1936 agreement, adverts inserted by machine tool distributors began appearing in the U.S. press nationwide which included within their listed stock the “Prosser Carbide Tool Grinder”. The “Prosser” grinder featured regularly in such adverts until about 1960; second hand machines appeared in adverts from time to time until 2001 and a Google search in 2022 revealed many results from vintage machine enthusiasts. One result was to the website “[Vintage Machinery](#)”, which actually has a page dedicated to Thomas Prosser & Son, a rare find for the otherwise elusive business; four of the sources listed on the page (transcribed below) are of interest in that they identify the extensive range of machinery and metal products sold by the firm at the beginning of the 20th century, which was reduced to just grinders by 1940:

1908 The Iron Age Directory lists Thomas Prosser & Son, 26 Platt St., New York, as makers/suppliers of axles, steel billets and ingots, engine and other castings, ore crushers, forgings, gears and gear blanks, coffee, spice, corn and feed mills, connecting rods, piston rods, pump rods, crank shafts, rock-crushers shells, car and locomotive wheels and tires, boiler tubes, and wire.

1940 Aero Digest buyers' guide lists Thomas Prosser & Son as a supplier of grinders.

1944 issue of Metal Progress lists Thomas Prosser & Son, New York, as a supplier of carbide tool grinders.

1957 4-page catalog of Prosser Carbide Tool Grinders from Thomas Prosser & Son

Where the family firm was based in the latter years of its existence is not known, it was described as a supplier of the grinders, who the manufacturer was is also unknown.

When Roger Derby Prosser died, aged 91, in 1989 he was still living in Englewood, Bergen, New Jersey, where his parents had lived, and his obituary in *The Record* dated 23rd May also referred to a property at Weekapaug, presumably the summer home on Rhode Island inherited from his parents. The obituary described him as being the “president” of Thomas Prosser & Son and of holding senior positions in two other businesses at the

(unidentified) time of his retirement. The obituary did not mention the ranch in Texas in which he had been left a life interest by his uncle Robert Woodward Prosser (see p. 113) and in which he was said to be living in a report in the *Del Rio News Herald* dated 8th December 1959 of a dedication service of the newly built “Prosser Hall” at St. James Episcopal Church in Del Rio financed by a bequest left by his uncle. Perhaps it was his uncle’s death that prompted Roger Derby Prosser to wind up the family firm and retire from business.

The exact date of the dissolution of Thomas Prosser & Son has not been traced in searches made online on newspaper sites or otherwise. In 1963 Roger Derby Prosser had told Manchester that he still held “business files” of the firm.

Richard’s older brother, Thomas Prosser I, was, no doubt, proud of the firm he founded that was to remain in existence for over 110 years and of the prosperity, only acquired later in his life, that he passed on to his son and grandchildren.

Chapter 47

Richard: A Personal Conclusion



(© *Science Museum*)

During the ten years of my research into and writing of his life I have often studied the image above of the portrait of Richard painted in oil by the young Abraham Wivell and now held in the Science Museum's collection. Although attributed to being a portrayal from a death mask, the painting is that of a person still very much alive - as if drawn from life by the 22 year old artist.

Wivell's parents had been living near or in Birmingham since about 1840, initially in Edgbaston and by 1851 in King Alfred's Place off Broad Street - close to both Richard's town house at 18 Broad Street and the Cambridge Street Tube Works. Richard may have been a familiar face and even well known to his portrayer. In fact, it would not be surprising if Richard and Wivell's father, also Abraham (who had died in 1849), had known each other and were, perhaps, even on friendly terms. Abraham Wivell snr. (1786-1849)

was not only an established society portrait painter, he was also a “writer and pioneer of fire protection, credited with inventing the first effective fire escape system” according to his entry in Wikipedia.

The young Wivell’s portrait of Richard has a warmth about it that suggests that the portrayal is subjective; that the artist had his own insights into his subject’s character.

At the very commencement of my biography of Richard I wrote of my impressions gained from his likeness in the miniature inherited by my late mother-in-law (*Rescuing Richard*). This earlier portrait, painted, probably, at least 18 years before Wivell’s, is that on the left on the title page of this Story. (The central silhouette, I suggest, dates to the early 1840’s).

Both the miniature and the oil painting depict Richard in partial, but opposite, profiles - in effect, the one facing the other. Physically, the resemblance of the two depictions is apparent in most of the features - particularly the prominent nose, dimpled chin and curvature of the mouth. The “carefully styled curling” dark brown hair in the miniature has retained its colour in Wivell’s portrait but now the “careful” styling is a ‘comb over’ - an attempt to conceal a receding hair line (the curls are still evident, however).

Apart from the evident ageing, it is in the portrayal of the eyes of the subject that there is a marked difference in the two likenesses. The younger Richard’s serious and tired gaze is averted from the viewer with a suggestion of some anxiety or lack of confidence besetting the sitter, whereas the older Richard looks directly at the viewer with an air of calm and firm resolve (but his expression is not austere). At the beginning of *Rescuing Richard* I speculated on the causes of the younger Richard’s solemn expression.

Strangely, the colour of the eyes in Wivell’s portrait appears to be brown (consistent with that of the rest of the painting), those in the miniature are a striking blue/grey - for accuracy I favour the latter, which would be consistent with Richard’s Welsh ancestry.

If Richard was known personally to Wivell, his portrayal suggests he had some regard for his subject and found Richard a likeable personality.

As for Richard’s personality my own impressions, gained from my researches, accord very much with those voiced by his obituarist William Costen Aitken, whose long obituary for his friend is transcribed in the Appendix that follows this closing Chapter of Richard’s history. It is

understandable that Aitken's obituary contains no derogatory remarks, nor were any made by the unknown writer of the obituary in *The Spectator* (also transcribed in the Appendix).

In fact, I have found hardly any condemnations of Richard in my researches. (His brother Thomas's allegations of forgery, which received wide exposure in the press (other than Birmingham's) in 1836, were publicly retracted and discredited - *Rescuing Richard* pp.81-83.)

His erstwhile employee Samuel Bayliss, a talented engineer who had first been apprenticed to him, was an exception. In *The Dust-Pressed Process* (pp. 97/98) I recounted that in March 1846 the Birmingham press had reported on the proceedings that Richard had brought against Bayliss for slander. Bayliss, through his barrister, had denied making the alleged slanderous remarks but, had, also, stated that he would retract them and issue an "ample" apology if it was proved he had. Richard was awarded the nominal damages he had asked for (set by the judge at 40 shillings) and agreed to pay his own costs. Subsequently, Bayliss wrote in a letter to the Birmingham press:

I wish it to be clearly understood that I have never offered and shall never offer Prosser any apology for any thing I have ever said of him. I have long determined to have nothing whatever to do with him, and to this determination I shall adhere.

At the time of writing my account of this event I had been unable to identify the subject matter of the alleged slander. This came to light in July 2021 when I came across a further report of the proceedings in *Aris's Birmingham Gazette* dated 30th March 1846:

Prosser v. Bayliss - This was for slander. Mr. Whitehurst for the plaintiff, and Mr. Humfrey for the defendant.—The plaintiff is an engineer in Birmingham, and the patentee of certain useful articles which he had invented. The defendant is also an engineer, and served his apprenticeship to the plaintiff, after which he became a journeyman in his service. Towards the close of last year a disagreement arose between the plaintiff and defendant respecting the wages of the latter, and a separation took place between the parties. About that time the plaintiff heard that rumours were in circulation derogatory to his character as a tradesman and a man of honour, but he could not trace the source whence the scandal had emanated. A person named Watson however entered the plaintiff's service, and the defendant then began to make statements to him respecting the plaintiff, which were unjust, untrue, and calculated to injure the plaintiff's reputation. He stated that he was a thief

- that he had stolen a quantity of things from a person named Jones, and that he had induced two persons in Scotland to embark their capital with him in his patents in order that he (the plaintiff) might become possessed of their property. By such statements the plaintiff's character was being whispered away; and at last Watson told his master that the reports were put in circulation by the defendant. The plaintiff then had no alternative but to submit to the defamation or bring an action; and, feeling conscious that he had been unjustly treated, did not hesitate to bring the case before a court of justice, to afford the defendant an opportunity of proving his charge, if he could do so. The defendant had put a plea that he had not used the words imputed to him, and that was the extent of his reply to the action. —Mr. Humfrey, on the part of the defendant, said his client denied that he had ever used the words imputed to him. He had no belief or recollection of ever having used any such language; but he had no hesitation in saying that, if he ever did say so, he was sorry for it, and was willing to make the most ample apology to the plaintiff, and to disclaim any imputation against him. - His Lordship said the case had been properly disposed of as the jury had heard, and they would find accordingly. - A verdict for the plaintiff, damages 40s, was taken by consent, each party paying his own costs.

I was slightly disconcerted on first reading this report. I had previously speculated that the alleged slander might concern the controversy in 1845 over the originality of Richard's dust-pressed process patent (described in *The Dust-Pressed Process* pp.56-69 and clarified by the revelations in the pleadings in the Prosser v. Wakefield litigation described in the *Early Addendum* to it). Bayliss would have known of circumstances potentially embarrassing to Richard and Herbert Minton, the joint owner of the patent - and which reportedly did, indeed, subsequently cause Richard to be embarrassed and disillusioned with the patent.

On reflection, I should have realised that Richard was unlikely to take defamation proceedings against Bayliss which would have risked revealing in open court facts that the parties to the Wakefield litigation had agreed to keep secret.

In July 2021 it was, initially, disturbing to discover that the allegations inferred against Richard in 1889 by Frederick William Hackwood, a schoolmaster and historian of the Black Country, were in circulation as early as 1846 - and, presumably, had continued to be given some credence during the 43 years preceding Hackwood's writing of *Wednesbury Workshops*, his

short history of the development of tube manufacture in his beloved hometown.

Hackwood's allegations principally concerned Richard's supposed betrayal of the once wealthy and well connected American, Thomas Morton Jones, a venture capitalist who was Richard's employer during the mid to late 1830s at the Britannia Nail Manufactory (where Richard was the chief engineer). Jones and Richard had also collaborated over the development of the lap-welded tube machinery patented by Richard in 1840, much of its development cost may have been underwritten by Jones. The background to their business relationship is told in *Rescuing Richard* and *Tubes: A Wealth of Trouble*; the latter narrative also examines the credibility of Hackwood's allegations, which I concluded were unreliable.

The discovery that Bayliss had, allegedly, made similar allegations in 1846 made me reconsider my earlier conclusion on those made by Hackwood - but I remain of the same opinion. The very fact that Richard challenged Bayliss to prove his allegations in open court suggests that Richard was confident that Bayliss would be unable to substantiate his claims. At the trial it is possible that significant witnesses may have actually been present in the court who Richard intended to call upon to give evidence - including Jones himself perhaps.

Following the auction sale of his large house and its furniture and effects in Sparkhill in November 1841, Jones had swiftly reached a settlement of his bankruptcy with his creditors in 1842. By 1847 he had moved his large family to the Crescent in Baskerville Place, Birmingham, adjacent to Cambridge Street and the Tube Works. He described himself variously as an accountant, boiler manufacturer; by 1851, he appears to have retired, "a Gentleman", until his death in 1857. A patent relating to boilers had been granted to him in 1843, but he was not an engineer. His circumstances after his bankruptcy suggest to me that he may still have had a continuing business relationship with Richard. (One of Jones's daughters, Adeline, was to marry Edward Lawley Parker (1837-1908), a future mayor of Birmingham who played a leading part in the successful realisation of the Elan Valley Water Works project that still supplies Welsh water to the citizens of Birmingham.)

As for Bayliss's alleged claims regarding Richard's partners in the Scottish venture, as recounted in *Tubes etc.* this was, in fact, to prove very successful. Particularly so for his two former surviving partners, who Richard eventually had to sue to recover his share in the capital of the business following his resignation from the partnership in July 1846, just four months

after Bayliss's court appearance and retraction of his allegations. (A fourth partner was to die in 1848, whose estate presumably received some payout from the business).

If Bayliss truly had (as his barrister claimed) "no belief or recollection" of making the claimed slanders then either Watson was lying or, possibly, Bayliss was drunk when he made them. Whatever the origination of the rumours, they subsisted in the minds of some in the local business community for a long time.

Obviously, the many business disputes involving Richard's patents must have led to enmity with others and his outspokenness must have caused some feathers to be ruffled, but on the whole his good reputation as an honest and honourable man appears to have remained intact throughout his life.

What of his reputation as an inventor? Was he the "genius" that I declared him to be at the outset of my research or was this a misconception engendered by my initial excitement over my discovery of this forgotten ancestor of my husband? Certainly, there have been misconceptions and mistakes in my earlier writings, some of which I have corrected in later revisions and some which still (in late 2022) remain to be corrected (and, no doubt, some that have not, as yet, come to light in my researches).

Genius: An exceptionally intelligent or talented person, or one with exceptional skill in a particular area of art, science, etc. (Oxford English Dictionary)

There is no doubt that Richard was, indeed, acknowledged to be an exceptionally talented mechanical engineer and a successful builder of very complicated machinery - a genius within that particular field.

Whether his inventions were as innovatory as some of those of the individuals repeatedly named as amongst the "great inventors" in the many lists now revealed by an online search is debatable. But amongst the most well known of these "greats" there are some, if not many, whose inventions owe much to the efforts (including failures) of others and/or were fortunate to have been the first to patent 'their' idea.

Richard, unlike some very talented inventors, was also a business man, who adopted a commercial approach in the application of his talent. In a letter to the *Birmingham Journal* dated 21st October 1837 (on the issue of the

absence of any locomotive manufacturing in Birmingham), already cited in *Rescuing Richard* (p.180), Richard made the point:

...but the manufacturer is compelled to look at the question more prudently, and decide that at present prices any profit from making locomotive engines is extremely problematical...

In fact, after his first disastrous attempted foray into nail manufacture (with his brother Thomas and John Rowlands), Richard instead looked to exploit his inventions by licensing manufacturing rights under his patents to others - thus avoiding the risks inherent in such ventures and leaving himself free to develop more inventions.

Both of his obituarists acknowledged Richard's mechanical ingenuity, but went further in their praise for his broader intellectual powers.

His mind was richly and variously gifted; he perceived clearly what humanity is capable of, and he ever strove to uplift it. (The Spectator)

Richard may well have wished to be remembered as something more than an engineer and inventor - he was obviously an admirer of that great polymath Benjamin Franklin (his probable friend the mechanical engineer John Farey jnr. has also been so described - *A Biographical Dictionary of Civil Engineers in Great Britain and Ireland* by A. W. Skempton.). The contents of his extensive library suggest that his interests were wide ranging and what has survived of his writings are peppered with literary and other references intended, no doubt, to demonstrate the extent of his erudition.

Litigious to an extent that might not seem (and possibly was not) sensible, it has been the pleadings in and press reports of the many court cases in which Richard was involved that have provided much of the material for what is known of his life. Nor was he afraid of physical confrontation as evidenced by the press reports in 1836 of his seeking to prevent bailiffs searching his mother's home for his father who was on the run from his creditors (*Rescuing Richard* pp. 80/81). In his 'illegal' second marriage to his sister-in-law in 1850 and his public support for the reform of the law prohibiting such marriages, Richard again courted controversy. Seemingly Richard was a man of conviction and self belief - it was such attributes which may have led Aitken to make the following comment about his friend in his long obituary - a fitting end to this narrative:

Mr. Prosser was one of those men who carve out a path for themselves.

Appendix Obituaries

Obituary by W.C. Aitken - The Birmingham Journal 27th May 1854

THE LATE RICHARD PROSSER, ESQUIRE., C.E.

It but seldom falls to our duty to record a greater loss to a community like our own than that which has occurred in the death of the respected gentlemen whose name appears at the head of this obituary notice. Had his life extended to three score years and ten, which marks the appointed span of man's sojourn on earth, the labours which he has accomplished would have been great, but how much greater when we consider that so much useful labour has been achieved ere he had barely past his prime. Mr. Prosser was one of those men who carve out a path for themselves. In early life he was employed in the then extensive brass foundry establishment of Penn and Williams, Bromsgrove Street. As the natural bent of his genius, however, led him to desire a more intimate acquaintance with science, he spent his leisure hours in the examination and study of the principles of mechanical philosophy, the study of applied mechanics, and in the practice of mechanical drawing. By these means he qualified himself for the profession of civil engineer, in the active duties of which he was engaged until his lamented death, which took place on the morning of Sunday, the 21st May, at his house, near Kings Norton. On matters relating to inventions or the processes carried on in the manufactures and trades of the town, Mr. Prosser was an undoubted authority. He was appealed to on the occasion of the trials of several important patent cases, and but rarely, if ever, was his aid in this direction sort in vain. In the late agitation respecting the Patent Laws, which resulted in the extensive and important alterations which now regulate the law of property in inventions, Mr. Prosser ranged himself in front of the battle. Intimately acquainted with their absurd anomalies and glaring abuses, he spared neither time nor personal exertion in agitating for their amendment. In the summer of 1851, he was examined before the Parliamentary Committee of the of the House of Commons, and gave important information as to the defective state of the Law of Patents. To him we owe the possession by Government of the "Indices of Parents", compiled by Professor Woodcroft, until the purchase of which the nation was really ignorant of what had been done or patented in machines or manufacturers. Aware how much valuable time was lost inventing what had been done before, Mr. Prosser also agitated for the publication of specifications in

groups, referring to particular classes of manufacturers. He not only did this, but something more, he showed how it could and ought to be done, by printing at an almost nominal price three valuable specifications relating to the working of wood - viz., those of Bentham, Brunel, and Elizabeth Taylor. They bore on the cover the following characteristic inscription: "Suggestions as to the form of printing the past and future specifications of letters patents for inventions, so as to render them available to the public at a cheap rate, with a view to their classification into groups illustrative of the history and progressive improvement of the trade or manufacture to which the patents relate." At headquarters an unexpected difficulty presented itself in the cost at which lithographic diagrams could be had to illustrate the printed matter; the difficulty was at once overcome by Mr. Prosser becoming a contractor for the necessary supply at little more than half the customary charge made by trade lithographers. At the period of his death Mr. Prosser was actively engaged in increasing his facilities for the production of these illustrations. Appreciating his general acquaintance with mechanical construction, the Commissioners of the Patent Office had applied to Mr. Prosser to write the appendix to the group of specifications on Small Arms. This work, we understand, was very far advanced at his death. It would have been amply illustrated with drawings of improved machines employed in the manufacture of firearms, and by a series of representations of those in use at the Russian government Manufactory at Toola (sic). Many of these plates we have seen, and can therefore vouch for their instructive character, particularly to those engaged in the manufacture of firearms. Mr. Prosser formed one of the few witnesses, not directly connected with the gun trade, who were examined during the late Government enquiry, and he there gave good, sound, and practically useful evidence.

As an inventor, from his union of practical knowledge and scientific skill, Mr. Prosser was eminently successful. His invention of improvements in machinery for the production of iron tubes materially reduced the cost of that important agent for the transmission of water and gas; while his production of buttons, tiles, tesserae, and articles of pottery from clay in a powdered state, was equally important in an economic point of view, and largely assisted the decorative artist. An invention on which he was engaged at the time of his death, applicable to calico printing, promises to affect a great saving of capital employed in that branch of manufacture. It might be easy to cite other evidences of the inventive powers of the deceased, but enough has been said to prove that he was indeed possessed of talent far above the average of ordinary men.

Keenly alive to the difficulties he had to encounter in the acquirement of knowledge in early life, Mr. Prosser was an active and intelligent advocate of an education which would teach young people to comprehend intelligently the operations in the trade or professions in which they were about to engage. For the "charlatans" in science, non-entertained a more profound contempt. To the modest enquirer, he was ever courteous and kind; his warm sympathies were always enlisted in their behalf, and that are not a few who now occupy respectable positions in society to whom he most unostentatiously lent a helping hand in their time of need. As an employer, he was beloved and respected; to a circle of friends who knew and could appreciate him, he will be long remembered; of the bereave meant to that inner circle to whom he was endeared by more tender ties, none can tell the intensity of the loss.

THE SPECTATOR 27 MAY 1854

PROSSER THE ENGINEER

[FROM A CORRESPONDENT.]

Richard Prosser, of Birmingham, an engineer of high original faculties and great attainments, has died suddenly, of inflammation, while sedulously pursuing a work of importance to the Ordnance Board, an appendix to the volume just issuing from the office of Mr. Woodcroft, containing all the patented inventions on the subject of gunnery from the earliest periods. Mr. Prosser's work would have added thereto all the practices that have not been patented, together with original views of his own as to what is still required in the science and practice of projectiles, which Mr. Prosser regarded as being very inferior to what would obtain if progress were rightly directed. How hard Mr. Prosser worked to get together his materials, and how conscientiously he strove to make his work perfect, his friends were well aware; and to his over-anxiety may be attributed the disease that so suddenly laid him low. There are few men whose minds are so amply stored with the knowledge of all that had been done in manufactures and machinery, few who so well perceived what we are still lacking. And not in a merely mechanical view is his loss to be regretted. His mind was richly and variously gifted; he perceived clearly what humanity is capable of, and he ever strove to uplift it. Thoroughly liberal in all his sentiments, he was beloved by all who knew and understood him. He was the enemy of every

species of pretension, and more especially of scientific pretension. To his exertions the late reform in the Patent Law was mainly owing. He was the inventor of many mechanical improvements, and amongst others, of the process of forming pottery from dry clay dust, made to adhere together by pressure,—a process which gave rise to the manufacture of the mosaic tiles in colours known far and wide as Minton's; a patent process only just getting into the remunerative stage, and which we hope will obtain an extension for the benefit of Mr. Prosser's family.

It is a loss to the community that such a man has passed from amongst us; but he died in his vocation—work—work for the benefit of the community. The Board of Ordnance will miss the brain that would have solved for them the problem of the efficient manufacture of arms by machine-tools, and of a better kind than have yet been produced. He died at the age of fifty; leaving a family of six intelligent children, who will miss in him not only the loving father, but the friend also who was awakening in them and cultivating the highest powers of their natures.

Subsequently quoted in full in Aris's Birmingham Gazette 5th June 1854 and elsewhere in press nationally.

Those readers looking for an index will not find one - for which I make no apology. This electronic format should be searchable on most devices; an essential aid in my own researches.