

Prosser The Engineer: A Forgotten Birmingham Genius



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

The Fourth Story

The Emancipation of Inventors

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 Fourth Story is largely confined to the relevant events in Richard's life that occurred during 1851 and 1852. His portrait on the title page, which was painted shortly after his death from a death mask, dates to 1854 (© 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 this 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
to date

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

Work in Contemplation:
The Fifth/Final Story
Finally: Gunnery, Death, Aftermath

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 "The Emancipation of Inventors" especial thanks are due to the following:

The archivists and, in particular, Steven Campion within the Business and Intellectual Property Centre of the British Library, the custodian of much original "Prosser" source material; Eve Watson, the archivist of the Royal Society of Arts where Richard had been a "most helpful" member of its influential patent reform committee; and, not the least, to Beryl Leigh, a retired librarian of the Patent Office Library, whose enthusiasm for Richard encouraged the writing of this and the other Stories of his life.

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.

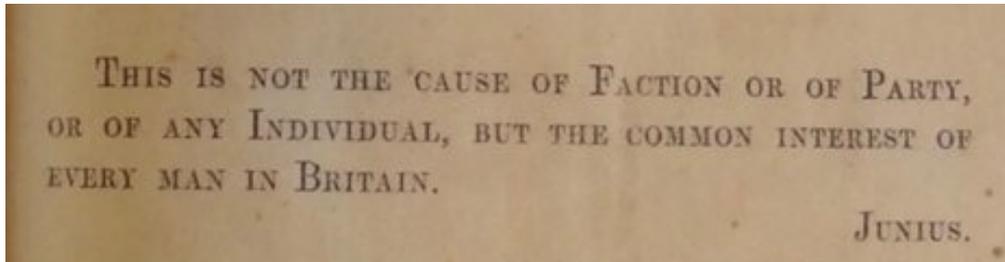
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The Emancipation of Inventors

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Chapter 22

An Unsung Hero?



*Image of a quotation on the cover sheet of "Prosser's Pamphlets" Dec 1850
(© Victoria and Albert Museum, London)*

The Views of Others

Back in March 2012, on only our second visit to the British Library (BL), we had met Beryl Leigh who had been a librarian with the Patent Office Library (POL) for over 30 years. (Our first visit in search of any Prosser records had been largely unrewarding, but we had identified the relevant division of the BL and who we needed to contact. See *The First Story: Rescuing Richard* p.97)

The POL, while still housed at its original location off Chancery Lane, had become a part of the BL in 1972 following a short period as one of the British Museum reference libraries. The physical transfer of the POL to the new St. Pancras headquarters of the BL had taken place in 1999. Although officially retired, Beryl was assisting in the, still ongoing, task of incorporating the POL's archive into that of the BL's Business and Intellectual Property Centre. For our visit Beryl had put together a selection of material relating to the Prosser father and son, Richard and Richard Bissell. The results of my genealogical researches had revealed some family details and chronology, but we then knew little of the career of the latter and even less about that of his father, other than that he was described as a Birmingham engineer and inventor in his son's entry in the original *Dictionary of National Biography* (available in [Wikipedia](#) by tapping on the preceding underlined link to the website - the first of many herein to relevant sites). The *DNB* entry for Richard Bissell Prosser did, however, also disclose that:

Richard Prosser was heavily involved with the introduction of the Patent Law Amendment Act 1852, and his 700-volume library, combined with

that of Bennet Woodcroft,(1803-1879) formed the basis of the Patent Office Library, which opened on 5 March 1854.

We were very pleased to hear Beryl speak enthusiastically about both of the Prossers but, in particular, about the father for his contributions to patent law reform and the creation of the POL - for both of which, she confided, Richard Prosser was an “unsung hero”.

In researching the topic I have discovered a dearth of in depth studies of the reignited campaign that led to the 1852 reform of the British patent system; a campaign which had been unsuccessfully rumbling on for decades.

Of three of the better known authorities on the early development of the system:

Klaus Boehm, who was “unable to analyse the pressure for reform in any detail”, made very few references to any of the pre-1852 reformers and, unsurprisingly, none to Richard (*The British Patent System* published in 1967);

H. I. Dutton, in his more detailed study, cited Richard twice for statements he made before the 1851 House of Lords Select Committee on patent law (Dutton included more citations from Richard Bissell Prosser’s *Birmingham Inventors and Inventions* but conflated father and son in the index) (*The patent system and inventive activity during the industrial revolution, 1750-1852* 1984);

Sean Bottomley, the most recent, and with the advantage of easier access to records not so readily available to earlier commentators, mentioned Richard only once, again for a statement he made before the 1851 Committee (*The British Patent System during the Industrial Revolution 1700 -1852* 2014).

Boehm’s work was published by the Cambridge University Press under the “auspices” of the University’s Department of Applied Economics. Dutton and Bottomley had each studied their chosen subject for a PhD in the first instance. After Dutton published his book in 1984 the interest in invention and patent systems here and abroad amongst academic historians appears to have grown considerably. Much has since been published in the form of academic papers available on line, as well as books, containing detailed statistical analyses and intellectual argument as to, for example, the historical development and interaction of patent systems and invention and their economic impact. Of the few I have read, none mention Richard other than Bottomley.

My searches online for Richard’s name had revealed no other results relevant to patent reform other than the references in his son’s entry in the *DNB*

quoted earlier. However, since 2013 a search in the online [Oxford DNB](#) would reveal the new entry for Richard which I had assisted its author to research at the outset of my investigations into Richard's life, this does contain a synopsis of his then known involvement in the patent reform movement

The *ODNB* entry was written by Professor Christine MacLeod, one of the leading authorities on the patent system and invention in Britain during the 18th and 19th centuries. Christine freely admitted when she first made contact through the *Ancestry* genealogy site in October 2012 that she “knew scarcely anything at all about RP except that he was a great friend of my 'hero' Bennet Woodcroft.” In addition to many academic papers, Christine is the author of two substantial and much cited works neither of which mention Richard (although each cites his son's *BI&I*). That Richard makes no appearance in her earlier *Inventing the Industrial Revolution: The English Patent System, 1660-1800* (1988) is unsurprising, but his omission from *Heroes of Invention: Technology, Liberalism and British Identity, 1750-1914* (2007) might be deemed an oversight, except for the facts that Richard was a relatively minor character within its immense subject and little of the contemporary source material relating to him would have been readily discoverable at the time of its writing.

Other than to ourselves, Richard's very existence was, in fact, in 2012 still known to only a very, very few who were studying or working in very specialised fields (see *The First Story: Rescuing Richard* pp.13-15), of whom Beryl Leigh was one.

Thanks to the recent advances in the digitisation of source material available online, I have come across comments, admittedly not many, from contemporaries of Richard, which suggest there was some truth in Beryl's assertion of Richard's “hero” status.

His (unidentified) obituarist in *The Spectator* dated 27th May 1854 briefly commented:

To his exertions the late reform in the Patent Law was mainly owing.

(The full obituary can be found in the Appendix to Chapter 1 in *The First Story: Rescuing Richard* pp. 24/25.)

On the same date the *Birmingham Journal* published a longer obituary attributed (in a note made by Richard Bissell Prosser on the copy held in BL) to the local business man and fellow supporter of patent law reform William Costen Aitken (1817-1875). In the following extract Aitken described Richard's “exertions” in more detail:

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 (sic), and gave important information as to the defective state of the Law of Patents. To him we owe the possession by the Government of the "Indices of Patents", 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.

A much shorter version of this obituary appeared in the *Illustrated London News* on 1st July 1854 which, nevertheless, emphasised Richard's contributions to the 1852 reform. (The full *Birmingham Journal* obituary can be found in the Appendix to Chapter 1 in *The First Story: Rescuing Richard* pp. 22/24.)

It is unsurprising that some support for these endorsements was to appear in the Birmingham press:

But probably no feature in the new [1852] act is of greater importance than the publication, at a cheap rate, of the specifications of the patents after the lapse of a few weeks period when they are filed, in passing we may remark that the credit of this important feature in the new act is entirely due to the exertions of the late Mr. Richard Prosser, who pressed the importance of such a step upon the attention of Commissioners, and demonstrated the practicability of the proposition by printing three specifications as examples. His recommendation was finally adopted. (Birmingham Journal 9 June 1855)

The last amendment of the [patents] law was brought about mainly by the persevering labours of Birmingham men, of whom the ingenious and public spirited RICHARD PROSSER was amongst the foremost. Only those who were associated with him can appreciate the great value of his services, and the energy, determination, and fulness of knowledge he brought to the prosecution of his self-imposed task. Though death has robbed us of Mr. PROSSER's assistance, there yet remains others who shared his views and participated in his zealous labours.
(*Birmingham Journal* 9 August 1862)

In 1864, in his evidence to a Parliamentary Committee, Henry Cole (1808-1882), the distinguished civil servant and adviser to Prince Albert, was to describe Richard as:

...a patentee of considerable eminence, now dead, Mr. Prosser brought forward the reform of the Patent Law;

Cole had himself been greatly involved in the early 1850s with the patent law reform campaign and had sat on the Society of Arts' committee appointed in 1849 to promote the cause; Richard was also a member. It has to be said that the later Sir Henry may have had other motivation, explained hereafter, for this championship of Richard in addition to his evident admiration and their, probable, friendship.

And lastly, in 1898, in a report in the London press on the proposed relocation of the POL, some late recognition appeared:

Mr. Richard Prosser, of Birmingham, who took a prominent part in Patent Law reform, placed at the disposal of the Commissioners of Patents a large portion of his private library. (*London Evening Standard* 9 April 1898)

Of the names cited by Dutton and Bottomley as campaigners for reform of the patent law in the period immediately leading up to the 1952 Act, the names of Thomas Webster (1810-1875) and Bennet Woodcroft (1803-1879) are amongst the most prominent. MacLeod championed Woodcroft, who as a friend and collaborator of Richard's, appeared, fleetingly, in Richard's earlier Stories, as did Webster. A leading patent law barrister, Webster had represented Richard's opponents Cutler and Van Wart in the recent litigation over his lap-welded tube machinery patent. Woodcroft, of whom more later, also sat on the Society of Arts' patent law reform committee; it was just one of many bodies debating the issue at the time, some only recently constituted to promote the reform, but it became one of the most prominent.

The Society for the Encouragement of Arts, Manufacture and Commerce (its original name) was founded in 1754; it was granted a Royal Charter in 1847

and the right to include “Royal” in its name in 1908. The “Arts” in the founding mission statement were not confined to the fine arts and extended to creative activity in all fields that might “improve our manufacturers and extend our commerce”.

It was in some research papers on the Society of Arts’ role in the advancement of invention that I found more recognition of Richard’s contribution to the 1852 reforms. (The Society had previously played a significant part in bringing Richard to public attention as recounted in *The Second Story, The Dust-Pressed Process* (pp.115-119). In early March 1843 the process was the subject of one of the Society’s regular evening lectures; the interest this engendered led to Richard’s first known meeting with Prince Albert later that month.)

In my researches online I had come across a series of “Studies” by James Harrison published in the now Royal Society’s *Journal* in 1980 and 1982. The first three of these papers, titled *Bennet Woodcroft at the Society of Arts 1845-1857*, were an in depth analysis (including much biographical detail) of the part that Woodcroft played in (inter alia) the patent law reform campaign and the creation of the museum that eventually evolved into the Science Museum. The three papers published in 1982, notwithstanding the limitations suggested by the title (*Some Patent Practitioners Associated With The Society of Arts c1790-1840*), contained much of relevance to the history and operation of the old British patent system, its deficiencies and its subsequent reform. The first of the 1980 papers contained five references to Richard and described him as “a close associate of Woodcroft in the patent reform campaign”. The last of the 1982 papers contained two references to Richard; the second alluded to Richard and Woodcroft as:

Two particularly associated with the patent reform movement that led to the passing of the Patent Law Amendment Act of 1852.....Although Woodcroft has taken the main credits, the modern system of patent classification and of abridgements owes much to both, and when the Patent Office Library was opened in 1855 with the private libraries of these two men as its nucleus, Prosser’s contribution was the greater.

I subsequently discovered that in 2006 Harrison had published a short book based on these articles: *Encouraging Innovation in the Eighteenth and Nineteenth Centuries - The Society of Arts and Patents, 1754-1904*. A note on its sleeve informs the reader that:

Harrison was a patent examiner at the UK Patent Office for more than thirty years after qualifying as a chartered textile technologist following 10 years industrial experience. On becoming a Fellow of the Royal Society of Arts in 1954 he soon took an interest in the history of the Society and was one of the earliest members of its History Study Group.

He served for several years on the Society's Library and History Studies Committees.

In its Introduction Harrison described his book as an “essay”, which he had been encouraged to write late in life at around the 150th anniversary of the enactment of the Patent Law Amendment Act by those at the RSA aware of his papers published in its *Journal* more than twenty years previously. Harrison explained that by the early 1980s little had been published on the development of the British patent system. He admitted that he was not an historian by training and had been “fascinated” to note the interest that was subsequently taken by academics in the subject (including Dutton who he later met). However, Harrison was clearly sceptical of the emphasis that was placed on their “attempts to chart significant cause and effect relationships between patents and industrial growth prior to reform of the patent system”, which he observed “with respectful astonishment”. In Harrison’s opinion: “Although, doubtless, patents had **some** effect in promoting economic growth prior to the 19th century their influence can be over-stated”. He also strongly voiced his indignation that the importance of the Society of Arts’ contributions in fostering invention since its foundation in 1754 and in the reforms of the patent system during the mid and latter half of the 19th century had not been given the recognition it deserved.

(In his essay Harrison praised Dutton for his in depth and well sourced research. Perhaps he had forgotten, or had chosen to overlook, his somewhat scathing review of Dutton’s 1984 treatise published in the *RSA Journal* in August 1986; his criticisms mainly centred on alleged carelessness and mistakes in Dutton’s analysis of the mountain of source material he had unearthed, but he also complained that Dutton had largely ignored the Society’s influence.)

Harrison may not have been a trained historian but his earlier Studies and 2006 “essay” are scholarly to a very high standard; they are also an enjoyable and easy read. Bearing in mind his career in the Patent Office (and earlier in industry) his extensive knowledge of inventors and invention is not surprising. His writings are supported by scrupulous and detailed research as evidenced by the numerous citations of source material. He had the advantage of his long career as an examiner at the Patent Office, the coalface of his chosen subject, and would have been familiar with its extensive archive. Perhaps, it was an interest in Woodcroft, in effect the first head of the new Office from November 1852 and the subject of his first Study, that led him in about 1946 to become a member of the RSA so that he could investigate its records.

Harrison was generous in the acknowledgments that he gave for the support and advice he received (inter alia) from within the RSA and his colleagues at the Patent Office. Amongst the latter was John Hewish (1921 - 2010?), who I already knew of from Christine MacLeod; in 2012 she had recommended his book *Rooms Near Chancery Lane: The Patent Office under the Commissioners, 1852-1883* (2000) for its references to both Richard Bissell Prosser and his father. Its sleeve note tells us that Hewish, who initially trained as an engineer:

spent much of the Second World War in flight test research and in the Navy. After reading English at Oxford and some technical journalism he joined the National Reference Library of Science and Invention (part of the British Museum library) in 1968. He retired from its successor the Science Reference and Information service in the British Library in 1985 but has since worked as a consultant on the archival collections.

Both Harrison and Hewish clearly joined Beryl Leigh in having some admiration for Richard, Woodcroft's otherwise virtually unknown friend and collaborator; admiration gained out of their familiarity, acquired over decades, with the vast archives of the Patent Office and, in Harrison's case, those of the RSA.

In his 2006 "essay" Harrison referred to Richard as: "A most useful member of the Society's committee" and, later, as:

a Birmingham engineer and patentee [who] had joined the Society shortly before Woodcroft [i.e. in 1843]. He was equally zealous for patent reform and served on the Society's Committee for Legislative Rights where his contribution was great, one of his suggestions being of especial significance. An issue to which the Committee gave attention was how 'invention' was to be defined.....Prosser pressed for and gained acceptance of the brief definition to be found in the Statute of Monopolies of 1624, in essence "any manner of new manufacture". The Courts were already well versed in interpretation of this phrase and continued with care and skill to mark its boundaries through more than a century and a half of shifting tide of scientific and technical development.

(Source: minutes of the Legislative Committee on the Rights of Inventors 12 December 1850)

According to Hewish in 2000: Richard was "a popular man of wide interests, and a notable patentee". In describing Woodcroft's and Richard's contributions to the POL his description of Richard's was fulsome:

Prosser's books, besides being more numerous and varied, were a bibliophile's dream, covering mathematics, millwork, geology, mining,

railways, ordnance, pure science, agriculture, natural history and architecture.

Bennet Woodcroft

Hewish had earlier written a “preliminary study” of Woodcroft for a booklet to mark the centenary of his death in 1879; published by the BL in 1980, its title *The Indefatigable Mr Woodcroft* was taken from an account of the activities of the Patent Office in 1857 in *Household Words*, the weekly magazine edited by Charles Dickens. Hewish and Harrison were aware of each other’s researches at this time as evidenced by acknowledgments in their respective, concise but thorough, 1980 biographies of their chosen subject. Hewish’s commemoration is out of print but Harrison’s is accessible online through the [JSTOR](#) website.



(Image Woodcroft 1860 Science Museum CCL)

In 2000, in his early history of the Patent Office, Hewish included a brief description of Woodcroft’s career in Manchester before he moved permanently to London in 1846:

He was born near Stockport in Lancashire in 1803, the son of John Woodcroft, a dyer and velvet finisher whose family had long-standing links with Sheffield where they owned property. After shop floor training in textiles (he “worked at the loom” wrote his obituarist) he went into partnership with his father. This was not a success and he set up on his own as an inventor and consultant. He took out patents for improvements in textile machinery and textile printing, and for marine propellers, one of which was fitted with success to Brunel’s SS Great Britain. He moved to London and continued practice as a patent agent, becoming involved, ...with the Society of Arts. For a short and unsatisfactory period he was Professor of Machinery at University College.

The “obituarist” mentioned in the above passage was Richard Bissell Prosser who, aged 18, had been offered employment by Woodcroft in late 1856 as an “Extra Clerk” in the Patent Office. The deceased Richard’s young son did not have the required qualifications for the post but Woodcroft, characteristically, bent the rules; he was aware that his late friend’s family had been left in financial difficulties following his untimely death in May 1854.

Woodcroft formed a strong and lifelong bond with his “protégé”, who was to become his master’s “Boswell” according to Hewish. Richard Bissell Prosser was employed at the Patent Office for the next thirty two years, rising through the ranks of clerks to become a Superintendent of Examiners in 1884 and accumulating on the way the wealth of knowledge for which he was to become well known.

The long obituary written by Woodcroft’s “Boswell” published on 14th February 1879 in *The Engineer* (just one of many) was relied on by both Harrison and Hewish for details of Woodcroft’s early life. His unsuccessful venture into academia was also mentioned:

for which he was not particularly well fitted. Although his ideas were clear and decided, he lacked the faculty of expressing them in the sustained manner essential to a successful lecturer.

After only a brief résumé of his career in the Patent Office, there followed a detailed description of Woodcroft’s eight patents (granted between 1826 and 1851) which took up nearly half of the obituary. Richard’s son then dwelt on Woodcroft’s “strong antiquarian” interests and “ardour” for the collection (in effect in many cases the rescue) of all things relating to invention; in particular of machinery, which led to the creation of the Patent Office Museum and, also, of portraits of inventors and other innovators, which (it was alleged) suggested the idea of a National Portrait Gallery to its founders. Woodcroft’s few published writings were detailed with a note of regret that there were not more (not for his “literary faculty” of which he was not “possessed...in any marked degree” but for his knowledge of the history of inventions). It was for his “services to inventors”, for which Woodcroft “had hardly received adequate recognition”, that Richard’s son had reserved the most praise for his former patron, who being an inventor knew their needs and had an “intimate knowledge” of patent law. “No better man” more suited to the post could have been appointed head of the new Patent Office, an appointment which he, “being no ordinary Government official” immediately carried out “not in the spirit of doing as little as he must, but as much as he could” notwithstanding the efforts by other senior officials to thwart his, for them, “too advanced...schemes”. Of those “schemes” which were implemented, three were illustrated of which two (neither a requirement of the 1852 Act) were: the immediate printing of the specifications (including their drawings) of about 15,000 (sic*) pre-1852 patents (all achieved within five years) and the establishment of the POL. In the case of the latter, Richard’s son did state that the idea for a library was “largely, but not entirely due to Mr Woodcroft”, but he left the reader with the impression that the printing of the pre-1852 specifications was Woodcroft’s initiative alone. The obituary concluded with references to: the purchase by the Government for £1000 of the indices of patents previously compiled by Woodcroft (Richard’s part in this, as alleged in Aitken’s obituary, was unacknowledged); the later

publication of volumes of patent “Abridgements”, which Woodcroft initiated; and revealing comments as to his character, including his “strong determination” and compulsion to complete any task he set himself coupled with a loss of interest once he had achieved success - “a man of original genius and power,... he exercised a strong influence upon all who came in contact with him”.

*(Actually about 13,000 - a typesetter’s error rather than a mistake by the usually meticulously accurate Richard Bissell Prosser? The obituary is accessible on the [Grace’s Guide](#) website.)

The obituary only makes a reference in passing to Woodcroft’s role in the campaign that led to his appointment to the post that was to make him a person of some influence in his day: “He did not it is true originate the Act of 1852 - that was the work of many - but he carried it out in a thoroughly liberal spirit”.

Richard’s son did not entirely overlook the less complementary aspects of Woodcroft’s character, but Hewish was more forthcoming in 1980. The Patent Office archives contained much material concerning Woodcroft (assiduously collected largely by his “Boswell”), on which Hewish based his assessments as described in the following extracts from *The Indefatigable Mr Woodcroft*:

His activities are better documented than those of the average Victorian civil servant. Fortunately for us, he was ambitious, combative and often awkward in his dealings with other people. (p.4)

Woodcroft’s surviving letters, and his published works confirm the indications of a largely self-taught man, who was not at ease in academic circles... (p.10)

He had, as will be apparent, a somewhat impulsive character, and it may have worked against him at a time when diplomacy and finesse were called for above all. (p.16 - Hewish suggested that at the Society of Arts Woodcroft was “eclipsed... by that functionary par excellence, Henry Cole”)

The incident is one example among several of Woodcroft’s opportunism. (p.16 - his attempt to make the Society bear the cost of the publication in 1850 of his history of steam navigation which, according to Harrison, was stymied by Cole.)

Woodcroft was not a modest witness,... (p.17 re his evidence before the 1851 Parliamentary committee on patent reform.)

This looked like missing the chance of making the Prince's patronage of such a scheme known by his own agency. The memorial was delayed at his request (p. 20 - re the initiative in 1853 to create a museum of inventions for which Woodcroft wanted the credit for having introduced to Prince Albert; the "memorial" was from a group of Manchester engineers, just one of several similar proposals then current for such a museum.)

Even here, toes were trodden on by Woodcroft. A printed note on the first page of the catalogue records that "The loan by Mr Woodcroft of this collection led to the formation of the Free Public Library". (p.23 - the note that Woodcroft insisted should be included in the first (1857) Catalogue of the POL (to which its librarian, his subordinate, had the temerity to object). Richard's contributions to the Library were in fact almost twice that of Woodcroft's.)

Woodcroft's career was evidently as disputatious as it was many sided. If he has been shown complete with some warts this is because they are apparent in the evidence. ...His tactlessness and avidity for credit must be weighed against his vision and originality as an inventor and in a new field of public service. (p.37)

Harrison was kinder to Woodcroft in his 1980 commemoration when acknowledging his idiosyncratic and "curious" character. He too recounted the examples of Woodcroft's opportunism recited by Hewish and added a few more gleaned from the RSA archives: "...he used the Society more than he was useful to it". His account also mentions episodes illustrating Woodcroft's obsessive acquisitiveness as a collector: his "borrowing" when in Manchester of the collection of another engineer inventor which he kept and "treated as his own"; his acquisition of the Society's unwanted (due to lack of space) collection of models of machinery donated to it over many years, which Harrison suggested did not end up at its purported destination, University College. Woodcroft's later years were beset with arguments over the ownership of many of the items acquired by him including some of those housed in the Patent Office Museum under his watch. At his death he occupied two adjoining properties: one a residence (which itself "must have resembled a museum") for himself and his much younger wife (he remained single until he was 63) and the other a repository for the remainder of his collections.

However, it was the very traits which make Woodcroft appear an unattractive personality which were those that drove him to leave “The legacy of invention” (the sub-title to Hewish’s booklet *The Indefatigable Mr Woodcroft*) - and it was, indeed, a considerable legacy. Some of the leading 19th century exhibits in the Science Museum are ones that were saved by Woodcroft (Stephenson’s famous steam engine “Rocket” for example - *image Science Museum CCL*), but any acknowledgement of his contributions is not immediately evident on its website. His achievements at the Patent Office, for which in themselves Woodcroft deserves the accolade of a “hero”, were in an obscure field of little public interest.



It is therefore not surprising that by 1980 Woodcroft had “been forgotten by all but a few specialists...amongst whom a vague awareness of a legendary patriarch” existed (Harrison). That awareness has become less vague during the last forty years amongst industrial historians, but, although an online search against his name will now produce numerous entries, he remains largely unknown elsewhere. In fact, his underling at the Patent Office, Robert Bissell Prosser is probably better known by historians and Woodcroft would probably have been somewhat put out to find that his “protégé’s” entry in the *ODNB* (updated in 2013 by Christine MacLeod) is fifty per cent longer than his own (updated in 2015).

Richard’s *ODNB* entry (new in 2013) is twice the length of Woodcroft’s. Despite his “avidity for credit”, Woodcroft may not have resented this longer entry for his friend and collaborator, for whom he had immediately arranged the taking of a death mask on learning of his demise and commissioned the portrait in oils now part of the Science Museum’s Woodcroft Collection. Woodcroft was to play an important part in the last four years of Richard’s life and his subsequent patronage of his eldest son is, perhaps, some indication of the gratitude that Woodcroft felt for Richard’s friendship and support during this period. A patronage, however, that may have instilled a sense of debt in his “Boswell” which contributed to the inhibition that appears to have deterred Richard Bissell Prosser, the biographer of so many other inventors, from writing any biography of his father.

Woodcroft was unlikely to have been a “popular man”. The assertion, that Richard was, by Hewish, was unattributed, but there is some evidence of this from contemporary sources: in the obituaries mentioned above; the declared regard of others including Henry Cole; and the evident friendship of the

redoubtable Lady Bentham, the widow of Sir Samuel, of whom more later. It may be that Richard was one of the few to befriend Woodcroft and appreciated the positive attributes of his driven, but awkward, friend.

Henry Cole

Henry Cole (1808-1882) was another whose personality did not always endear him to others. *Image - rare portrait of Cole in mid life - 1851 sketch by Prosper Lafay (© Victoria and Albert Museum, London)*



The following transcript of the sleeve note to a biography published in 2003 gives a vivid portrait of a hugely influential figure:

Extraordinary larger-than-life ‘eminent Victorian’, visionary civil servant, and accomplished spin-doctor, whose pioneering ideas created the magnificent museum which is now the V&A.

By the end of his life Henry Cole was recognised as a national institution, ‘Old King Cole’, though he was also treated with caution as a “playful monster“. He was a lifelong civil servant, in a period when civil servants could be buccaneering reformers rather than impassive mandarins. Described as a “clever agitator, and a public spirited fellow“, he waged many campaigns, moving from the Public Records to the Penny Post, to railway expansion, to patent law revision, to art and design reform.

With Prince Albert he created the Great Exhibition of 1851, and kept on organising international exhibitions for the rest of his life. He was in charge of a nationwide system of art and science education, and, again with Prince Albert, developed the South Kensington area as the intellectual quarter of London. The Victoria and Albert Museum, of which he was founding director, remains as his best known memorial, and is a symbol of his mission to educate through exhibiting. He is portrayed not only as exhibitor, museum director and educationalist, but as a galvanic force administering salutary shocks over wide areas of Victorian life: children’s books, hackney cabs, public lavatories, choral singing, cookery, sewage disposal, to name only a few. In his own time he aroused admiration and antipathy in equal measure...., his energy and creativity...mark him out as an inimitable Victorian phenomenon.

The Great Exhibitor: The life and work of Henry Cole - Elizabeth Bonython and Anthony Burton 2003.

It seems probable that Richard was on friendly terms with Cole, whose own antipathy for Woodcroft he did not disguise in correspondence cited by Harrison in 2006 and is intimated in his evidence to a Parliamentary

Committee in 1864. Cole's animosity may have originated many years previously and was mutual; Hewish in 1980, citing Woodcroft stated: "In later years he expressed his dislike of Cole in private correspondence" (page 34).

Cole had known of Richard since at least 1843 as briefly noted in Cole's diary entry on 15th June 1843 and as already recounted in *The Second Story: The Dust Pressed Process* in which he makes numerous brief appearances and at more length on pp.135/136 and 162-167. When they first met remains unknown but, in the light of the events described in *The Dust Pressed Process*, it seems probable that they had met before the end of 1846, by which date they had both been introduced to membership of the Society of Arts (Richard in 1843 and Cole in 1846).

Woodcroft had joined the Society in 1845, the year before his relocation to London. It would not be surprising if he and Richard had already met before then and they must surely have known of each other for their patented inventions and from the publicity they had each received in the press and journals such as *The Mechanics' Magazine*. In Manchester, Woodcroft, who had studied with and was a favourite pupil of the chemist and physicist John Dalton, was a well known engineer; his circle of friends and acquaintances included some still famous names: Joseph Whitworth, James Nasmyth, Richard Roberts, Eaton Hodgkinson and William Fairbairn (RBP's obituary).

What it tells us of Richard (i.e. that he was on good terms with both these foes, Cole and Woodcroft, each very strong and opinionated personalities) it is difficult to say. Richard, himself, was no shrinking violet. All three could have been described as "indefatigable"; perhaps Woodcroft was the most obdurate but he was no match for Cole.

Amongst the academic industrial historians Cole has not received as much recognition as he, probably, deserves for his role in the campaign that led to the passing of the 1852 Act. Having only joined the Society of Arts in 1846 he quickly became a prominent member and when its Committee on the Legislative Recognition of Rights of Inventors was appointed he acted as its secretary. In 2006 Harrison claimed that the influence of this Committee and of its three reports, for which Cole claimed the authorship, was such that the 1852 Act became known for a time as "The Society of Arts Act".

Thomas Webster

Harrison, in championing the role of the Society, which he felt they had ignored, did endorse those academic historians who recognised the importance of the lawyer Thomas Webster to the reform movement. Thomas Webster (1810-1875) was a "leading authority on patent law...It was largely due to his efforts that the *Patent Law Amendment Act* of 1852 was passed"

states the short entry (updated 2020) which can be found on searching for his name in the ODNB. Otherwise an online search revealed little apart from a shorter entry on [Wikipedia](#), which appears largely to be a transcript of the original *DNB* entry written by a longstanding Secretary of the RSA and its earlier historian Sir Henry Trueman Wood (1845-1929), who is much cited by Harrison. Wood had made similar claims. *Image Thomas Webster QC (unattributed portrait Harrison 2006)*



In 1980 Harrison credited Webster with the revival of the fortunes of the Society of Arts after its membership and finances had fallen to unsustainable levels by 1840. In 1841, having joined the Society only about three years previously, he was elected its Chairman. He was the instigator during the decade of the recruitment of many new members who were attracted by a new regime of weekly lectures and discussion meetings and, importantly, his success in securing the revocation in 1842 of a long-standing rule which must have deterred many inventors from joining the Society. Since its foundation the Society had sought to encourage dissemination of innovation by awarding premiums to applicants whose inventions passed the Society's tests; a successful applicant would benefit, directly, financially and, indirectly, from the publicity generated. However, it was a condition that the invention must be immediately and freely available to all and, therefore, must not have been patented. In fact, patented inventions could not even be discussed at Society meetings. In 1842 Webster had managed to overturn a principle of the Society that had been sacrosanct for three quarters of a century.

In 1849 Webster also sought to take action to cut the Society's expenses by proposing that the exhibitions hosted by the Society should be reduced. Here he met an obstacle in the form of Cole, "The Great Exhibitor", whose powers of persuasion were even greater than Webster's. The result of this confrontation was that Webster was ousted as Chairman. "Those who got in Cole's way generally had to get out of it" (Wood courtesy of Harrison).

This episode may be the reason that Webster, although he remained a member of the Society, was not to sit on its patent reform Committee, but in 1980 Harrison was to maintain that:

Of the many who campaigned for patent reform through the 19th century, pride of place must be given to Thomas Webster, who laboured with tremendous persistence and patience for this cause

through the Society of Arts, the British Association and other organisations.

Webster was the first witness to give evidence before the 1851 House of Lords Select Committee and he was to be the eventual draftsman of the 1852 Act. His relations with Richard, whose 1840 lap welded tube patent he had so recently sought to overturn while acting on behalf of the Van Warts (and Cutler), are unknown.

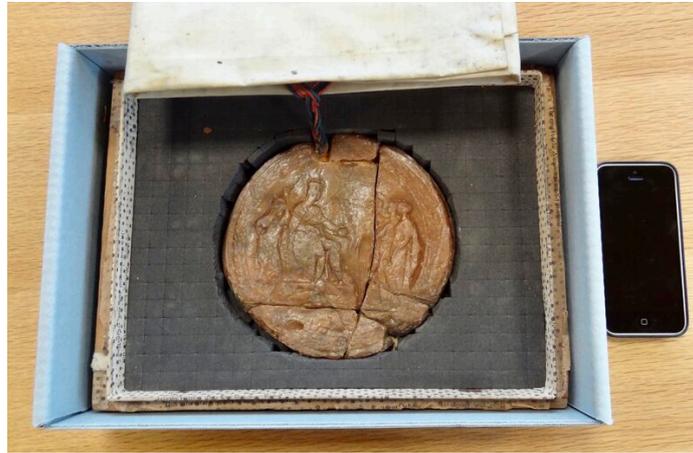
In his obituary for Woodcroft, Richard Bissell Prosser, wisely, did not seek to champion the cause of any one individual for their contributions to the successful outcome in 1852 of the patent reform campaign: “- that was the work of many” was his brief comment.

An examination of Richard’s own knowledge of patents and patent systems and a chronology of Richard’s involvement in the movement, his ‘exertions’ briefly described by Aitken in the extract of his friend’s obituary quoted above (pages 8/9), will hopefully give some credence to the championship of Richard by Aitken, Cole, the few unidentified others and, of course, by Beryl Leigh.

First, however, a very brief oversimplification of the origins and shortcomings of the old, pre-1852, British patent system - shortcomings which will be examined further in the history of Richard’s contributions to its reform.

Chapter 23

The Old Patent System and (some) of its Shortcomings



An example of the Great Seal attached to a patent granted to Thomas Prosser, Richard's older brother, in 1830 for sash window improvements - note size against mobile phone to right.

(Image - Reproduced with the permission of the Library of Birmingham: ref.MS 3391 Finding No. (DV 404) 387119.)

The old system's origins go back to at least the 14th century when an incentive, in the form of an award, was granted by the Crown to a Flemish weaver to introduce his country's methods into England (Bottomley). The grant was a type of "letters patent": visible evidence to all concerned of the grant of a Crown privilege (of which a multiplicity of other types already existed).

Over time the term "patent" came to be used to identify a specific form of grant - that for inventions. From these beginnings the British patent system slowly evolved accompanied by the creation of a bewildering bureaucracy of offices to implement the grants. The bureaucrats administering the offices were appointed by the Crown, initially usually as a reward for other services, and they were often remunerated so handsomely out of the fees charged to the recipients of the grants that they were able to employ clerks to carry out their duties for them.

By the 19th century the number of these offices administering the grant of patents had grown enormously. Separate sinecures had been created for 'duties' of a trivial nature (eg. provision of sealing wax) and unnecessary 'rubber stamping'. The names of some of these offices were so obscure that Dickens did not need to rename them in his satirical short story published in

October 1850: A Poor Man's Tale of a Patent. (See also *Rescuing Richard* pp.146/147)

In a much quoted extract Dickens referred (inter alia) to “the Lord Chancellor's Purse-bearer, the Clerk of the Hanaper, the Deputy Clerk of the Hanaper, the Deputy Sealer, and the Deputy Chaff-wax” - these posts were not fictions and were just a few of the officers each of whom extracted a fee from the applicant patentee. The extract ends with the following plea from Dickens' “Poor Man”: “I ended with the Deputy Chaff-wax. Note. I should like to see the Deputy Chaff-wax. Is it a man, or what is it?”

The First Report of the Society of Arts' Committee (probably written by Cole and published in December 1850) in its opening paragraph described the existing patent system in a similar tone of aggrieved astonishment that such a Byzantine process existed:

By passing through a series of formulas, so antiquated that the origin of them is lost in the obscurity of past centuries – so empty and frivolous, that common sense revolts at them – so numerous, that they can hardly be reckoned accurately – so intricate, that everyone seems a pitfall to discourage scientific invention to the utmost – so inexplicable, that the greatest diversity of opinion obtains in interpreting them – so costly, as to place scientific intelligence wholly within the power of capital; an inventor may at last obtain a mere recognition of his right, which he is then at liberty to protect as he may be best able.

Of the shortcomings of this system the most obvious one was cost.

Bottomley's analysis found that in 1850 the fees of the Deputy Chaff-wax and all his superiors for an English patent (which included Wales and, at extra cost, the colonies) totalled about £95 (equivalent to £10,810 purchasing power (RPI) in 2021: measuringworth.com BUT see note at end of this Chapter for relative values based on other comparative measures e.g. earnings). By 1850 it was usual to appoint a patent agent to navigate the labyrinthine system on payment of a fee, usually 10 guineas (this saved an inventor the expenses otherwise incurred in working time lost plus, for inventors not based in London, in travel and lodgings). This small and select profession had evolved in the second half of the 18th century, the first patent agents were actually clerks employed within the patent administration offices; it later attracted lawyers with a technical bent who could provide advice on ancillary aspects, including the drafting and preparation of the specification of the invention (costly in itself).

If an inventor wanted to have protection in the separate jurisdictions of Scotland and Ireland then the costs more than trebled. Bottomley estimated that by 1850 about 40% of English patentees secured a Scottish patent; coincidentally, Richard took out four of his eleven English patents in Scotland (and two in Ireland, which was much rarer).

Bottomley conceded that the cost of patents must have been a deterrent to inventors as evidenced by a dramatic increase in the number of patents granted annually after the enactment of the 1852 Act. Relatively few patents were granted in the 18th century and the numbers only increased gradually after 1800. In England by the 1840s they averaged about 450 annually, in 1851 there were 455 but in 1853 the number of grants leapt to 2,187. The Act, which created one unified system for the whole of the UK, had achieved some reduction in cost but not nearly as much as Richard had hoped for and continued to advocate after its passing.

However, Bottomley believed that Dickens exaggerated the other difficulties and delay that his "Poor Man" had to endure and that, in any event, they were self inflicted as he did not use a patent agent. As Bottomley suggests Dickens' and, also, Cole's descriptions of the complexity of the patent process were probably deliberately inflated to achieve maximum exposure and effect. Provided an inventor did employ a patent agent, by 1849 the initial process was usually accomplished, if unopposed, within 3 to 5 weeks. The initial process granted provisional protection based on a very brief (and often vague) description of the invention and was conditional on enrolment of a detailed specification within the stipulated period - six months if the applicant had alleged, as they usually did, that a Scottish and Irish patent were also to be taken out. (Bottomley).

It is clear that patent agents exercised a considerable amount of control over the patenting process before the 1852 Act and just three firms dealt with 80% of the patent applications by 1850 (Bottomley). According to announcements in 1839/1840 in issues of *The Mechanics' Magazine*, Richard had acted as the Birmingham agent for one of the three - the smallest headed by the *Magazine's* editor Joseph Clinton Robertson (see *Rescuing Richard* p.179). At the beginning of the next decade Richard's then view of the profession was made public in a series of letters published in the Birmingham press described in more detail later. He particularly accused patent agents of abusing one aspect of the system whereby anyone could file a caveat entitling them to a warning of a patent application for an invention which might relate to the subject matter described in the caveat; an objection could then be filed causing delay and expense to the applicant patentee. The potential

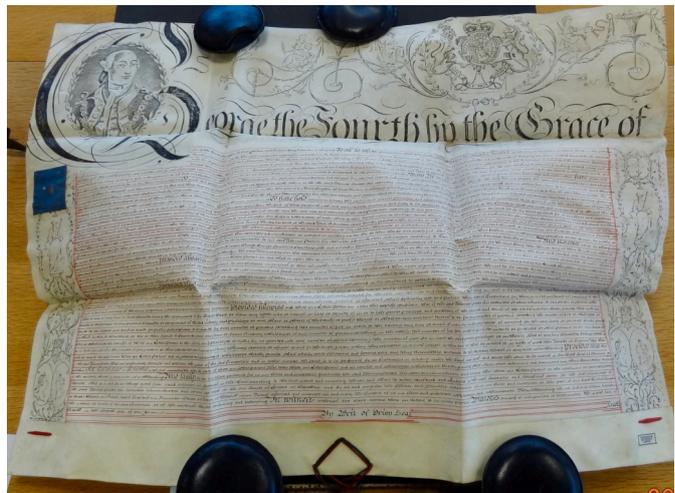
for abuse of the caveat procedure is self evident; it was not uncommon for a purely speculative caveat to be filed relating to a class of invention by a person who had no such invention in contemplation but who hoped to gain some financial advantage. According to Richard, this even sometimes led to the 'pirating' of the invention.

Cost, unnecessary procedural complexity and caveat abuse were major shortcomings of the pre-1852 patent system, but perhaps the greatest shortcoming was one of record keeping or rather lack of it.

An invention had to be novel to the UK for it to get any protection from a patent (from its earliest origins with the Flemish weaver, patenting of imported foreign inventions was permitted whereas in some other countries, eg. the U.S., it was not). However, the grant of a UK patent did not guarantee the novelty of the claimed invention and the patent would be unenforceable or could be set aside if its novelty was disproved, whether or not the prior/true invention had been patented. Therefore, before even embarking on the development of an idea (itself possibly very costly), never mind then incurring the substantial cost of patenting it, an inventor was wise to investigate what had gone on before. Here, he (or, indeed, she) was faced with an enormous difficulty in the case of researching unpatented prior inventions, for which a leap of faith in the novelty of his/her own invention might be required after an investigation of prior patented inventions had been satisfactorily completed. However, even the latter investigation was no easy task as there was no official record of prior patents other than the manuscript copy of each specification lodged, in the case of an English patent, in one of three possible offices in London nor, even, was there any official method of filing in classifications or indexation. Woodcroft, aged only 23, had been caught out at considerable cost when his very first patent was found to infringe an earlier one; this misfortune led to his compiling the index referred to in Richard Bissell Prosser's obituary for him (and also Aitken's for Richard).

Bottomley argued that Woodcroft and the other reform campaigners made too much of this issue on the grounds that since the 1820s new patents had been given much exposure in journals such as the *London Journal of Arts and Sciences* and *The Mechanics' Magazine*; the former more expensive journal sometimes including complete transcripts of specifications (whether this was welcomed by the majority of inventors seems doubtful and it also seems doubtful that it would have included specifications of the length of some of Richard's). In addition, Bottomley pointed out that patent agents had created their own indexes of patents and copies and abstracts of specifications. However, these arguments disregard the fact that journals and magazines,

particularly historic issues, might not be readily accessible, could not be relied on for completeness and accuracy and, in any event, would have had no standing in a court of law. The same could be said for the records of a patent agent, whose knowledge and expertise would only be made available at a cost and, in addition, if only three firms had a majority of the business there must have inevitably been potential conflicts of interest. Distrust of patent agents was evident in contemporary accounts. To be certain of keeping his/her invention secret many prospective patentees would prefer to rely on their own researches and, in order to be satisfied that an existing patent would not be infringed, the enrolled specifications of all potentially relevant patents would have had to be identified, located and scrutinised. Pre-1852 the enrolled specifications were written on parchment in one of the formal scripts adopted for legal and other documents (harder to read than common hand) and no official printed copies existed; a transcript could be purchased from the holding office - at a cost. *Image: Thomas Prosser's 1830 patent (Reproduced with the permission of the Library of Birmingham ibid).*



One of the other principal complaints of the pre-1852 patent system was that its adoption was beyond the reach of the largest in number of potential patentees, those created by the industrial revolution - mechanical operatives working in factories. A simple modification to machinery could be of immense value, but many an employee received very modest or, even, no reward when left with no alternative but to divulge their idea to their employer in the hope of some recompense.

Some of the system's complainants had even more fundamental objections. Most inventions are improvements to existing processes - as were all of Richard's patents. Even ground breaking inventions have usually been as a result of experimentation by many, the eventual patentee of a successful process owing much to the efforts and failures of others. This evident truth was put forward by some as a reason for objection to the existence of patents in principle. Others objected for religious reasons - inventive talent being God given should not be exploited for profit. Some simply objected to any form of monopoly, even temporary.

A number of inventors, some famous, even refused to patent their inventions on altruistic grounds. Others felt that any form of patent process was not worth the expense and trouble; they preferred to protect their invention from piracy by maintaining secrecy, which was lost as soon as a specification was enrolled. Others countered with the argument that encouraging inventors to patent discouraged secrecy with greater benefit to society in the long run.

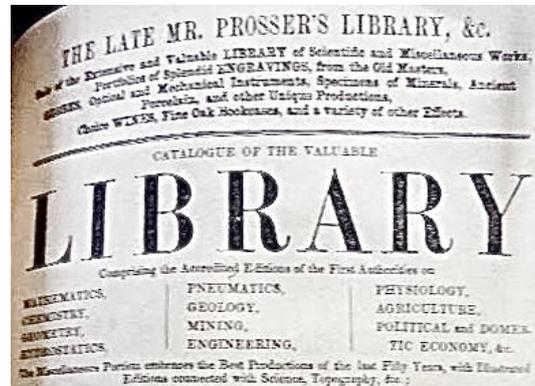
The 1852 Act did not put an end to this debate, which continued throughout most of the 19th century.

Note - Copied from measuringworth.com

In 2021, the relative price worth of £95 0s 0d from 1850 is:
£10,800.00 using the retail price index
£12,500.00 using the GDP deflator
In 2021, the relative wage or income worth of £95 0s 0d from 1850 is:
£84,300.00 using the average earnings
£133,000.00 using the per capita GDP
In 2021, the relative output worth of £95 0s 0d from 1850 is:
£404,000.00 using the GDP

Chapter 24

Patent Reform: Richard's Role - His Expertise



(Image - Reproduced with the permission of the Library of Birmingham: ref. L78.1PRO/279287)

On January 21, 1853 – when the Patent Office had been open only a few weeks – Woodcroft reported to Windsor that Prosser would “immediately send on loan to the Patent Office Library for public use until such books can be found elsewhere, several thousand volumes of purely mechanical works, which have taken him almost a lifetime to collect”. The 1857 Library catalogue lists 1,827 titles, of which Nos. 1–388 are headed “Mr Woodcroft's collection” and 389-1093 (i.e. 705 titles) as “Mr Prosser's collection, purchased by the Commissioners in 1856”.

(Hewish: The Indefatigable Mr. Woodcroft)

Whether Woodcroft had given his report directly to Prince Albert, clearly the intended recipient, is not clear from Hewish's account. The reference to “several thousand volumes” being loaned by Richard was obviously an exaggeration but, perhaps, more as to the extent of Richard's generosity than the extent of his library.

The two day auction of “The Late Mr. Prosser's Library” on 10th and 11th April 1855 included over 650 lots consisting mainly of technical books, but also including (inter alia) journals, newspapers, engravings and maps. Many of the lots comprised multiple works. In 1861, on leaving High House in Kings Norton the family's home since 1847, his widow auctioned much of its

contents including the “LIBRARY of upwards of 350 Volumes of valuable Works” (see *The Third Story - Tubes: A Wealth of Trouble Part 1* pp.156/157). The POL catalogue is available [on line](#) and Richard’s contribution in 1853 (at pp.44-150), Hewish’s “bibliophile’s dream”, not only covered the subjects described by Hewish (mathematics, millwork, geology, mining, railways, ordnance, pure science, agriculture, natural history and architecture), but also included a number of more recent texts including foreign publications on patents and patent law in the U.S., France and Germany.

A PDF of the 1855 auction catalogue on the [prossertheengineer](#) website can be accessed [here](#) (courtesy of The Library of Birmingham). This collection’s subject matter is as wide ranging as that donated to the POL and included many antiquarian volumes. Large quantities of technical (and other) periodicals are itemised, including extensive series of the aforementioned *London Journal* and *The Mechanics’ Magazine* (and also of the American publication the *Journal of the Franklin Institute*); books on patent law here and abroad included four copies of Webster’s on the 1852 Act; records of patents included two volumes of French patents and a bound copy of Woodcroft’s index of English patents 1617-1852.

Woodcroft’s claim that the collection was the work of almost a lifetime seems unlikely bearing in mind Richard’s upbringing and his financial difficulties throughout most of the 1830s. I have previously speculated whether Richard might have acquired the library of his previous employer, the much travelled and once extremely wealthy American businessman Thomas Morton Jones, when the contents of his substantial home were auctioned in 1841 following his bankruptcy (see *Tubes etc. ibid.*).

His library may only be circumstantial evidence of the extent and depth of Richard’s knowledge on invention and patents, but it is unrealistic to imagine it was acquired purely for show. Both of his obituarists testified as to his expertise:

On matters relating to inventions or the processes carried on in the manufactures and trades of the town [Birmingham], 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 sought in vain. (Birmingham Journal - Aitken)

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. (Spectator- unknown)

The “several important patent cases” referred to by Aitken have not been identified; there had been those reported relating to his own tube patents, but Richard could not have acted as an independent expert on those. He did act as an expert witness in an earlier unreported patent infringement dispute in 1836 when the Wednesbury tube manufacturer James Russell sued his own brother John Russell. Four expert witnesses were called, three of them major figures in their time: Marc Isambard Brunel" (1769-1849 - the father of the great Isambard Kingdom Brunel) and William Carpmael (1804-1867), later a leading patent agent and lawyer, for James; John Farey (1791-1851) "the mechanical engineer and polymath" (who was supported by Richard) for John (see *ibid.* p.15).

Farey must have become well known to Richard in the years to follow, if not before. In addition to their involvement in 1836 in the Russell brothers' dispute, Farey acted as an expert witness for the licensees of Richard's 1840 lap-welded tube patent in the 1840s in the “Great Suit” and in other litigation. Farey was highly regarded as a mechanical engineer and inventor, as a reliable expert witness, and for his knowledge of patent systems here and abroad; he also undertook the writing of specifications for other inventors.

In 1838 a letter to *The Mechanics' Magazine* published in its issue dated 3rd February is suggestive of the correspondent's breadth of knowledge and attention to detail in a topic outside his usual field. Although, his brother Thomas's 1830 patent referred to previously may have been a factor or perhaps Thomas himself prompted the letter? The disgraced Thomas was to emigrate from Birmingham to the U.S. later that year.

Wilson's Window Sash Suspender

Sir - Annexed I hand you an extract from the 32nd vol. of the Transactions of Society of Arts 1814 which, if made generally known in your pages, may be more acceptable to some of your readers on the score of expense, than the patent method, described in your 711th number.

I am Sir etc,

R Prosser

Birmingham Jan. 4 1838

The advice in the letter was somewhat tardy, the “711th number” of the *Magazine* had been published over a year before, but in the light of the events of the previous three years it would not be surprising if Richard was behind with his reading.

The earliest evidence so far found of Richard's familiarity with the law applicable to patents is a letter from him published in an issue of *The Mechanics' Magazine* on 23rd May 1840, which shows that he had scrutinised the progress of an earlier attempt to introduce a reforming measure to Parliament. In a previous issue its editor, the patent agent Joseph Clinton Robertson, had wrongly endorsed an incorrect statement made by a William Baddeley who was a frequent correspondent to the *Magazine* at the time. Robertson acknowledged that: "Our friend Mr. Prosser is right". (William Baddeley c1806 -1867: fire inspector, civil engineer and patent agent - online source *Grace's Guide to British Industrial History*).

USE OF THE WORD PATENT

Sir

In the letter of Mr Baddeley contained in your Magazine of May 16 he asserts that the custom of applying the word patent to unpatented articles was prohibited under penalties and in a note in your editorial capacity you confirm Mr B's impression. In the original bill of Lord Brougham such a clause was inserted but there is no such clause in the Act itself. All that the Act imposes is "a penalty of £50 for using unauthorised the name of a patentee". Certainly there is no penalty for applying the word patent to an unpatented article. Why it was struck out of the original bill I am not prepared to say. The custom of trade is to be deprecated which in Birmingham calls an article patented when it is not and in London a thing town made when the fact is otherwise. It would best serve the interest of morality and of sound commercial dealing too if in Birmingham and London the custom of trade were always to tell the truth come what may.

I am Sir

Yours respectfully

R. Prosser

2 Cherry street Birmingham

May 18 1840

The fact that Richard was invited to join the Society of Arts Committee in 1850 and was required to give evidence to the 1851 House of Lords Select Committee speaks for itself.

Perhaps one of the most significant testimonies as to his expertise was Richard's own contained in a report of a public meeting in Birmingham reported in *Aris's Birmingham Gazette* on 16th June 1851 at which Richard, who appears to have been the principal speaker, was quoted at length. The meeting in the Public Office had been called to consider "the best means of

exciting public attention to the evils of the existing Patent Laws in this country". Following an account by Richard of the main "evils" and how they should be addressed in which he quoted from a publication of "Mr Bennet Woodcroft", with whose views he concurred, Richard continued:

*When he (**Mr. P.**) went to London some time since, he found there had been 13,716 patents since the reign of King James the First. The first patent he believed on record was one taken out by a monk and some other person for the transmutation of metals; but of these 13,716 there was no properly arranged official record, so that no one could really tell where they were without a great amount of trouble in going from one office to another; and as a matter of information he had prepared a list of the number of patents granted in every ten years since the issuing of the first. Mr. Prosser read the following list;- From the year 1617 to 1627,35; 1627 to 1637,66;1637 to 1672,61, it being 35 years; 1672 to 1682,53; 1682 to 1692,69; 1692 to 1702,82; 1702 to 1712,22; 1712 to 1722, 50; 1722 to 1732, 96; 1732 to 1742,46; 1742 to 1752,85; 1752 to 1762, 100; 1762 to 1772,234; 1772 to 1782,306; 1782 to 1792,536; 1792 to 1802, 722 ; 1802 to 1812, 947; 1812 to 1822, 1117; 1822 to 1832, 1673; 1832 to 1842, 3000; 1842 to May 1851, 4416, being 9 1/2 years; total 13,716. There were 500 patents taken out annually for England alone, and England was the only country where the specification was not required when an application for a patent was made. In all other countries, when a man asked for a patent, he said here is my specification and I want a patent for it. The Americans published a list annually of all patents, so that a man in that country could at once tell what inventions really were in existence. They did not, however, publish the specifications in that country; but they were aware of the defect, and were now seeking to remedy it. In France and in Austria the specifications were published. In America they had an officer called the Officer of Inventions, and he made reports and circulated them throughout the whole country. In France their patents were transmitted through the post, but in England the trouble and expense to inventors was really enormous. A man with an invention had first to find out a Patent Agent in London, who, for taking his money to different offices, was of course to be well paid. There was the first defect. A man should not be under the necessity of employing a Patent Agent; and although Mr. Dickens's description of the working of the system had been denied, he (**Mr. Prosser**) was thoroughly satisfied that it was too true. If they wanted to obtain a specification copy they must pay a high price. He had paid £15 and when he did get it it was not worth anything to him. With respect to the expense attending the issuing of patents, he was decidedly of opinion that it ought not to amount to more than such sum as would be sufficient to cover the expense of the office in which the*

*business was to be transacted with all reasonable despatch and the greatest possible security to the public. He believed that for ten pounds each patent they would be able to establish a competent office, and have sufficient out of the funds to form the nucleus of a library in which they might have all the foreign mechanical works. It was really incredible the amount of injustice and injury inflicted by the present system. Very few persons were at all acquainted with the number of inventions which were really invented over and over again. Upon the subject of propelling there had been not less than two hundred inventions, and the following circumstance, which occurred not long since, would show the insecurity of patent property:- A Bank held patents which had been assigned by a person who owed money. A gentleman had taken a licence for one of the patents, and was working it, but he could not agree with the Bank as to the royalty, neither could he give it up without serious injury to himself, as his customers were anxious for the article. He applied to him (**Mr. Prosser**), and asked what he would recommend, upon which he advised him to give it up and then come to him again. He did as directed, and he (**Mr. P.**) told him to commence at once manufacturing the same article in accordance with another patent which was granted in 1798, and had expired. He went to the Bank, showed the specification, when it was at once discovered that it was the same article manufactured under two different patents. He believed the patents which had been thus assigned had been valued at £13,000.*

As well as exhibiting his expertise, the above report is also some indication of the extent of Richard's collaboration with Woodcroft. Richard referred to his own earlier researches in London into the patents that had been granted in England; the phrase "some time since" suggests that these took place a number of years previously. Bearing in mind Richard's early career and his involvement with a notable patentee of many inventions Dr. Church, in the much patented nail and tube industries, it would not be surprising if he had undertaken much of his research into earlier patents between the late 1820s and early 1830s. Harrison in 1980 had suggested that the compilation of Woodcroft's indices could not have been his work alone.

(Further evidence of the extent of Richard's expertise is apparent in his letters in the "Birmingham Debate" - see pp. 79-100)

Chapter 25

Patent Reform Pre 1850: Slow Progress



*The Rolls Chapel Chancery Lane London c.1800 the principal of the three repositories of patent specifications pre 1852
(Samuel Ireland - public domain)*

Whilst not a matter to “excite public attention”, by 1850 the unsatisfactory state of the British patent system had been under discussion for more than half a century amongst those with an interest in it (manufacturers and investors/capitalists as well as inventors). For most of that period the presiding Governments’ (and therefore Parliament’s) interest in the subject was, at best, intermittent or non-existent having wars and other more pressing matters to conduct and debate.

In May 1829 a Select Committee of the House of Commons did hear evidence and subsequently published a “Report on the State of Law and Practice Relative to Patents for Inventions”. The twenty two witnesses who were examined at “great length” included the 1836 Russell dispute experts, Farey and Brunel Snr. The “Report” in fact merely contained transcripts of the witnesses’ evidence preceded by a statement that the Committee had found the subject “so intricate and important” that they wished to reconvene the inquiry in the next parliamentary session before they reported their conclusions - this did not occur.

Farey's evidence, the most authoritative of the witnesses' according to Dutton, included documentation he had submitted to the Committee which was added as an 100 page Appendix to the Report and covered the subjects listed in the image below.

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Subsequent attempts to introduce reform bills before Parliament by the patent lawyer and MP Richard Godson (1797-1849) were unsuccessful but led to the cause being taken up by Lord (Henry) Brougham (1778-1768), the Lord Chancellor between 1830-1834, who promised much but actually was able to achieve little in the Act to Amend the Law Touching Letters Patent for Inventions that was enacted in 1835.

Patentees could now amend their specifications to remove small errors and petition the judicial committee of the privy council to extend their patents for a further seven years but the system was left very much as it was. (Dutton 1984)

In 1839 and 1844 legislation was passed effecting, respectively: a corrective amendment to the 1835 Act; and enlarging the Privy Council's power to extend patents by up to 14 years. Attempts to introduce wider reform measures in the later 1830s had failed and "for most of the 1840s patent reform attracted little attention" (Dutton).

Interest was to revive in the late 1840s and in the latter half of 1848 a Lords' Select Committee on the Signet and Privy Seal Offices sat to investigate the role of those offices in the grant of patents, in particular, patents for inventions (the Offices were also responsible for the grant of patents for Crown appointments). Woodcroft, Webster and Carpmael were three of the fourteen expert witnesses called to give evidence; of the others a significant number were patent agents. Richard would, no doubt, have been an outspoken witness, but he was not - in any event, throughout 1848 he was still heavily embroiled in the much publicised litigation over his 1840 tube patent.

The Committee's report published in January 1849 identified (inter alia) the principal shortcomings described earlier of the existing patent (for inventions) system and recommended measures that would have gone some way to remedying them if implemented. Recognising that such implementation would have meant the loss of many livelihoods, the report ended with an expression of hope that those officials who were rendered redundant could be awarded compensation. No immediate action was taken to address the somewhat thorny issues raised in the Report.

The earliest known reported contribution by Richard to the reform debate was at a meeting of the members of the Society of Arts on 27th April 1849 chaired by Webster, then its Vice President. The meeting had been called to announce the appointment of a special committee of the Society to consider "the laws affecting arts and manufactures, and the protection afforded to designs and inventions" and to invite contributions from the members on the subject. In 2006 the initiative for this appointment was attributed to Cole by Harrison.

The report of the meeting in the June issue of the monthly journal *The Artizan* continued with an account of a reading of a letter from Cole listing what he considered to be the main faults of the existing system. Richard, present in person, was then quoted:

Mr Prosser considered that the cost of obtaining a patent in England is much greater than it should be. The cost of obtaining patents in America, Austria and France is much less than in England; and the cheapness of obtaining patents in those countries is not found to increase litigation. He also considers that the specification should be deposited at the time the application for a patent is made. The Americans publish alphabetical lists of all patents granted. The French and Austrian print the specifications of all patents granted. These are things which he considered it would be well to have done in England.

William Newton (1786-1861), one of the three leading patent agents and editor of the *London Journal*, agreed that the cost of patents should be reduced and suggested what he considered to be satisfactory amounts for each of the UK jurisdictions; a Mr. W.E. Newton of the same business address (source: *Harrison* 1982) considered that there should be a single system for the whole of the UK, but he did not agree with “Mr Prosser” as to the timing of the deposit of the specification. A Mr. Brockeden advocated the publication of indexes of the patents granted and the Chairman, Webster, concurred that this would be “very desirable”. Some further unreported discussions took place following which the meeting was adjourned until May 10th.

I have found no report of a meeting on May 10th in *The Artizan* or elsewhere. In 1844 the Society, in financial difficulties, had suspended publication of its *Transactions* and publication was not resumed until 26th November 1852 when its newly named *Journal* was launched. Minutes of these meetings have probably survived in the Society’s archives but my proposed visit to view them had to be put on hold when Covid 19 struck in early 2020. I decided to commence writing the, already delayed, Fourth Story nevertheless. (*Harrison* had cited the minutes in 1980, but due to an ongoing reorganisation of the archives they remained unavailable in 2022.)

In fact, Cole’s initiative, if it was his, may have lost its initial impetus, perhaps a casualty of the skirmish in 1849 between himself and Webster over the latter’s proposals to reduce the exhibitions the Society hosted; a disagreement which, as mentioned earlier, Webster lost. When the appointment and membership of the Society’s “special committee” was formally announced eighteen months later in November 1850 Webster’s name was omitted.

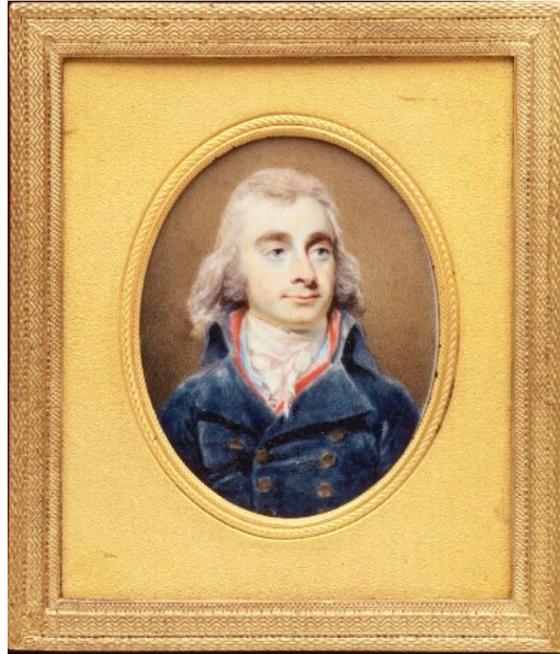
During these eighteen months the campaign to reform the patent system remained in the doldrums; it was not on the political agenda, despite Brougham’s continued interest. However, an impending event due to open in May 1851, in which Cole was a major player, was to inject the stimulus required to engage the attention of the Government.

Richard would, no doubt, have been frustrated that the potentially promising start to 1849 on the patent reform issue had led to nothing. Not that he would have had much time to spare to devote to it. The year was to see the tube litigation moving towards a satisfactory conclusion, but it would still have been time consuming. In the autumn of 1849 he wrote a 20 page paper on brick making for his friend Edward Dobson; a contribution to Dobson’s

Rudimentary Treatise on the trade published in 1850, a work which remained an authority on the subject for over a century - *The Dust-Pressed Process* pp. 167-192. However, most of 1849 and much of 1850 must have been spent developing his anti-weld tube invention which was provisionally patented on 11th April 1850 with enrolment of its massive specification on 11th October of that year.

Chapter 26

The Bentham Affair



*Samuel Bentham by Henry Edridge
watercolour and bodycolour on ivory, circa 1795-1800
NPG 3069 © National Portrait Gallery, London (CC license)*

There was one reported incident involving Richard in the autumn of 1849 which has a bearing on patent reform and I take this as an excuse to examine Richard's relationship with Lady Bentham in more detail. It was a relationship which was clearly a meeting of two remarkable minds, at least on one subject - that of the inventions of her late husband Brigadier-General Sir Samuel Bentham.

The incident has already been described in Part 1 of *The Third Story - Tubes: A Wealth of Trouble* pp. 152-154. Richard took the opportunity offered by the holding of the Exposition of Arts and Manufactures in Birmingham to exhibit a working model he had made of Sir Samuel Bentham's "ship timber cutting machine" (the description in the Birmingham press at the time); an invention which Richard considered had been pirated by Marc Isambard Brunel - to Brunel's great financial gain but at great cost to the country and no reward to

Sir Samuel. This allegation was repeated in the Birmingham press and probably emanated from Richard (see *Tubes etc.* *ibid*).

In September 1852 Bentham's 1793 and Brunel's 1801 patents were two of the three chosen by Richard when (at his own expense) he had printed and published three old patents as examples of the manner in which the specifications of all the pre-1852 patents should be made readily accessible.

In late 2017 I had traced an image (see *Tubes etc.* *ibid*) of the model in a 1908 Catalogue of the Science Division of the V&A and made enquiries as to its whereabouts of its successor - the Science Museum. In March 2018 we again visited the Science Museum's store at Blythe House in West Kensington and were met by its new Collections Administrator Natasha Logan who, not without difficulty, had managed to trace the model in its vast collections. The model is, in fact, of just one of several woodworking machines included in Bentham's 1793 patent. *Images © Science Museum*



SAW-FRAME FOR SHIPS' TIMBERS, 1793

This represents an early type of machine which was patented by Sir Samuel Bentham in 1793, for sawing timber into curved, bevelled, or winding forms, such as required for the ribs for wooden ships, etc.

The timber to be sawn is fixed in a frame which as it travels along, is moved sideways by means of a pin which travels in a curved slot in the stationary main framing. The movable frame is mounted upon a second frame which is capable of rocking about a horizontal axis, so that the timber may be placed in the right position to be sawn, either with a bevel, or in a twisted or winding form. Specimens of the work done by the model are shown.

Scale 1 : 8

Presented by Lady Bentham
Inv. 1859-1

At Natasha's suggestion I had previously contacted the Science Museum Library to enquire as to any files it might hold relating to the model of Bentham's machine and had ordered these in advance to view on the same day. There we discovered a letter dated 9th November 1907 from Richard Bissell Prosser within one file. The letter, image below, confirmed that the model is the one that was exhibited in Birmingham in 1849 and viewed by Prince Albert to whom Richard had explained its "mode of operation". Richard's son then continued with the speculation that, subsequently, it must have been given to Bentham's widow by "my father who was in constant correspondence with her on the subject of Bentham's inventions". *Image © Science Museum*

M. 50. 759-1.

75, Dartmouth Park Road,
N.W.

9th December 1907.

Bentham's Machine for sawing Ships' Timbers.

The model of this machine was made by my father who was much interested in Bentham's inventions, and was shown in action at an Exhibition held at Bingley House, Birmingham, in September 1849, on the occasion of the visit of the British Association to the town. The machine is described at some length at page 96 of the catalogue of the Exhibition, and the description is reproduced in the Mechanics Magazine, of 10th November 1849, vol 51, page 1443. It was seen by Prince Albert who paid a visit to the Exhibition, when the mode of operation was explained to His Royal Highness by my father (see Art Journal, December 1849, page 378^h.) I believe that the model must have been presented to Lady Bentham by my father ~~with whom~~^{who}, was in constant correspondence ~~with her~~^{with her} on the subject of Bentham's inventions. Lady Bentham died, 18th May 1855, and after her death the model became the property of the South Kensington Museum.

R B Prosser

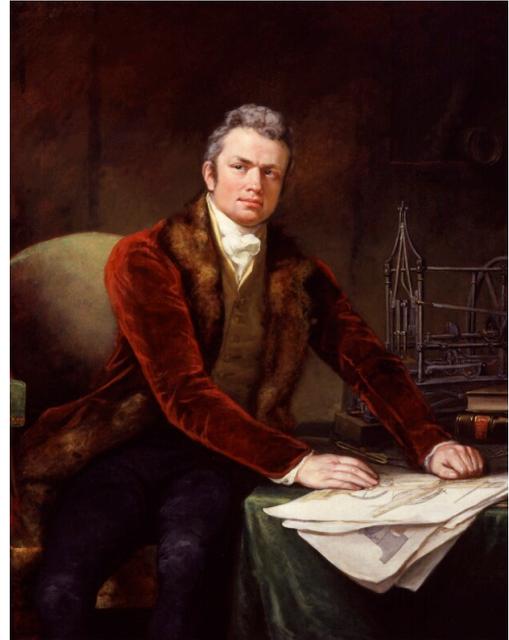
Lady Mary Sophia Bentham (or Maria Sophia as she preferred to be known later in life) (c1765-1858) was, without doubt, a very intelligent, well educated, resourceful and able woman. She deserves a greater online presence than is currently evident on a search against her name, where she is described briefly as a botanist, author and wife of Sir Samuel.

The daughter of a distinguished chemist, she had assisted her father with his experiments, and after her marriage in 1796 was to become a helpmeet and secretary to her husband, accompanying him on his extensive travels, bearing him five children and acknowledging, albeit not always without reluctance, the three older illegitimate daughters for whom Sir Samuel had accepted financial responsibility. Two short and entertaining academic papers have, however, been published online which throw more light on the abilities of this remarkable woman and the, surely somewhat unconventional, lifestyle of the Bentham family: Catherine Pease-Watkin - [Jeremy and Samuel Bentham – The Private and the Public \(2002\)](#) and [The Influence Of Mary Bentham On John Stuart Mill \(2006\)](#)

[Brigadier-General Sir Samuel Bentham \(1757-1831\)](#) was the only surviving sibling of the philosopher Jeremy Bentham (1748-1832) and deserves to be as well known as his famous older brother. Sir Samuel was a major figure in British naval history and, amongst those interested in and knowledgeable on the subject, he is recognised as the person responsible for the revolutionary modernisation and industrialisation of the shipbuilding methods adopted at the British navy's dockyards at Portsmouth and elsewhere at the end of the 18th and beginning of the 19th centuries. He advocated the introduction of machinery, much of his own invention, to replace the expensive carpenters and other skilled craftsmen traditionally employed in the dockyards; the machinery could be operated by unskilled men - even convicts, he suggested. (Samuel's collaboration with his brother Jeremy on prison design using Samuel's Panopticon building concept is well recorded online). What is more, Bentham achieved this introduction notwithstanding much opposition from within the Navy Board, his immediate superiors, where 'pocket lining' and corruption was rife; the Board was (inter alia) responsible for the management of the dockyards, but was subordinate to and answerable to the Admiralty.

Detailed histories of Bentham's extraordinary career, travels and many inventions are accessible online and do not need to be repeated here. He was a true adventurer and, somewhat belying his portraits, allegedly a charming womaniser before his marriage to Maria Sophia. However, in the 1800s the Bentham name and reputation quickly became and is still

overshadowed by that of the two Brunels: first by the Frenchman Sir Marc Isambard Brunel (1769-1849) and later by his son, the renowned, Isambard Kingdom Brunel (1806-1859). All references to 'Brunel' hereafter refer to the father not the son. *Image -Sir Marc Isambard Brunel by James Northcote oil on canvas, 1812-1813 NPG 978 © National Portrait Gallery, London (CC license)*



The older Brunel, himself a renowned engineer in his time, is mainly remembered as the father of his famous son and for his involvement in the construction of the Thames Tunnel between 1825-1843; the first tunnel built under a navigable river and still in use as a railway tunnel today. His career is well recorded on line, including his earlier collaboration with Sir Samuel Bentham and the mechanical engineer Henry Maudslay (1771-1831) over the introduction of



new machinery into the Portsmouth dockyards for the manufacture of the wooden pulley blocks used in huge quantities in ship's rigging. This innovation alone was said to have saved the Government, represented by the Admiralty, over £16,000 annually. Brunel, allegedly with Bentham's approval, was credited with the invention of this machinery on the basis of a patent that had been granted to him in 1801 and for which he was eventually rewarded handsomely by the Admiralty - in accordance, apparently, with Bentham's earlier recommendation that, if the machinery proved successful, Brunel should receive a payment for his services equivalent in amount to one year's savings achieved.

It is against this background and for his 1801 patent that the older Brunel's name remains at the forefront of many commentaries on the history of the Royal Navy's Portsmouth Dockyard during the time of the Napoleonic wars.

Bentham, whose relationship with the Navy Board had always been difficult, was dismissed from the service in 1812. He retired with his family to rural France, returning to England in 1826 where he died in 1831.

On 21st March 1854 Richard gave evidence to the Parliamentary Select Committee on Small Arms investigating British methods of gun manufacture

(for his testimony relevant to gun barrels see Part 1 of The Third Story - *Tubes: A Wealth of Trouble* pp. 136-141). Richard had already been very critical of the methods then adopted by the British Board of Ordnance when, later in his long testimony, he sought to compare the industrialisation of some other manufactures and took the opportunity to refer to the industrialisation of the manufacture of pulley blocks for the British navy. This digression was to culminate in him accusing Brunel of having deceived the Government: “he drew the feather “over” the eye of the Government” (i.e. pulled the wool over); and of “gimcrackery” (Brunel was supposedly known for his charm and persuasiveness). Richard had previously ascribed the development of the successful block machinery to Maudslay under Bentham’s direction and produced a copy of Brunel’s specification stating “if you take this specification to Portsmouth you cannot find machinery like it”. Earlier in his testimony he had (inter alia) stated:

all the improvements in the working of wood that I have ever seen are due entirely to General Bentham's patents of 1791 and 1793... General Bentham introduced Mr Brunel to the Government, and Mr Brunel has in all the printed books the credit of it, but it does not belong to him. This is Mr Brunel's specification (producing the same); he was employed under General Bentham to carry out this notion, which was patented in 1801; General Bentham's was in 1793. This specification of Mr Brunel's is contained in General Bentham's, but Mr Brunel received £16,621 8s 10d for his remuneration, being the savings in one year by making blocks by the Government machinery...

Shortly after the “gimcrackery” accusation Richard’s testimony was brought to an abrupt conclusion but only after he had testified that he had:

asked those in Woolwich Dockyard last week, and they had not [read Brunel’s specification]; so that there they are working General Bentham's machinery, and nobody knows his name.

Exactly 2 months later, Richard died on 21st May 1854.

Lady Bentham was aware of Richard’s testimony, if not from himself, from the publication of the Committee’s Report on 12th May 1854; in a letter dated 4th December 1854 she referred to the evidence given to the Committee contained in “the Blue-book”. Although in her very late 80s (her exact date of birth appears to be unknown, but 1765 is generally the assumed year based on an age of 93 given at her death on 18th May 1858), she was still very much in command of her faculties as evidenced by her 34 letters published in the *Journal of the Society of Arts* over the period of nearly three years commencing in July 1854 to her final letter dated 9th May 1857. The earlier letters were mostly long, some very long, and were largely concerned with

naval matters. The reference to the “Blue-book” was in her letter published in issue 107 of the *Journal* dated 8th December 1854 under the title “Wrought-Iron Ordnance” which had been prompted by letters she had read in *The Times*; as was nearly always the case with her letters, it was written in response to a discussion or report in the press about some topic on which she considered her late husband’s views/inventions still remained relevant - as she did not fail to emphasise. Her own grasp and recollection of the technical and other details was extraordinary and she often expressed views and suggestions of her own.

Previously, she had had many letters published in *The Mechanics’ Magazine*. Again, they mainly concerned naval matters and, also, included a series of articles on a particular interest of hers - education (for both sexes) following the example of the naval seminaries advocated by Sir Samuel. With the exception of one long letter in the issue dated 13th July 1844 headed “Breakwaters - Sir Samuel Bentham’s Plans”, those I have traced were published in issues dated from 5th July 1851 to 1st July 1854. Thereafter she appears to have switched her preferred means of publicly extolling both the memory of her late husband and the benefits of education for all to the *Journal of the Society of Arts*. In the *Magazine* she wrote semi-anonymously as “M.S.B.”, perhaps concerned that disclosure of her sex may have undermined the authority of her narratives with its readers. This may, however, be an unfair speculation, but is, perhaps, given some credence in reports found in the press:

The letter containing these interesting facts was remarkable for the clearness of its expression, and for the accuracy of demonstration, when it was considered that it proceeded from a lady in her 75th year.

(Naval & Military Gazette and Weekly Chronicle of the United Service 15th March 1845 - concerning a letter from her which was read out at a meeting of the Institution of Civil Engineers)

Of these a very detailed account is given in the work before us by his widow, Lady Bentham, who, in addition to her other qualifications for the task, possessed one very uncommon in her sex, a full and accurate knowledge of mechanical science. Unfortunately she has not lived to witness its publication, but her MS has had the advantage of careful correction by her youngest daughter, under the advice of eminent engineers.

(Army and Navy Gazette 12th April 1862 - the conclusion of a long review of her Biography of Sir Samuel published posthumously, which along with other reviews in the Morning Post and Bells Messenger

lamented the fact that by the time of its publication its subject had been largely forgotten. The [Biography](#) is available online.)

What corrections were made posthumously to Lady Bentham's narrative is not evident, but the Preface to the *Biography* written by her daughter "under advice" does not hold back on criticism of her father's superiors. She referred to: the "incalculable" savings resulting from his inventions and from his "Dockyard and other reforms which closed the sources of many long-continued and most pernicious abuses."; the "Official opposition, which sought to uphold all vested interests" and "personal animosity" that Sir Samuel encountered which prevented him from "carrying out many things that he had at heart".

In her exhaustive *Biography* Lady Bentham devoted comparatively little time to the Brunel block machinery issue that had so agitated Richard. In two passages in Chapters X and XI she alluded to Sir Samuel having been asked in 1803 to advise as to the amount of the remuneration that the Admiralty should award Brunel, the Admiralty having already agreed that some payment was due following a request from Brunel for some recompense for his services. Sir Samuel's advice was to the effect that the introduction of cost saving inventions to the navy should be encouraged and be rewarded by an amount equivalent to the savings achieved (once ascertained) for a specific period; in Brunel's case he recommended one year's savings. In 1809 Sir Samuel was again consulted on the amount claimed by Brunel for savings achieved over the previous year, the first during which the machinery had been fully operational. Brunel had claimed £21,174 12s 10d, which, after a very thorough investigation fully described in the *Biography*, Sir Samuel had recommended should be reduced to £16621 8s 10d (the exact amount stated by Richard in his testimony to the Select Committee in March 1854). On the face of it, therefore, Richard's allegation, that the reward paid to Brunel was undeserved, appears unjust. Lady Bentham did, however, make the following comment on one aspect of the difficulties that her husband had encountered when trying to evaluate the annual savings:

There were, however, circumstances attending this case which rendered it a business of peculiar difficulty. It had been pointed out to him that the savings produced by his own machines, taken from Queen Square Place [a property owned by Jeremy Bentham], were considerable, and that as they were of his invention, not of Mr Brunel's, the savings made by them ought not to be included in his remuneration. But Mr Brunel had entered so fully into the General's

ideas, and seconded him so ably in the selection of workpeople, that he considered him as deserving some remuneration for the trouble he took in forwarding his views in regard to the general management.

His widow also quoted an entry from her late husband's journal dated 18th March 1810: "At work all day on Brunel's accounts; find that he has made out his with every appearance of the fairest, most honourable intentions;...".

Sir Samuel may, therefore, have disagreed with, and even been embarrassed by, some of the more inflammatory allegations made by Richard forty years later against the man who had probably been one of his few allies in his battles with the Navy Board to modernise the dockyards. An ally who, according to his widow in a letter dated 2nd April 1852, Bentham had quickly recognised might be useful in those battles because of Brunel's "peculiarly ingratiating" manner and "no small share of...French tact" (as well as his "real talent").

His widow, in her *Biography*, did not mention whether Sir Samuel, during his lifetime, felt any resentment for the credit awarded to Brunel for the innovations introduced at Portsmouth. However, in another much shorter biography published in 1869 in a series of essays titled *Essays of a Birmingham Manufacturer, Volume 1*, when referring to the extract quoted above from Lady Bentham's *Biography*, the essayist commented:

This was the more disinterested, because there had been at one time a coolness between the two, caused by an alleged disposition on the part of Brunel to appropriate to himself, in the eyes of visitors, too large a share of the credit of the machinery.

The author of the essay was William Lucas Sargant (1809-1889) an "educational reformer and political economist" known for "his sagacity and fairness" in his writings according to his entry in the DNB. Sargant did not cite all his sources, the above comment was unattributed, but in addition to Lady Bentham's biography he cited from a biography, also published in 1862, of Brunel by Richard Beamish (1798-1873), a civil engineer who had worked under him on the Thames Tunnel. On Beamish's assertion that Bentham had recognised the superiority of Brunel's block machinery Sargant commented:

Mr Beamish states in this passage, that Bentham abandoned his own less perfect conceptions; and this might be taken to mean that his machines which he had brought from Queen Square Place were

all thrown aside. This was not so: they were to a great extent retained, and Brunel's machines were used to finish the blocks which were begun with Bentham's machines. This erroneous estimate of the rival inventors, was caused by Bentham's carelessness about his own reputation, when it might be in conflict with the good of the service.

He [Bentham] was bent on getting machinery generally introduced into the yard: he thought this might best be done, by exhibiting to all comers the results in a particular instance. He arranged the block machinery in the manner best adopted to this purpose: we have all heard the exhibition praised by visitors; and Brunel's block machinery has become proverbial. At first Brunel was himself the showman; and apparently was guilty of some vanity and some ingratitude in the display. He overlooked his obligations to his generous superior in office, and forgot to mention that much of the wood machinery used in the yard was not his own. General Bentham felt himself wronged; and some coolness followed between the inventors.

Sargant also commented on Lady Bentham's campaign during her lifetime to restore her husband's reputation. He asserted that she had exaggerated some of her claims, which though "unfortunate" was "perfectly natural and pardonable" in the light of the importance of the many improvements introduced by her husband in contrast to the one of Brunel's whose name "was in everyone's mouth, while her husband's name was unknown". "The world attributed everything to Brunel; ... even in works of authority" Sargant stated later. The world included the Admiralty according to Samuel Goodrich (see below).

In addition to her biography it is evident that Sargant, for his examination of the 'Bentham v. Brunel' issue, had also relied extensively on a letter dated 2nd April 1852 written by Lady Bentham published in *The Mechanics' Magazine* issue no.1495 (vol. 56 pp.264-276) dated 3rd April under the heading "The Invention of Woodcutting Machinery - Sir Samuel Bentham - Mr. Brunel". The letter took up 12 pages of the *Magazine* and cited and quoted numerous sources for her assertions and contained much information of interest beyond the scope of this narrative. The references made by Sargant to Bentham's coolness towards Brunel and to Brunel's machines merely finishing the blocks probably originated from this letter in which Lady Bentham had also stressed that:

Brunel's machines were never sanctioned till drawings of them had been well considered and approved by Bentham; during such

*examination can it be doubted that he suggested many an improvement? Those machines were made by Henry Maudslay, after frequent consultation with Bentham, and examination of these often whilst in process of manufacture. Bentham, Goodrich, Burr – all of them – discussed the suitability for its destined work of every particular engine, each of them indicating means by which it might be more or less improved.**

**From personal knowledge, supported by Bentham's signature of approval.*

(Simon Goodrich (1773-1848): Bentham's assistant and resident engineer at Portsmouth Dockyard; James Burr: a draftsman spoken of highly by Bentham in a source cited by Lady Bentham.)

Earlier in his essay Sargant had stated that Brunel was not a mechanic and had relied on Maudslay to “seize his ideas and construct his machines” and yet later he was to assert that nevertheless Brunel's machines for (finishing) the blocks “were his own, made quite independently of Bentham's and not even suggested by his. We have the evidence of Abbott, Bentham's near relation and intimate friend, that this was the truth”. Charles Abbott, Lord Colchester, (1757-1829) was an eminent barrister, an MP and from 1802 to 1817 was the Speaker of the House of Commons; he was also Bentham's stepbrother. The “evidence” cited by Sargant was a brief reference in Abbott's diary on 24th November 1824 remarking, on an invention by a Mr Browne, that Browne was “brought up under Brunel, the inventor of the block-cutting machinery”. On this flimsy “evidence”, dating to before her husband's death but not published until 1861 after her death, Sargant continued: “Lady Bentham was so convinced herself, by the arguments adduced, that in her Biography of her husband published so lately as 1862, she quietly dropped the claims she had set up.”

Lady Bentham, it is true, devoted far fewer words to her “claims” in her *Biography* than she had in her letter in April 1852 to *The Mechanics' Magazine*, but there is no suggestion that she had “dropped” them in the extract quoted below. (Was Sargant influenced by the regard in which both of the Brunels were still held when he was writing his essay published in 1869?)

It has been, and continues to be, supposed that the whole of the machinery employed for making blocks was the invention of Mr Brunel. The machines for shaping the shells were indeed so, though they had already been clearly described in Bentham's specification of 1793, but several official documents prove that most of the

*operations were from the first performed by machines of the Inspector General's invention, in many instances by machines which he had had at work previously to his appointment to office. Amongst them were those of which he submitted drawings on the 1st of June 1802 as "forming part of the machinery for working in wood". In the same letter he proposed "that these engines should be set up in Plymouth dockyard immediately, to be worked by the steam engine", particularly specifying that independently of other uses "they are, as it were, necessary for the cutting out the wood to the proper scantlings and lengths for **shell of blocks**". So also it appears from various documents that other machines were Sir Samuel's such as that forming wooden pins plus, an apparatus for sawing timber, turning lathes, a circular saw contrived to cut at pleasure to different angles, and which was employed in the wood mills for cutting off the angles from blocks previously to shaping them. In regard to this and other machinery being then the Inspector General's private property, it was arranged with the Admiralty that their value should be estimated, and that they should be charged by Mr. Lloyd, and paid for to a mill wright, who had been trained by the Inspector General and employed by him in making them. They were thus furnished to the Government at a price much below what they had really cost, to the pecuniary loss of the Inspector General; while he has also been deprived of the credit of their invention.*

(pp. 224/225 The words "shell of blocks" were highlighted in italics in her *Biography*.)

In a short book published in 1847 Lady Bentham had written a history of her husband's attempts to introduce machinery into the dockyards in which she (inter alia) described the opposition he faced from the Navy Board and the ignorance of the Admiralty as to Bentham's inventions (per Goodrich). She concluded her narrative:

Should it seem that Sir Samuel Bentham has been brought forward too prominently in this paper, the writer admits that she has seen with pain his inventions and improvements continually adopted by others, and considered as amongst the marvels of the day, without the least reference or allusion to him: it appeared, therefore, no unworthy endeavour, thus late, to obtain for him in public estimation the credit so justly, his due in regard to manufacturing concerns; but it is hoped it will be borne in mind that this paper is no more than a simple statement of facts, taken from official documents still in her possession; and that reference might at any time be had to them, as well as to the records contained in the books of the naval department. She cannot conclude

without craving excuse for the imperfection of her humble endeavours; and of adding a hope that the example afforded of success attendant on perseverance no less than skill, may contribute in exciting others to continued exertion in the introduction of improvements, whether for private emolument, or for the benefit of the public service.

Mary Sophia Bentham,

widow of Sir Samuel Bentham

(Paper on the First Introduction of Steam Engines into Naval Arsenals and Machinery Set in Motion thereby - 1847 John Weale Architectural Press, London.)

Lady Bentham would, no doubt, continue to be pained to find that, despite her efforts, 200 years later Brunel's name still looms larger than that of her husband's in many accounts and websites of the history of the Royal Navy's dockyards. Brunel is still often credited with being the sole originator of the block making machinery.

However, the *Wikipedia* entry for the [Portsmouth Block Mills](#) does give some credit to Bentham, Maudslay and Goodrich for the final design of 'Brunel's machine' whose original specification while it did "show many of the principles of the machines actually installed bears little resemblance to the final designs." The making of the blocks is described in some detail showing that the shaping/finishing of the shell is just the final step in the manufacture of the shell, which itself is just one of the components of the blocks. The entry also refers to the enormous publicity given to Brunel and his machines at the time but continues: "These accounts concentrated almost entirely on the block making machinery, and ignored the saw-milling side of the mills, and in consequence modern commentators have not discussed this aspect of the Block Mills." (*Wikipedia* - as at 4th Feb. 2021)

So, what is to be made of Richard's testimony before the Select Committee in 1854 and, in particular, his statement that: "if you take this specification [i.e. Brunel's 1801 patent] to Portsmouth you cannot find machinery like it"? Can we presume that Richard based this assertion on his own investigations at Portsmouth? This seems a reasonable assumption and he did also testify that he had just the previous week been allowed access to the Woolwich Dockyard. Hopefully, ongoing research by others better placed and more knowledgeable may bring forth more evidence from within our vast naval archive to vindicate Richard's and Lady Bentham's claims.

Richard's allegations as to Brunel's having deceived the Government (the 'feather drawing' and 'gimcrackery' aspersions) suggest a degree of personal

dislike. Had this arisen in 1836 when he and Farey were acting as John Russell's expert in the Russell brothers' dispute? Had Farey and Richard met with Brunel and Carpmael in the course of the settlement negotiations? Both of Richard's obituarists were to make similar observations about Richard which may have some bearing on his attitude to Brunel:

He was the enemy of every species of pretension, and more especially of scientific pretension. - Spectator

For the "charlatans" in science, non-entertained a more profound contempt. - Aitken

As to Richard's working model of the "saw-frame for ship's timbers" constructed from that described in the specification of Bentham's 1793 patent, this remains hidden away in the Science Museum's store. The patent has been described as "one of the most remarkable patents ever issued by the British Patents Office" (J.W. Roe - *English and American Tool Builders 1916*); and in one commentary in issue 1323 of *The Mechanics' Magazine* dated 16th December 1848 (MM vol. 49 p.591) on a woodworking machinery patent case: "a perfect treatise on the subject; indeed the only one worth quoting that has to this day been written on the subject".

In the introduction to a book published in London and New York in 1872 the author, an American mechanical engineer, eulogised Bentham for the genius of his patents describing him as "the "Father of wood-working machines" in England" (John Richards (-1880) - *A Treatise on the Construction and Working of Wood-working Machines*). In an obituary published in the *American Machinist* on 6th March 1880 Richards was described as the author of several books on woodworking machinery (and other mechanical subjects) on which he was regarded as an authority. In his *Treatise* Richards only briefly mentioned Brunel's machine for "shaping block shells", his employment under Bentham to "perfect" his design, and subsequent reward. However, he also described an award of £20,000 by the Government to Jeremy Bentham in arbitration proceedings in 1813 which:

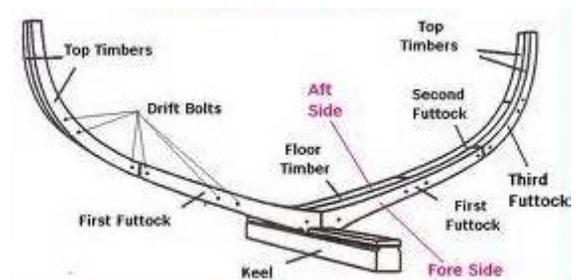
After the examination of numerous witnesses, allowed him the sum of £20,000 for machines furnished to the dockyard and penitentiaries. From the testimony given before this commission we learn that "Sir Samuel Bentham prepared a system of machinery for the employment of men without skill, and particularly with a view to utilising convict labour. In 1793 patents were taken out on these inventions to secure their exclusive use for the prisons. The testimony states that no skill was required in the use of these machines; they were introduced into the dockyards and worked by common labourers." The use of the machines saved nine-tenths of the labour.

Lady Bentham also quoted from these proceedings in her letter dated 2nd April 1852 (ibid). The award had stated that it was made to recompense Jeremy Bentham for the large sums he had expended on his brother Samuel's inventions (and for his work on prisons) - Samuel having relinquished any claim he might have in Jeremy's favour. Lady Bentham alleged that the award fell far short of the actual costs incurred by Jeremy and that:

as to Samuel, he had sold all the estates left to him by his father, in order to raise money for the completion of his machinery, but for which expenditure he never in any shape received a sixpence in return.

In 1916 Richards' compatriot Roe, an Assistant Professor of Machine Design at Yale University, devoted far more attention to Brunel of whom he was clearly an admirer in the chapter in his book titled "Bentham and Brunel". Despite his acknowledgment of the "remarkable" 1793 patent, he downplayed Bentham's inventions and appears to have attributed machinery that Bentham invented to Brunel and, also, Maudslay, whose contribution he does acknowledge in admitting that Brunel lacked the necessary mechanical skills to realise his ideas. Interestingly, *Roe* had earlier referred to the "sharp controversy over the origin of this Portsmouth machinery" that had arisen "About sixty years ago".

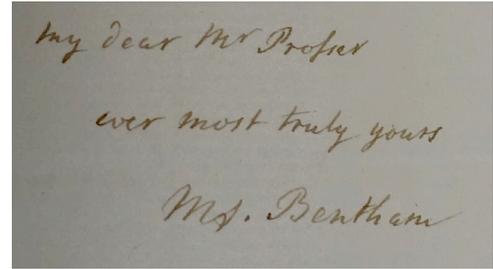
In 1852 in another (undated) letter, Lady Bentham actually mentioned the model made by "Mr. R. Prosser of Birmingham" and exhibited there at the 1849 Exposition "together with an attendant to cut the pieces of timber called "futtocks" in ship-building, several hundreds of which were given away." She had also



been told by "an energetic supporter of Bentham's claims" that he "felt certain" that Richard's model had made a small futtock he had seen placed on a model (one of several) of a machine for sawing "curvilinear" wood exhibited at the 1851 Great Exhibition; the supporter's comments at the Exhibition (that all the woodworking machines exhibited were "mere plagiarisms" of Bentham's patents) apparently caused some consternation. (Issue 1501 *The Mechanics' Magazine* dated May 15th 1852 - letter headed "Notes on Sir Samuel Bentham's Introduction of Machinery into the Royal Dockyards".)

I had hoped to find that an archive of Lady Bentham's papers had survived somewhere with letters from Richard within it, but my online searches indicate

that this is not the case. One letter of hers to Richard has survived and is held by the British Library. Dated 14th September 1852 it closes with a valediction that is perhaps some indication of the extent of their friendship: "My dear Mr Prosser ever most truly yours M. Bentham". *Image © The British Library Board. All rights reserved.*



My dear Mr Prosser
ever most truly yours
M. Bentham

I will return to the circumstances that gave rise to this letter in due course.

However, before continuing with the chronology of Richard's contribution to patent reform there is yet one further letter of Lady Bentham's that I wish to mention. It appeared in issue 1451 of *The Mechanics' Magazine* dated 31 May 1851 ([MM vol. 54 pp.426-428](#)) under the heading "Publication of Patents" and is relevant to arguments put forward by *Bottomley* on an issue discussed previously (see p.26).

The letter is, also, evidence of the breadth of Lady Bentham's knowledge on science and invention both past and then present, here and abroad, and on all manner of subjects. The letter opened with the following statement:

Amongst the many improvements of the law of patents that have lately been suggested, no one seems more difficult of accomplishment than that of giving publicity to patented inventions in a classified notification of them, at a cheap rate of expense to the inquirer, and including all the patents heretofore granted, no less than future ones. Information of this nature is of real importance to inventors, since, without it, they cannot ascertain whether what they conceive to be new has already been patented or not. Article 11 of Lord Brougham's proposed Act provides for the inspection of future patents at the Great Patent Seal-office, and article 12 for the printing and publication of them; but this could afford no intimation of bygone patents. By some other plans the expediency has been suggested of rendering public in some way all patents already past as well as future ones. To a very limited extent this has been already done in the "Repertory of Arts" and lately the Mechanics' Magazine has given an abstract of all the patents that had been enrolled in the week prior to its weekly publication. Not any of these plans suffice to inform a projector whether what he conceives to be his own invention has already been patented or not, or whether it may not have been in practice, or published, though not patented circumstances on which the validity of any patent he might have in view must depend, and which it must be to his interest to ascertain...

She expounded at some length on the need for some method of recording the “histories” of all inventions in classes relative to their subject matter and suggested a means of accomplishing the enormous task: the employment of “young engineers, architects, chemists etc.” too many of whom, she alleged, were then without jobs. She emphasised that: “In drawing up such histories it would be essential to consult only *original records*,...general report should never be considered proof, nor should hearsay or partial evidence be admitted of. In these respects some of our best books on arts and manufactures have failed.” Lady Bentham had already alluded to her late husband’s inventions in woodworking machinery, which had often been overlooked and thus infringed by subsequent patents. She ended her letter by pointing out that even the “eminent” Dr. Ure in his *Dictionary of Arts Manufactures and Mines* had ascribed the invention and introduction of the block machinery at Portsmouth wholly to Brunel.

(A transcript of the 1849 Birmingham Exposition Catalogue entry appears on the following page)

1849 Birmingham Exposition Catalogue entry**SHIP TIMBER SAWING MACHINES**

(From the Catalogue of the Birmingham Exhibition of Manufactures and Art 1849)

No 4

By Richard Prosser C.E. Birmingham

Machine for sawing Ship Timbers patented by Bentham

The specification of the above patent is published in the 10th vol. of Repertory of Arts 1799 page 239 to 240 and from that description the working model has been constructed by Mr. Richard Prosser, of Birmingham, civil engineer. The object of this machine is to cut the timbers forming the framing of ships technically called "futtocks". The curve of the futtock is ensured by means of a "template", or guide, and these templates require changing to suit the particular curve and bevil of the futtock. Owing to prejudices against the use of machinery, and perhaps also to this valuable invention being lost sight of, this machine has not been introduced into Her Majesty's Dockyards. A machine of American invention has very recently been erected in Woolwich Dockyard, for "sawing ships' timbers in curved and winding directions," but neither that nor any other machine which has been proposed for cutting ships timbers are "automatic" in their action; all, except the machine invented by General Bentham, requiring manual aid to guide the saws, and give the requisite bevel to the timbers. Sir Samuel Bentham was, by authority of the Lords Commissioners of the Admiralty, the person who introduced steam engines into the naval arsenals, and machinery set in motion thereby. To him belongs the merit of having introduced Mr Brunel to the then existing Administration, in consequence of which his block machinery was erected at Portsmouth Dockyard, and is now at work there; but before the introduction of Mr. Brunel's block machinery, General Bentham had erected machines of his own for working in wood; in fact, the first sawing machines used at Portsmouth for converting the wood for the shells blocks, were prepared according to the plans and directions of General Bentham. This is mentioned here, to correct a common but erroneous opinion that the machinery in the wood mills at Portsmouth was the invention exclusively of Mr. Brunel. The block making machinery (including, it is true, the saws and other preparatory machines of General Bentham's invention) effected a saving of £16,621 8s 10d per annum. — *Vide Paper on the First Introduction of Steam Engines into Naval Arsenals and Machinery set in Motion thereby, by Mary Sophia Bentham, Widow of Sir Samuel Bentham, — Weale 1837*

(From *The Mechanics' Magazine* Issue 1370 10th November 1849 (vol.51 p.443/444))

Chapter 27

A Curious Letter



*Britannia Bridge Anglesey Entrance c1850
National Library of Wales Collection (public domain)*

Nothing in the first eight months of 1850 relevant to Richard's role in the patent reform campaign has come to light. In January the litigation he had commenced in Scotland in 1848 against his former partners in The Caledonian Tube Company was settled on unknown terms. He had claimed the enormous sum of £25,000 as the value of his share in this concern at the time of his resignation from the business in 1846 (2021: purchasing power (RPI) equivalent £2.58 million; average earnings comparative £22 million - measuringworth.com). The dispute was just one of many described in Part 1 of *Tubes: A Wealth of Trouble*. The provisional grant of his anti-weld tube patent, his 'marriage' to his sister-in-law Hannah Somerton Potter and a family trip to Germany all occurred before September 1850. In June he was reported to have been amongst the larger subscribers (£50) towards the restoration of St. Martin's in the Bullring (in October his reported donation to Birmingham's Queen's Hospital was to be considerably smaller - only £5

5sh.). All these events are described in Part 2 of the Third Story - *Tubes: A Wealth of Trouble*.

On 14th September a curious letter from Richard, dated 2nd September, was published in *The Mechanics' Magazine* in issue 1414 (vol. 53 pp. 211-214). It has to be doubted whether its contents were intended to be taken seriously; the views expressed appeared to contradict ones that Richard is known to have declared shortly afterwards and which he had probably held for a long time. The editor of the *Magazine*, the patent agent Joseph Clinton Robertson, certainly appears to have taken its contents at face value as he inserted a preliminary note expressing his "surprise and regret" that such views should be held by "an esteemed correspondent"; Robertson inserted several other notes of disapproval throughout the letter, which appeared under the heading: "On Tubular Bridges: and the Claims of Mr. Stephenson to their Invention".



Robert Stephenson c 1856



William Fairbairn

Images CC License

A well publicised dispute between the railway engineer Robert Stephenson (1803-1859), son of George, and the engineer and shipbuilder William Fairbairn (1789-1874), had been the subject of correspondence in recent earlier issues of the *Magazine*. The dispute concerned the innovatory design of a railway bridge, the "Britannia Bridge", over the Menai Straits in North Wales required to complete the Chester to Holyhead railway line. The width of the Straits (between the mainland and the island of Anglesey), and the requirement of the Admiralty that the Straits remained navigable for its warships, presented problems not previously encountered. The full history of the construction of the bridge is available online on Wikipedia and elsewhere, but the dispute between Stephenson and Fairbairn that arose during the five

year course of its design and construction is not always mentioned (a detailed account can be read on this [link](#) to an article in *The Engineer* in 1865 vol. 19 p. 122.)

The bridge had been completed in early 1850 and was formed of iron tubes supported on masonry piers, each of its spans being exceptionally long for its time. The concept of a tubular bridge was proposed by Stephenson and he was appointed the chief engineer in charge of the project; he quickly enlisted Fairbairn's help for his knowledge and experience, particularly as a shipbuilder (ships in essence being a type of tube); Fairbairn in turn sought some input from the engineer and mathematician Eaton Hodgkinson (1789-1861).

The dispute between Stephenson and Fairbairn was as to which of them should be credited with the invention of a tubular bridge - Stephenson whose idea it was in the first place or Fairbairn who was largely responsible for the detailed design and the experimentation that culminated in the realisation of the idea. In 1865 the author of the article in *The Engineer* allocated the honour equally to the two collaborating engineers. The Britannia Bridge still stands but the tubular element had to be replaced after a fire in 1970. The concept was rarely used and the only surviving original tubular bridge is said to be the nearby, smaller, Conwy Bridge built at about the same time by the same collaboration.

So what did Richard have to say in September 1850 as to the merits of the competing claims of the two eminent engineers?

He prefaced his letter by quoting at length from a letter in 1755 from Benjamin Franklin (1706-1790) to a Dr. Lining of Charles Town (sic), South Carolina published in Volume 1 of *The Complete Works in Philosophy, Politics, and Morals* of Franklin - one of the "Founding Fathers" of the United States; Franklin, a polymath, was an inventor of many things amongst his numerous accomplishments. The quoted extract (at p.308 - as cited by Richard) followed a long answer to questions raised by Dr. Lining on Franklin's experiments involving electricity. Lining had presumably also mentioned some incident involving an aspiring inventor friend of his to which Franklin referred when he ended his letter with a discourse on the perils of being an inventor: (inter alia) the disbelief they often encountered and "the envy, jealousy and the vanity of competitors for fame" which had resulted in the origin of many valuable inventions being lost. His discourse and the letter concluded with the following advice:

One would not, therefore, of all faculties, or qualities of the mind, wish, for a friend, or a child, that he should have that of invention. For his attempts to benefit mankind in that way, however well imagined, if they do not succeed, expose him, though very unjustly, to general ridicule and contempt; and, if they do succeed, to envy, robbery, and abuse.

Richard opened his letter, having referred to the previous correspondence about the dispute in the *Magazine*, by raising:

a very important principle vis., at what stage, if any, of an invention, can the aid of scientific and practical men be called in, without the risk of their claiming to be sole or joint inventors, and thereby depriving the first inventor of perhaps the only honour he cares about.

He continued with the propositions that “An inventor is the person who first gives to the public a new notion,...” - in any manner - and that “An invention has no relation to the trouble, mental or physical, which is necessary to work it out;...”. He contended that Stephenson could have patented his idea in a specification by claiming: “that he had invented a bridge made of iron so as to form a tube with a roadway through it,... The specification need contain no x’s or y’s, or other mathematical symbols”.

To these contentions the editor of the *Magazine*, a supporter of Fairbairn, appended an indignant note commencing “The writer is altogether in error...” and ending “The law affords no such protection as our correspondent imagines to mere abstract and speculative notions.”

It is hard to disagree with Robertson. Richard’s views as expressed in the letter do appear to contradict his own, often voiced, opinion that the proposed reform of the patent system should include a requirement that a complete, accurate and detailed specification accompanied, where appropriate, with scale drawings should be submitted on the initial application for a patent. They are also contrary to the principle that the grant of a patent by the Crown, a temporary monopoly over the invention, was in consideration of the inventor disclosing sufficient information to render his invention capable of implementation by a competent workman.

Towards the end of the letter Richard explained that in endeavouring to trace the “invention” of the tubular bridge to its “proper source” he had consulted a number of works relating to its development, specifically mentioning those of Fairbairn himself (2 vols.), his son Thomas, Edwin Clark (the superintending Engineer appointed by Stephenson - 2 vols.) and an official commissioners’ report. After doing so, he continued, he had come to the conclusion that the

“invention” was the “original idea” of Stephenson, but he emphasised that “the subject has been considered as one of invention only, and not as mixed up with the manufacture of the bridge.” Richard concluded his letter by repeating the question he raised at the beginning and quoted above.

Earlier Richard had pointed out that Fairbairn would have had difficulty declaring, as he would have had to do, that he was “the first and true inventor” if he sought to patent the bridge. Richard had then quoted an extract from Sheridan’s satirical play *The Critic* comparing Fairbairn’s position to that of the character Puff the playwright — Puff is accused of plagiarising Othello to which he responds: “but that’s of no consequence; all that can be said is, that two people happened to hit on the same thought — and Shakespeare made use of it first, that’s all.”

Fairbairn did, in fact, take out a patent in 1846 for “hollow sheet-iron girders”; Richard proceeded to mention this and referred to a letter in 1846 from Fairbairn to Stephenson, quoted by Clark, in which Fairbairn acknowledged that the “original idea” was Stephenson’s. However, Richard failed to mention that, according to Clark, in 1846 Stephenson had acquiesced to the patenting and had agreed to pay half the cost but did not wish to be named on the patent itself; the other letters quoted by Clark are evidence of this. Subsequently, Stephenson, in a letter to Fairbairn in 1847, disputed that he had agreed the patent could be taken out for the purpose of use in the construction of bridges contending that his understanding was that the patent was to be for use of the girders in “fireproof buildings” only (see comment below). It would appear that the patent was deemed unenforceable, in any event; Clark stated it was not “sustained” as the girders came into general use. Presumably, the famous and more renowned Stephenson’s claim to be the “first and true inventor” would have deterred Fairbairn from trying to enforce it. To be fair to Fairbairn he never appears to have sought to deprive Stephenson of the credit and honour for his new and original idea.

(Readers of Part One of the Third Story - *Tubes: A Wealth of Trouble* may recall that in July 1849 the decision on the retrial of R. v. Cutler laid down the precedent that the use of an existing process for another end use was not a patentable invention. This judgment ended Cutler’s claim to a monopoly over the use in steam engines of lap-welded tubes made by the method patented by Richard in 1840. In September 1850 Richard may have decided it diplomatic to remain silent on this aspect of the dispute.)

In addition to quoting Sheridan, Richard also quoted from “Holland’s Plutarch, p.1018” when, surely facetiously, comparing the issue to an orchestra claiming to be the inventor of Handel’s oratorios “because they first rehearsed them to fit them for the public ear”. (Philemon Holland (1552 - 1637))

A fortnight later, on 28th September, issue 1416 of *The Mechanics’ Magazine* (vol. 53 pp. 249/250) published a rejoinder dated 18th September to Richard’s letter under the heading: “Mr. Stephenson’s “Original Idea””. The author, unusually, chose to remain anonymous subscribing merely the initials “C.E.”, which I take to be for his profession rather than his name. “C.E.” stood with Robertson on the issue commencing with the assertion that “an invention is not a notion, an abstract conception or an idea — but it is an actual construction...”. He referred to the principle that a patentee’s specification must contain sufficient information for the invention to be capable of implementation by “ordinary workmen”. In answer to Richard’s question he stated that it was inevitable that the originator of an idea, if he had assistance from another in its successful fruition, was at “risk” of having the assistant claim a share in the invention. However, in concluding his arguments the anonymous contributor acknowledged the importance of Stephenson’s original idea which inspired Fairbairn’s ultimately successful experiments - credit and honour being due to each of them for their “independent” contributions. (Whether an enforceable patent could have been secured by either of them independently is another matter.)

The rejoinder, which was logically argued, was, in fact, more in keeping with the stance that I would have expected Richard to take on the dispute. That he might have been the author of both letters is a speculation that I continue to harbour. Otherwise, it is difficult to know what to make of the first letter. However, in November 1852 Richard was, indeed, to apply for two patents which might be considered to be of ideas - each a “new notion”. (See Part 2 of the Third Story - *Tubes: A Wealth of Trouble* pp.15-23.)

([Link](#) to Vol. 53 of *The Mechanics’ Magazine* containing both letters.)

Chapter 28

The Society of Arts and “Prosser’s Pamphlets” (Late 1850)



*Society of Arts' House in John Adam Street
18th Century Engraving*

The Society of Arts Stirs

On 1st November 1850 the Society of Arts announced that the committee first proposed in April 1849 had been formally constituted and was to be known as “the Committee for promoting Legislative Recognition of the Rights of Inventors”.

The Committee’s terms of reference, “principles”, were outlined, namely that: the costs incurred in the protection of an invention should be limited to those “absolutely necessary”; the “difficulties and anomalies” of the existing patent system should be removed; both the existing copyright and patent systems were inadequate; the cooperation of “interested” others should be invited. With reference to the last of these “principles”, the Committee particularly sought information as to any invention the public benefit of which had been lost (“suppressed”) because the inventor could not afford to patent it and, in addition, of cases where costs of patenting had been “fruitlessly incurred”.

The twenty nine members of the Society, all “Noblemen and Gentlemen”, who had consented to sit on the Committee were named in the announcement. In addition to Richard, Cole and Woodcroft, the others named included John Farey and names familiar from another Story in Richard’s life: the potter Herbert Minton; the architect Owen Jones; and the railway entrepreneur and MP Samuel Morton Peto (see the Second Story - *The Dust-Pressed Process*). The most famous Committee member, then and now, was Charles Dickens, whose short story *A Poor Man’s Tale of a Patent* had only been published the previous month. Dickens, notwithstanding his concern over copyright protection, does not appear to have taken much part in the activities of the Committee, but in 2006 Harrison considered the publicity afforded to its cause amongst the “wider public” by publication of the *Tale* was of more importance.

The Society’s patent reform Committee was just one of many formed nationwide about this time, including others in London; William Fairbairn was to the fore of that in Manchester, which was particularly active. The reignition of the reform campaign has been attributed to a comparatively new but growing marketing initiative to which the Society had already contributed and of which the 1849 Birmingham Exposition was another early successful example - the trade exhibition. Manufacturers wanting to put on show their latest products were often deterred by concerns that they might be pirated without any effective recourse if a patent or the copyright had not already been secured. These concerns were highlighted with the prospect of the opening in May 1851 in London of the largest trade exhibition ever contemplated, which it was hoped would attract exhibitors from all over the world - the Great Exhibition. It became apparent that the potential deterrent would have to be addressed.

Earlier in 1850 an amending Act had been passed which enabled qualifying designs to be exhibited without prejudice to after acquired copyright (The Copyright of Designs Act 1850). Intending exhibitors at the Great Exhibition had been seeking similar protection for new inventions. This was not to be forthcoming until the next parliamentary session when legislation was hurriedly enacted in April 1851 providing for a temporary system of provisional registration of an unpatented invention, which could then be exhibited without prejudice to a subsequent patent application. The Protection of Inventions Act 1851 initially granted protection for one year only, but this was later extended to ensure it remained in force pending the enactment of the, by then, anticipated legislation reforming the patent system.

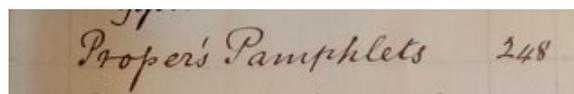
In 1850, the importance of patents to the global trading community having been exposed, the UK reformers took the opportunity to initiate a resurgence of their campaign.

The first meeting of the Society of Arts' Committee took place on 19th November, both Richard and Woodcroft were amongst the only eight attendees named in the brief press reports. However, Harrison in 1980, in a note to his first essay on Woodcroft, was to suggest that Cole was also in attendance and that he, Woodcroft and Richard had not remained silent:

At the Society, Henry Cole and Bennet Woodcroft were requested to prepare drafts of a Bill and Richard Prosser was asked to set out his different opinions. Committee Minutes 1850-51, p. 43, 19th November 1850.

“Prosser’s Pamphlets”

Early on in my researches a random online search had revealed an entry on the *WorldCat* library website referring to a 14 page paper “prepared in conformity with principles affirmed” at the above meeting. Tentatively attributed to “Richard Prosser?”, it was held in the National Art Library in London, part of the collections of the Victoria and Albert Museum. We did not visit the V&A until 14th November 2018 to view and take images of the paper; we found that it formed part of its Henry Cole collection and was in a bound volume of other miscellaneous papers of Cole’s titled “Patents for Inventions”. In its handwritten index (possibly in Cole’s own hand) the paper was described as “Prosser’s Pamphlets” (the first “s” in Prosser was written in the archaic style looking more like an “f”).



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There are, indeed, two parts to the paper: the first being “Observations” on inventions, Richard’s “different opinions”; the second being “Suggestions for an Act” - Richard had apparently taken on the task assigned to Cole and Woodcroft by the Committee as there is no alternative version in Cole’s collection.

The British Library holds another unattributed copy of the paper, but it was due to Cole’s meticulous record keeping that the survival of its attributed copy was brought to my attention.

The “Pamphlets” are printed and on the front page there is the quote of Junius depicted at the beginning of Chapter 22; the quote was a plea seeking to quell discord. Above it there is a manuscript note identifying the document as “Prosser’s Pamphlet”, in the same hand as in the index to the volume. “Junius” was the pseudonym of a still unidentified 18th century political writer.

The second page, headed “SOCIETY OF ARTS”, continued with the following request:

As the following “Observations and Suggestions” are merely the individual opinions of a Member of the above Committee, it is requested they may at present be considered as private.

The anonymous author then asserted that his opinions had been prepared in conformity with the “principles” affirmed by the Committee on 19th November specifically referring to those as to cost and the “difficulties and anomalies” of the existing system.

The first of the twenty “Observations” was a statement that “No trace of protection for Invention is to be found in the Roman Civil Law.”; the second was a more relevant quote from an Act of Parliament known, by its short title, as The Statute of Monopolies. Enacted in 1624 this Act had rendered void, with retrospective and future effect, the grant of all patents for monopolies by the Crown except in limited instances. One of these exceptions was the grant of patents not exceeding 14 years duration:

...of the sole working or making of any manner of new manufactures within this Realm to the true and first Inventor or Inventors of such manufactures which others at the time of making such Letters Patent and Grant shall not use...

The second Observation quoted this definition of inventions. The third and fourth referred to the American (U.S.) and French patent systems with quotations from the originating statutes dated 1790 and 1791 respectively and were followed by:

5. *...it [the definition of inventions in the 1624 Statute] embraces the whole subject, and leaves nothing to be desired.*

6. *As Englishmen we should reflect with **pride** that the patent Laws of all nations have been borrowed from our own, and with **shame** that they all excel ours, and afford protection at a much cheaper rate.*

Richard next observed that the “much cheaper” cost of American, French and Austrian patents was £6 10s, £12 and £14 11s 8d respectively, each of which countries published the specifications of their patents whilst the “English publish nothing, yet the Englishman pays £300” (true for a patent for the whole of the UK).

There then followed three somewhat lyrical Observations which (inter alia):
praised England for achieving “great eminence” by its manufactures (to the envy of other nations) and argued that such eminence, being derived from “Useful Arts”, had a permanence that “ancient nations” were unable to sustain by their “Fine” arts;
compared the “Ideality of the Greeks” to the practicality of the Victorian manufacturing system which, nevertheless, was “called into existence by thoughts which are allied to Poetry and the Arts”;
cited Aristotle and compared the “ideality” and pleasure with which the ancient Greeks expended labour and skill in the creation/invention of “the beautiful for its own sake” to the “ideality” but practicality of the English which sought to reduce manual labour by mechanical skill/invention.

The following five Observations were of more “practical” relevance and are of particular interest in the light of Richard’s “curious” contribution to the Stephenson v. Fairbairn debate only two months previously and for his, perhaps surprising, outspoken criticism of James Watt.

In citing Aristotle earlier Richard had attributed to him the contention that “contrivance” in art consisted of three stages: “Theory, Contrivance, and Production”; Richard had maintained that this contention could also be applied to “manufactures resulting from mechanical skill”.

Richard’s criticism of James Watt (1736-1819) was founded on the terminology used in Watt’s 1769 groundbreaking patent for condensing steam in a separate condenser, an energy saving improvement to steam engines. Watt’s specification had claimed that his “method” (invention) consisted of “the following principles...”. Richard argued:

that the use of the word “principles” was a mis-use and could “have no possible application to mechanical Inventions”;
that Watt’s invention was a “contrivance” the practice of which led to a novel “production”;
that Watt’s “introduction of the word “principles” was no doubt an attempt (which all patentees have continued) to claim more for the Inventor than the mere substantive “invention” or “production”.”

Having observed that “this grasping propensity” had earned Watt “enormous wealth”, Richard claimed that Watt’s specification was deficient and that the patent, which had been extended until 1800, was not valid and required a further specification to enable the invention to be used “as beneficially” by others on its expiry and so justify the royalties paid to Watt. (This was not a new claim, the “deficiency” had been recognised by others and the patent

was much litigated, but survived. Many have since written about this less creditable aspect of Watt's genius.)

Richard cited a number of judicial observations denying that a "principle" could be the subject of a patent. He deplored the attempts that had been made in "law books", by "scientific witnesses" and in legal discussions in the Courts to vindicate "so called Inventions" (and excessive claims as to the extent of an invention) by assertions that the "principle" or "principles" involved warranted such vindication. In his view the issue, the novelty of the claimed invention, had to be judged on its "contrivance" or "production".

Oxford Dictionary:

contrivance - The use of skill to create or bring about something, especially with a consequent effect of artificiality (Origin: none disclosed);

production - The action of making or manufacturing from components or raw materials, or the process of being so manufactured (Origin: Late Middle English via Old French from Latin productio(n-), from producere 'bring forth').

So, looking back at the Stephenson v. Fairbairn debate, it must surely be the case that Richard's supposed support for Stephenson, as the inventor of the tubular bridge for his theory/principle, was no more than a mischievous intervention in the dispute and that he was, also, the likely author of the rejoinder - the anonymous "C.E.".

When I first read them the next three Observations were unexpected and they must reflect Richard's interest in farming having been the owner of the 60 acre farm at his residence in Kings Norton since 1847. His library contained a number of books on the subject. He advocated the creation of a commission "of Inventions for the Improvement of the Agriculture and Trade of Great Britain and her Colonies and Plantations Abroad". The first of his separate "Suggestions" for an Act to be the establishment of such an "Office" by the Board of Trade, funded by borrowing (not exceeding £100,000), to be overseen by a "Commissioner" to be appointed at an unspecified salary. The preceding "Observations" on this Office included suggestions for a museum of agriculture:

for the exhibition of "natural productions from all parts of the world" and of agricultural tools and models of farm machinery (referring to such a museum that already "partially" existed in Edinburgh and another ("a pattern of cleanliness and orderliness") in Rotterdam, inferring that he had visited both);

for the storage of seeds (inducements to be offered to "our ships" for their collection and carriage);

and for the compilation of “Agricultural Statistics”.

He incidentally observed that if, as a result of the distribution of such seeds/plants to professional growers, a suitable substitute for the potato could be discovered “the failure of the latter esculant (sic) would not expose our population to famine, as unfortunately is now the case”.

In his 19th and penultimate Observation Richard declared his preference for a drawing to scale over a model in patent specifications of mechanical inventions, models being “easily injured”. He excepted a few cases: escapements of clocks/watches and small machinery. (He did not mention the obvious storage disadvantages of models.)

Finally, Richard referred back to his suggested Commission of Inventions with a view that may have been reinforced by the accounts he had heard from Lady Bentham of her husband’s tribulations with the Navy Board:

*It may be considered that too much authority has been placed in the Commissioner of Inventions, and that a Committee would be better; but as human nature never alters, and Committees never blush, a responsible Commissioner is preferred to that form of tribunal, which so **generously** rewarded Copernicus, Galileo, Kepler, Newton, Harvey, Jenner, Fulton, and a host of others, by retarding their progress, and thereby the whole human races of men in that onward progress which is their destiny.*

The “Suggestions for an Act” included a comprehensive index to the subject matter of its fifty sections, a selection of which are summarised below.

The newly established Commission was to be housed in a building incorporating a museum and library, the former’s exhibits to be a collection of global scientific, mechanical and agricultural “productions” plus, if finances permitted, those of “Living Artists” - admission including use of the library to be free to all. The duties and required qualifications of the salaried Commissioner were defined. Several sections were, unsurprisingly, devoted to patent specifications including as to: format (printed in duplicate with scale drawings); content (adequacy and intelligibility); cost of official copies and availability; indexing; the option of filing of specifications and payment of fees through the postal system rather than having to do so in person or through an agent. The term “Patent” to be replaced by a “Certificate of Invention” to be granted (and renewed) on payment of one fee (the duration of the Certificate and the amount of the fee left blank). Assignments and licences of Certificates to be registered. Annulment and enforcement (infringement) proceedings (and penalties) were addressed, the latter to be within the

jurisdiction of the County Courts (a particular ‘bee’ in his ‘bonnet’). Near the end, but by no means least, two sections catered for the printing of all the previously granted patents. All fees received by the Commission were to be paid into an “Invention Fund” from which its operational costs would be paid together with the interest on the initial borrowing (plus capital repayments) - this seems a somewhat optimistic projection if patents were to be as cheap as Richard desired.

The “Pamphlets” are undated but the copy held in the British Library (unavailable for inspection in 2022) was attributed with the date “December 1850” in the 1857 Catalogue of the Patent Office Library. The BL copy formed part of Woodcroft’s contribution to the POL, which included an extensive collection of papers published during the patent reform campaign at this time. Richard was not the only reformer to make his views known and put forward proposals for legislative reform.

The next and second meeting of the Society of Arts’ Committee was held on 29th November; the press reported the names of thirteen attendees including those of Richard, Woodcroft and Cole. If the printed “Pamphlets” were by then available for consideration, Richard must have committed most of his time and mental energy to their completion during the ten days that had elapsed since the Committee’s first meeting - if, indeed, he was the sole author. The meeting’s discussions were unreported and Harrison did not comment on them.

Society of Arts’ First Report

However, the Committee’s, 23 page, First Report was approved for printing and publication only three days later on 2nd December - the price, 6d, was not cheap (£22.20 average earnings 2021 [measuringworth.com](https://www.measuringworth.com)). This timescale suggests that the report must have been drafted and presumably submitted to the Committee for consideration prior to the meeting on 29th November. It included, in a note on the final page, a quote from one of Richard’s “Observations”, the seventh as to the cheaper cost of other countries’ patents and was appended to a chart comparing different patent systems then in existence.

On page 24 I have already quoted an opening remark by Cole, the Report’s presumed author, declaiming on the Byzantine complexity of the English system. After an historical overview, Cole’s comprehensive critique continued in similar style covering (inter alia): property rights (intellectual - lack of); cost and delay (both excessive); caveat system (abuses of). The Report included what was to become a much touted description of the 35 stages (and each

fee charged) that an applicant patentee faced and to which Dickens had already referred in his *Tale*. This description was denied by patent agents, amongst others, and some modern commentators have also suggested that it exaggerated the complexity of the actual process.

The Report was heavily laced with quotations of opinions of members of the judiciary and the legal profession and from evidence given to parliamentary select committees including from Farey's in 1829, in particular, and Woodcroft and Webster in 1849. Webster, was described as "upon the whole a decided friend to the present system" - an unfair allegation against the former leading member of the Society who had recently been deposed by Cole.

Many other topics were addressed including:

- the relatively small benefit to the Exchequer from the fees realised under the present system (estimated at £65,000 annually of which about one quarter was paid to "private individuals" i.e. the likes of the Deputy Chaff-Wax);

- the perceived success of the second Copyright and Designs Act enacted in 1839;

- the opposition in principle by some to patents as a property right;

- the imperfect property rights actually granted by the existing system which did not scrutinise and, therefore, did not guarantee the novelty of the patented invention;

- the difficulty potential patentees encountered in establishing such novelty (Woodcroft was quoted).

The latter two topics were relevant to a later discussion on the expense of enforcing patents in which Richard was cited, not for any of his own experiences in taking and defending proceedings, but for informing the Committee that his fellow engineer, the wealthy Birmingham industrialist and MP, George Frederick Muntz had spent upwards of £10,000 on defending his "Sheathing Patent". As already explained in *Rescuing Richard* (p.162) this patent, also known as "Muntz's Metal", was the cheaper alternative to copper for sheathing ships' bottoms (including the Cutty Sark's) against fouling eg. by barnacles and ships' worms.

The need for a satisfactory definition of "invention" was noted and a very long and indigestible definition proposed in Parliament in 1833 by the then barrister and MP John Jervis was quoted with seemingly some support from the Committee (or Cole). Jervis had been closely involved with the litigation over Richard's 1840 tube patent having represented Russell in 1844/1845

and, in his capacity as Attorney General in 1847-1849, in the scire facias proceedings brought against both Richard's and Cutler's patents; knighted in 1846, by 1850 he was a Lord Chief Justice. Richard's "Observation" that the concise definition in the Statute of Monopolies should be adopted was not mentioned.

The First Report concluded with a statement that, although many matters still remained under discussion, three resolutions had been passed advocating:

that inventions be registrable on a renewable basis for a maximum period of 21 years with a fee payable of £5 for the first year and thereafter a renewal fee of £10, £20, £50 and £100 at the 2nd, 7th, 12th and 17th anniversaries respectively. The rationale being that initial registration should be encouraged but renewal only so in the case of successful inventions. Protection for 16 years would thus still cost £85, not much less than the existing fees for an English patent for 14 years. However, an inventor would have to pay much less initially when the outlook for the patent's success was uncertain. Similar proposals were put forward by other reform bodies;

that surplus profits from the fees collected be "applied to some public purposes connected with invention" and not disappear into the Consolidated Fund (the Government's bank account);

the imposition of penalties for wrongful claims to patent/registration rights (it was common practice to claim such rights as an advertising ploy).

Four further meetings of the Society's Committee took place on 4th, 7th, 12th and 13th December; the meeting on the 7th was unreported but Richard and Cole were reported as attending the other three, Woodcroft's name was missing in the reports of the third. It was at the meeting on the 12th December that Richard's arguments in the end prevailed and persuaded the Committee to endorse the definition of "invention" in the Statute of Monopolies. He proposed the resolution and Woodcroft seconded it (Harrison 2006). Webster was of the same view and retained the definition when he drafted the 1852 Act; as Harrison noted in 1980 it was not superseded until 1977.

In hurriedly drafting his "Suggestions" Richard had actually omitted to incorporate the Statute's definition of "invention" as recommended in his "Observations", a forgivable oversight in the circumstances.

In his *The New Patent Law* (the January 1854 fourth edition of his commentary first published in 1852) Webster was to remark in its first chapter on some of the "extravagant notions of the protection to be afforded to

property in inventions” put forward in the enthusiasm to promote the Great Exhibition. He referred to “many crude and unreasonable propositions” that had even been endorsed by “high authority”, disapproving of one draft of suggestions for a “Bill” in particular “printed in the autumn” of 1850 - he was therefore, probably, not referring to Richard’s “Suggestions” printed in December. Webster made no mention of the Society of Arts’ contribution to the reform campaign, he reserved his endorsement for a “Bill” proposed in late 1850 by the newly formed United Association of Inventors. The views of this Association were to be the subject of some criticism in correspondence published in the Birmingham press in early 1851 in which Richard took part and which may explain why Cole described Webster as a “friend of the present system” in the Society of Arts’ First Report.

(In May 2022, on a Covid delayed visit to the British Library, a search amongst Woodcroft’s 1848-1852 “Collection of Circulars etc.” unearthed a printed record of the twenty two resolutions passed at six meetings of the Society’s Committee held between 19th November and 13th December 1850. The circular was headed with the name of the Society and the title of its patent reform Committee under a marginal note that the circular was “For the Information of Members of Committee only”. The resolutions accorded with many of the “Suggestions” put forward by Richard in his “Pamphlet” and confirmed that on 12th December he had won the day on the issue of the definition of “invention”. The twenty second and final resolution approved the appointment of a three member Sub-committee to draft the heads of a Bill based on the other resolutions. The appointees were Thomas Milner Gibson MP (1806-1884), George Brace and Arthur Symonds. As his constituency was Manchester, the Liberal Gibson should have been well versed on the subject matter of his appointment (of personal interest, his illegitimate son by a servant girl was the maternal grandfather of the Mitford sisters). Gibson, while his party was in office, had, also, been the Vice-President of the Board of Trade and was later to be the President. Brace was a London solicitor who had specialised in copyright issues for many years and Symonds was probably the barrister of that name in practice at that time.)

Chapter 29

Interviews, a Report and the Birmingham Debate (1851 - Jan to April)

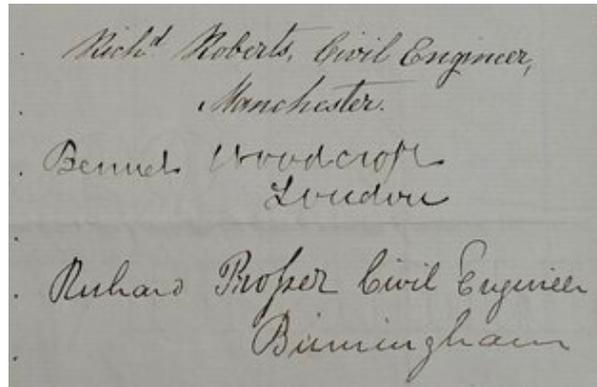


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The Society of Arts' Second Report was published on 22nd January 1851 but before then a significant event had occurred involving Richard.

An Interview with the Attorney-General

On 14th January Richard accompanied Woodcroft and the Welsh born engineer Richard Roberts to an interview with the then Attorney-General Sir John Romilly (1802-1874) "on the subject of the Patent Laws". Whether the three had petitioned for or been invited to the interview is unclear, but I favour the latter. The British Library holds what appears to be an initial (much corrected) note of the meeting written by Woodcroft and, also, a fair copy in the far neater hand of Roberts signed by all three attendees (image above). (Harrison had alerted me to the note's existence in his first essay in 1980 on Woodcroft.)

The note's preamble made no mention of the Society and it was made clear that the three were present in their capacity as inventors who, over the previous 30 years, had "collectively" been granted "no less than" 34 English patents. It was pointed out that "several" of these patents had been the subject of litigation but none had been "lost".

Of these three inventors Richard Roberts (1789-1864) was, by far, the most eminent. The career of the Manchester based mechanical engineer and developer of precision machine tools is well recorded on line; the brief but comprehensive biography on the Grace's Guide website includes details of

the tribute that was paid to Roberts following his death in 1863 at a meeting of the Society of Arts attended by, amongst many others, Fairbairn, Woodcroft and Webster. During his earlier career in Manchester, Woodcroft had become acquainted with both Fairbairn and Roberts; an acquaintance which, in the case of Fairbairn at least, developed into friendship (source: Richard Bissell Prosser). Roberts was probably not a member of the Society; in 1980 Harrison mentioned his name but only as a business associate of one of the new recruits introduced in the 1840s. *Image Richard Roberts by Ripplingille, Edward Villiers, 1798–1859 Salford Museum & Art Gallery CC.*



Having presumably acquainted Romilly with their credentials for “forming a correct judgement of the evils inherent in the present Law...”, the note continued with a modest list of eight “Proposals” for amending the law for the benefit of not only “Patentees” but also for the public “which is the greater gainer by inventions”. The abolition of the caveat system topped the list and the eighth was the acceptance of postal communications by the “Patent Officers”, another of Richard’s particular concerns. The intervening “Proposals” were: the unification of the three U.K. systems (to be administered within one office in London); that immediate protection be given on filing of a specification (each to be “progressively” numbered and to relate to one invention only) - though not stated this would seem to infer the abolition of the initial provisional protection available under the existing system pending enrolment of the complete specification; that all specifications and indices of patents be printed and published at “prime cost”; as to cost of patents. The latter proposal envisaged incremental fees of £5 each and a final fee of £25 totalling £40 over a period of three years.

On the following sheet of the fair copy a separate note had been added: “(Mr Prosser objects to secrecy of specifications) see Lord Eldon in Koop’s case”.

Ex parte Koops was a ruling by Eldon, the Lord Chancellor, on a petition in 1802 by Koops asking the Lord Chancellor to dispense with enrolment of the specification of his patent in order to preserve the invention’s secrecy. Eldon refused to do so on the ground that the public had the right to know what was in the specification so “that they may not throw away their time and labour, perhaps at a great expense, upon an invention which the patentee” could rightfully claim infringed his own. Why it was felt necessary to add this note to

the fair copy is unclear; Woodcroft would without doubt have agreed with Richard - Roberts may well have expressed a different view in the light of the evidence he was to give before a parliamentary Select Committee in May. In 1833 Roberts had published "Outlines of a Bill" to amend the patent laws which provided for a "Brief Specification" outlining the invention to be lodged with the petition for a patent; he remained committed to this view (source - copy held by BL in Woodcroft collection).

Romilly, who had only been appointed Attorney-General in July 1850, was to be appointed Master of the Rolls in March 1851 (tenure in the former post was, on the whole, short throughout most of the 19th century). It would not be surprising to find that he had carried out several interviews with interested parties on the subject of patent reform at this time - seeking views from different professions and parts of the country. Roberts and Richard described themselves as "Civil Engineers" of Manchester and Birmingham respectively; Woodcroft of London remained silent as to his occupation - not claiming the title of professor which he still sometimes assumed, notwithstanding his inattention to his post at University College.

Society of Arts' Second Report

Just how and when the Society's Committee approved its 10 page Second Report is not clear. The Report itself stated that it was approved for printing at a meeting of the Council of the Society on 22nd January 1851. I have found no press report of a meeting of the reform Committee in 1851 preceding this date, but later press reports suggest that there were at least two; the Committee's minute book when it becomes available should provide details.

Having reported, with satisfaction, that *The Times*, *Morning Chronicle* and other named leading London papers and journals had supported the views expressed in the Committee's First Report, the Second Report continued with a reference to the other committees that had been formed in London and elsewhere with the same objectives. Manchester, Belfast, Birmingham and Leeds were specifically identified; the impression was given that these committees were formed after the Society's. According to the report of the 1864 Patent Law Commission, Manchester's was formed in 1848 and Birmingham's in 1850. The date assigned to Birmingham's was probably premature, an informal group may have been in existence but a committee was not formally constituted until later in 1851. An appendix to the Second Report included details of a few of these other bodies including that of Manchester (of which Fairbairn was the president and Roberts was the treasurer) and also one formed by the highly regarded British Association (for the Advancement of Science) on which Roberts also sat. There was no

mention of Webster's preferred reform body: the United Association of Inventors.

The Report noted that the Committee had received numerous letters from individuals who had experienced "the abuses of the present system" and some were included in another appendix (some were also disclosed to and published in issues of the *Morning Chronicle*). Reference was made to the Committee's "many meetings...numerously attended, oftentimes by members travelling very long distances", which had resulted in the passing of 19 resolutions to put forward to the Government to "Form the Heads of a Bill" for consideration by Parliament. The "Heads" drafted by the MP and lawyers on the Sub-committee were more succinct and less numerous than Richard's "Suggestions" in his pamphlet but, on the whole, accorded with his proposals.

The "Heads" reflected the three resolutions quoted in the First Report and also proposed: that the existing definition of a patentable invention should be retained i.e. that in the Statute of Monopolies; the unification of the three existing systems to be administered by one office headed by a Registrar; the extension of the jurisdiction of County Courts to patent cases; the printing, publication and indexation of specifications (and as to their accessibility). Of the other resolutions two were more controversial.

The third resolved that the registration of a patent should be merely a record of a claim leaving it open to challenge by third parties as under the existing system - this accorded with Richard's view. Other reformers proposed that all applications should be scrutinised by suitably qualified experts to ensure the claimed invention's novelty and utility. The much criticised caveat system was not addressed other than by inference in a resolution which recommended that disputes should be referred to the Registrar for expert scrutiny before commencement of legal proceedings.

The 19th and final resolution related to the patenting of pre-existing foreign inventions in the U.K., which it prohibited except in the case of applications made by the "proprietors and inventors" of a foreign patent made within a year of its grant. As Richard was later to contend in his evidence before a Parliamentary committee, any such prohibition was contrary to the original justification for patents - the need to encourage the introduction of new processes and methods of manufacture into the U.K., a need which still existed. Richard's view was probably not disinterested. The London press reported that this resolution was not passed by the Committee until its meeting (reported as its ninth) on Saturday 25th January; it appears to have

been a late addition to the Report made after it was approved by the Society's Council on 22nd January.

The remainder (and the major part) of the Second Report continued with a discussion on the Committees' findings and the rationales supporting the resolutions passed - other than the 19th. As in the First Report, views of many witnesses at earlier Parliamentary committees were cited of which Farey's again predominated. The Committee's final Third Report was not published until after 28th January 1852, the date it was approved for printing by the Society's Council.

Interview with the President of the Board of Trade

On 12th February 1851 Richard represented Birmingham's inventors in a deputation attending an interview on patent law reform with Henry Labouchere (1798-1869), the then President of the Board of Trade. Three MPs headed the group, which also included six Londoners, three members of the Manchester Committee (including Roberts) and one from Liverpool. Woodcroft was one of the Londoners and one of the MPs was "Mr. Scholefield" - presumably William Scholefield, one of Birmingham's MPs. Richard would have been well known to Scholefield from the MP's earlier involvement in his father Joshua's business dealings ten years previously with Richard's then employer Thomas Morton Jones at the Britannia Nail Manufactory (see *Rescuing Richard* p.133). In 1851 both were also campaigning to reform the law that prohibited marriage to a deceased wife's sister; later in the year Richard was to become the chairman and Scholefield the treasurer of the Birmingham branch of the Marriage Law Reform Association (see Part 2 *Tubes: A Wealth of Trouble* pp. 32/33).

On 21st February, as a result of the continuing pressure for protection of unpatented exhibits at the looming Great Exhibition, a Bill was introduced into the House of Lords which was to culminate in the enactment on 11th April of the statute that was to grant such exhibits temporary protection: The Protection of Inventions Act 1851. By the time the Bill was being debated in Parliament, the readers of *Aris's Birmingham Gazette* had already been entertained for some weeks by a lively debate on patent reform in its letters columns; a debate which had commenced in mid-January and continued until mid-April and in which Richard played a leading role.

The Birmingham Debate

Little is known of William Spence. He described himself both as an Associate of the Institute of Civil Engineers and a patent agent in a pamphlet published in 1847 - one of a number of short practical texts on copyright and patent

matters of which he was the author. He gave his address as “Office for Patents 50 Chancery Lane”, which was still his address in 1851 (and in a later pamphlet published in 1856).

According to many modern commentators the profession of patent agent had, in fact, originated in the Patent Office in the late 18th century when one of its senior officers, James Poole, combined his public duties with private business by assisting inventors with their patent applications. Poole was later joined by his son Moses, a barrister, who succeeded his father and in 1835 he took in William Carpmael as a partner. Carpmael was the engineer who later qualified as a lawyer and was to act for Russell in the infringement cases he brought against other tube manufacturers including the licensees of Richard’s 1840 patent (see Part 1 *Tubes: A Wealth of Trouble* p.32). Poole & Carpmael’s main competitor was William Newton (see pp.37/38) who had commenced in business as a patent agent in 1819 having previously also been employed in the Patent Office. Newton was also the founding editor of the *London Journal of Arts and Sciences* first published in 1820. Spence had been articled to Newton before he started in business on his own account in 1839 (Dutton 1984).

By 1851, according to Dutton, at least 15 other patent agents were in business in London. The names he listed included Woodcroft’s, but Richard Bissell Prosser made no mention of this in his obituary of his patron; he described Woodcroft when he moved to London in 1846 as continuing the career he first commenced in Manchester in 1843 - that of a “consulting engineer”. However, in 1851 the oldest firm, by then known as Carpmael & Co, still dominated the profession, with Newton’s in second place. Carpmael claimed to have “over half of the current enquiries for patents” in evidence given in May 1851 to a Parliamentary Select Committee (his name survives in 2021 in that of the UK patent agents Carpmael & Ransford).

Within the patent agency profession Spence was, therefore, amongst the minor players, but he was not unregarded. He was called as a witness before Select Committees in 1848 (on the Signet and Privy Seal Office - see pp. 36/37) and those on the reform of the patent system in 1851 and 1863. In 1882 he was one of the founding council members of the newly constituted Institute of Patent Agents.

Why Spence decided to enter the ongoing national debate on patent reform in the columns of *Aris’s Birmingham Gazette* rather than the London press is a matter of conjecture; perhaps he simply thought the former would be more likely to publish the letter dated 8th January 1851 which appeared in its issue

dated 15th January. This letter gave rise to a debate that was conducted over the following three months in the *Gazette* between Spence in one camp and Richard and one of Richard's obituarists, William Costen Aitken, in the other. Of their 24 long letters, Spence contributed eleven, Richard eight and Aitken five. A PDF of an 104 page transcript of the debate on the website prossertheengineer.com can be downloaded on this [link](#) for those readers so inclined, otherwise the following précis can be read (or skipped through) for a taste of the, sometimes heated, discussion.

Gazette 15th January: Spence 8th January

“Sir—Everybody just now is talking about Patent Reform.” A sense of aggrieved outrage is evident in Spence's first letter, which deplored that the, previously uninterested, public were being urged by the press (“even... the (sic) *Times*”) to support the resurgent patent reform campaign, whilst the views of his profession were deemed to be “disqualified” (due to self interest) and, therefore, disregarded. He complained that the public were being induced to believe that the “great point” of reform was to make patents cheap and that in doing so no harm would be done if this resulted in an enormous increase in patents - what, he sarcastically commented, did it matter if the difficulty already encountered by inventors in researching previous patents was multiplied exponentially? He then turned his attention to Charles Dickens and denied the accuracy of the description in Dickens' *Poor Man's Tale* of the “35 stages” every prospective patentee faced. He did, however, declare that he was not in favour of “an overloaded machinery” in any public office, describing such practices as “an unquestionable evil” which fostered “corrupt practice”, but, nevertheless, protested against the suggestion that a patent should cost “half a crown or so” as maintained by Thomas, a friend of the “Poor Man”. Inventors, he said, in the light of their special talents, deserved better protection than “a loose mode of registration”. Spence ended his letter with an exhortation to the *Gazette* readers, “many of them interested in the protection of patent property“, not to follow the “temporary fashion” encouraged by the press but to take heed of the acknowledged experts.

Gazette 27th January: Spence 21st January; Aitken 23rd January

Spence followed up his first letter with a longer one dated 21st January published in the *Gazette* on 27th January. It was preceded by an article reviewing the Society of Arts' First Report and a recently published essay of Spence's, which congratulated both but urged caution on the former against advocating immediate “sweeping changes” and remarked that, whilst he had ably pointed out that the defects of the current system were such that “extensive changes” were, indeed, required, Spence was clearly reluctant to support any great change.

In his second letter Spence continued in the same vein as in his first. In particular, he decried the perception being given to the public that the “newly-formed Committee untrammelled by experience” of the Society of Arts was the prime and an authoritative mover in the reform campaign. He contrasted the views of the allegedly uninformed Committee to those based on the 30 years’ experience of Newton, his previous employer, who had published six papers in his *London Journal* suggesting improvements to the patent system; Newton he knew to “be sincere as a Patent Reformer, and his experience on practical points is indisputable”. He later linked Webster’s name with that of Newton. He ended his letter by advocating the “several broad recommendations” of the “United Inventors’ Association”, presumably the same body as the United Association of Inventors endorsed by Webster.

Below his second letter the *Gazette* published a response to Spence’s first, not from Richard, who was probably still busily occupied at the Society of Arts, but from Aitken, certainly a business acquaintance and presumably a friend of his in Birmingham. *Image: William Costen Aitken c. 1870 by Frank George Jackson. Birmingham Museums Trust CC.*



William Costen Aitken (1817-1875), a Scot, was born in Dumfries where his father owned a successful brass foundry; he described himself as a brass founder there in the 1841 census. Within a few years he had moved to Birmingham and was employed as the Clerk of the Works at R W Winfield’s brass foundry from 1844 to 1864 according to his entry in Vol 1 of Frederic Boase’s *Modern English Biography* (1892). The foundry was in Cambridge Street close to the tube works where the licensees of Richard’s 1840 patent were manufacturing tubes until about 1849, a venture in which Winfield was a participant; Richard subsequently relocated his business to the tube works. Boase also credited Aitken with being the main organiser of the 1849 Birmingham Exposition and with having written a third of *Birmingham and the Midland Hardware District* published in 1866 in the Preface to which its editor Samuel Timmins gave Aitken his “especial thanks”. Although omitted as a resident, and untraced elsewhere, in the 1851 census, in his letters to the *Gazette* Aitken gave his address as 19, Broad Street close to Winfield’s brass foundry and near, if not next door, to number 18 which Richard had recently leased and where his mother and sister resided in 1851. An online search against his name will reveal many entries evidencing Aitken’s interest in industrial history and also his artistic talent. After he left Winfield’s he had periods of employment as the manager of a respected art metalwork

manufacturers in Coventry (Skidmore's) and with the Birmingham stained glass and ecclesiastical fittings manufacturers Hardman & Co. From at least 1861 until his death, his main residence was Mayfield House in Heathfield Road Handsworth, which must have been in the vicinity of Heathfield Hall, the home of one of his "Soho" heroes James Watt. Birmingham Museum and Art Gallery holds the sketch Aitken made of Watt's workshop in 1870 when he was one of the first to enter the room that had remained sealed ever since Watt's death in 1819. He was one of the founders of the Birmingham & Midland Institute and, shortly before his death, had been appointed one of the first trustees of Sir Josiah Mason's Scientific College, both still in existence (the College was incorporated into the University of Birmingham in 1900 - Mason Science College). A very long obituary in the *Birmingham Daily Post* dated 25th March 1875 (cited by Boase) spoke for the respect and admiration in which Aitken was held in Birmingham. On 9th April The Society of Arts published its own obituary in its *Journal*, notwithstanding that he was not a member. At his own request Aitken was buried in the churchyard at St. Mary's Handsworth where Watt and others of his local heroes were buried - Boulton, Murdoch and, in particular, the less well known painter Francis Eginton about whom he had written a monograph published in 1871. Many Birmingham dignitaries attended the funeral and subsequently a subscription was raised for the memorial stone that marks his grave.

His own obituary confirmed that Aitken, unlike Richard, had received the benefit of a good education and this is evident in his long but elegant and restrained response dated 23rd January to Spence's, somewhat histrionic, first letter. Having expressed surprise at the notion that the public were much interested in the subject of patent reform, he nevertheless hoped that Spence would not object to "his dear friend 'the public' being favoured with a little additional information thereon". Aitken made it clear from the outset that his loyalties lay with inventors, principally but not entirely, of the ilk of Dickens' "Poor Man" on whom the impact of the current patent system was particularly oppressive. Referring to the "pleasantries" indulged in by Spence as to the press attention, he pointed out that it was not just *The Times* who supported the patent reformers and named *The Morning Chronicle*, *The Daily News*, *The Morning Advertiser*, *Spectator*, and *Examiner* as being "equally zealous in their condemnation of the existing laws". He supported cheap patents provided that an "improved mode" of enforcement was made available and speculated that it was "just possible, however, that the prospect of diminished fees,... may have suggested the caution" espoused by (quoting Spence) "those interested in the protection of patent property " e.g. patent agents. The letter continued with an unfavourable comparison of the UK system with that of other countries, both as to (inter alia) the fees payable, the record keeping and accessibility. He, nevertheless, recognised that the fees

charged must be sufficient to meet the administrative running costs. He did not accept Spence's contention that his stance, opposing radical reform, was in the interests of inventors being himself "acquainted with not a few inventors". He later cited, amongst other eminent names, Fairbairn, Roberts and Maudslay as supporters of the "great improvement" required to the existing laws and quoted the resolution recently passed at Manchester by its reform association proposing an initial patent fee of £5 and annual renewal at a cost of £5 for up to 21 years. He refuted as unfair and misleading Spence's assertion that the reform movement was a "temporary excitement" and referred to Spence's probable sympathy with an unnamed association that had drafted a Bill proposing a fee of £150 for a UK patent. Aitken closed his letter with an apology for its length and a pointed reference to Spence's address:

I must apologize for the length of this communication, which, but for the letter of Mr. Spence, would not have been written. In conclusion, I would very respectfully suggest that should "the public" of Birmingham now make Patent Law Reform the subject of their "idle gossip", and some of those more interested therein show a desire to kick over the traces, it will only prove that the gentleman who dates his epistle from 50, Chancery Lane, had better have left the subject to slumber in the comparative quiet in which he found it.

Gazette 3rd February: Richard 30th January; Spence 31st January

Richard entered the fray with a letter dated 30th January published in the *Gazette* on 3rd February. Less temperate and less elegant than Aitken's his letter, after listing the "35 stages" denied by Spence, sought to further discredit the views not only of Spence, but also those of Carpmael, Newton and Webster, expressed in the evidence they each gave in 1848 before a Select Committee, quoting from both Webster's and Carpmael's before commenting:

The whole tenor of the evidence in the Report of the Committee on the Signet and Privy Seal Office, 1849, so far as Patent Agents and a Barrister is concerned, is against "Cheap Patents" as a matter of opinion; but no reasons are given why cheapness in Patents should be productive of evil consequences, or why cheapness in Patents should produce a result contrary to cheapness in any other commodity.

High price of Patents is a temptation to commit fraud by inserting in one specification the inventions of several persons; it leads to immorality in parties perjuring themselves by declaring that they have invented that which they have bargained for from another, this is a common Practice. Improvements in manufactures are prohibited in this country by the expense of patenting them, a workman having no means of taking out a

Patent – and he would be very unwise to borrow such a serious sum for that purpose, even if he could do so; the consequence is that, a workman does not generally turn his attention to the improvement of his own business and the manufacturer is debarred from benefiting by the notions of those whose position places them of all others in the best situation to make improvements.

He continued with references to Newton’s evidence and to the additional costs that would be incurred if his suggestion, and Spence’s (that each patent application should be subjected to scrutiny by a salaried expert) were implemented. Richard was against this concept being in favour of the existing system of self regulation whereby subsequent enforcement of any arising infringement or alleged unpatentability (e.g. due to lack of novelty) was left to those actually prejudiced. He closed his letter by pointing out that in appointing such an official another (unaccountable) sinecure would be created: “his chair should have an inscription (not in “Cufic characters” as Lady Morgan says of St. Peter’s at Rome) “Esto Perpetua” which of course applies to the seat and the salary.” This reference must be to the then famous, but now obscure, Irish novelist, poet, travel writer and commentator Lady Sydney Morgan (1781?-1859) - as in other letters the uneducated Richard could not resist exhibiting his self taught erudition.

Stages.	£.	s.	d.
1st. Inventor prepares humble petition to the Crown			
2d. Which he must fortify by a declaration taken before a Master in Chancery, and pay	0	1	6
3d. He delivers petition and declaration to the Home Office, in Whitehall, and pays	2	2	6
4th. Home Secretary signs petition after some days, and refers it to the Attorney or Solicitor-General ...			
5th. Petition taken to the Attorney or Solicitor-General, at their Chambers, and the fees paid to them and Clerks are	4	4	0
6th. Attorney or Solicitor-General reports in favour of petition, as a matter of course, unless opposed..			
7th. Report taken back to the Home Office, in Whitehall			
8th. Home Office prepares a warrant, which echoes the report, and is			
9th. Sent to the Queen to sign	7	13	6
10th. Returned to Home Office, and			
11th. Home Secretary countersigns warrant, and the fees paid are.....			
12th. Warrant taken to Patent Office in Lincoln's Inn	5	10	6
13th. Clerk of the Patents prepares a draft of the Queen's bill and docquet of the bill, and the fees paid are	1	7	6
14th. And engrosses two copies of bill, one for the Signet Office and one for the Privy Seal Office, fees	6	0	0
15th. Stamp-duty on each.....	1	1	0
16th. Engrossing Clerk of the Patent Office engrosses Queen's bill for signature, fees	1	10	0
17th. Stamp for the same.....	6	0	0
18th. Queen's bill taken to Attorney-General or Solicitor-General and signed by them, fees	7	13	6
19th. Taken back to Home Secretary			
20th. Sent by Home Secretary to the Queen			
21st. Signed by the Queen			
22d. Returned to the Home Secretary, and the fees paid are			
23d. Queen's bill taken to Signet Office, in Somerset House	4	7	0
24th. Clerk of the Signet prepares a Signet bill for the Lord Keeper of the Privy Seal, and the fees paid are	4	2	0
25th. Clerk of the Lord Keeper of the Privy Seal prepares a Privy Seal bill for the Lord Chancellor, and stamp; fees paid are	5	17	8
26th. Privy Seal bill delivered to the Clerk of the Patents	30	0	0
27th. Clerk of the Patents engrosses the patent, and fees paid are Stamps for the patent, &c.			
28th. Clerk of the Patents prepares a docquet thereof	0	9	6
29th. Stamp for the docquet of patent	2	2	0
30th. Boxes for the patent	7	13	0
31st. Fees to the Deputy (!) the Lord Chancellor's Purse-bearer	0	10	0
32d. Fees to the Clerk of the Hanaper	1	11	6
33d. Fees to the Deputy Clerk of the Hanaper	0	10	6
34th. Receipt of the Lord Chancellor for the Privy Seal bill, which he signs			
35th. Fees to the Deputy-Sealer and Deputy Chaff-Wax...			
	£99	7	2

Image the “35 stages” : Image © The British Library Board all rights reserved

Spence responded to Aitken’s first letter on 31st January complementing him on “being so competent a writer” and adopting an emollient tone in arguing that their respective views were not as far apart as Aitken had supposed.

Gazette 10th February: Aitken 7th February; Spence 5th February; Richard (undated).

In his, again long, response dated 7th February, a more combative Aitken rejected Spence's conciliatory overtures; he criticised Spence's sarcastic disparagement of *The Times*, of the ignorance of the public and, in particular, of the Society of Arts' Committee, before he embarked on a lengthy discourse on the hardship caused by the deficiencies of the existing system and, in particular, its cost.

Spence's letter of 5th February in response to Richard's was more acerbic and started with a list of the eight stages that, he contended, in reality an applicant patentee faced; he continued with a, perhaps, barbed comment at Richard's own experiences in the courts "Mr. Prosser is a practical man. His experience in Patents is well known at Birmingham." and raised questions on the dangers of cheap patents to which he challenged Richard to respond. He did, however, agree "heartily" with a view expressed by Richard that "access to the specifications, or accurate copies of them, is, I believe, one of the first points (if not the first) to be attended to".

The *Gazette* dated 10th February also contained an undated letter from Richard, in effect an essay, the first in a series which were written as a commentary on separate aspects of the existing system and not in direct response to Spence. It described the additional costs (e.g. of a patent agent, for drafting a specification, for making a model, of opposing a caveat) a patentee was likely to have to pay over and above the fees (totalling in excess of £99 - for England alone) incurred in the "35 stages" listed in his first letter; perhaps doubling or even trebling the expense. Richard equated these very onerous (and, largely, unjustified) fees to a tax on inventors for the grant of a temporary monopoly, which the Government did not guarantee and left it to the inventor to enforce at his own cost in the event of infringement.

What a paying animal an Inventor must be. It is of no use, Mr. Editor, to talk of reforming the present method of taxing inventors for procuring privilege in the shape of Letters Patent, which merely enables them to go to law.

The whole manner of treating inventions must be changed, if we are to keep the lead as manufacturers.

There followed an eloquent polemic on the injustice of this "tax". Richard then addressed the principle deficiency of the existing system, the difficulty that a prospective patentee encountered in ascertaining what had previously been patented. He quoted at length from the evidence of "Professor Woodcroft" before the Select Committee in 1848 - of his experiences searching for past patents on "propelling vessels" and "navigation" in which Woodcroft described: the frequent inaccuracy of their short titles which exacerbated the already extraordinarily difficult task of identifying relevant patents in each of

the three enrolment offices; the (often wasted) time lost and search and copying fees incurred; and his discovery of numerous past patents which had been invalid from inception due to pre-existing patents. Richard concluded his second letter with an introduction to his next: "In my next letter I propose to show the iniquity of the Caveat system, and the injustice of the six months allowed for enrolling the specification of an invention."

Gazette 17th February: Spence 12th February; Richard (undated).

Richard's "next letter" was published in the *Gazette* dated 17th February. It was preceded in its columns by a letter from Spence dated 12th February, which responded first to Aitken's criticism of Spence's disparaging remarks concerning *The Times*, the public's ignorance and, in particular, of the Society of Art's Committee. In the case of the latter he reiterated his support for the less ambitious proposals of the United Inventors Association, whose members were, he alleged, better qualified to comment on patent reform than the members on the Society's Committee, notwithstanding, as he admitted, that some of the latter were also members of the UIA. Did these include Woodcroft (some of whose views probably coincided more with those of the UIA)? (This question was to be answered in May 2022 on the visit mentioned previously to the British Library; a UIA pamphlet in the Woodcroft collection disclosed that Woodcroft was actually on its Council.) Spence then turned his attention to Richard's first "essay" and commenced with rather perplexing comments on the judiciaries' role in the caveat process, which probably confounded the majority of the *Gazette's* readers (a process to which Richard had merely alluded in his first essay and was to be the subject of his next). Spence continued with a few further inapposite remarks (concerning Boulton's financial support of Watt and the problems the local MP Muntz had encountered with opposition to his patent) before he enthusiastically endorsed the publicity given by Richard to Woodcroft's evidence. Having already attempted to preempt Richard on its subject, he ended the letter: "We are promised a treat in the latter clause of the last paragraph of Mr. Prosser's letter."

In fact, in his second essay Richard did not dwell long describing the "iniquity" of the caveat system whereby anyone on payment of a fee of only one guinea became entitled to notice of any patent application that might relate to the subject matter described in their caveat, which they could then seek to oppose irrespective of the merit of their claim. It was well recognised that the system was abused, particularly by patent agents:

The Caveat being entered in the name of the Patent Agent, you have no means of knowing your opponent, nor his ground of opposition.

This is a great grievance, and enables dishonest persons to obtain a knowledge of what is going on by bribing the workmen or servant of the

intending patentee. In the Report of the Evidence given before the Committee of the House of Commons in 1829, this iniquitous practice was broadly stated - "That individuals had floating Caveat to catch information to what was going on."

Richard also cited an earlier commentator, one of the clerks within the Rolls Chapel of the Patent Office:

"We cannot, however, too much reprobate a practice which has of late grown into use by some speculative persons of keeping a list of Caveats upon general principles entered in the books, without any idea of obtaining Patents themselves, but with the sole view of being acquainted with every improvement that is going on, whereby they gain an opportunity of coming to a compromise with the real inventors, and sometimes have obtained large sums of money from them to withdraw their opposition." (A Collection of the most important cases respecting Patents of Invention... John Davies 1816)

Richard then commented on the recent increase in the number of resulting oppositions: "The fees on Patents and oppositions before the Attorney and Solicitor-General must amount to upwards of £7000 per annum, from which no benefit whatever results to patentees." The rest of this essay, three quarters of it, propounded his view that the full and complete specification of an invention should be submitted with the application for a patent. He likened the existing position to an author applying for copyright in a work six months before it had been written. He asserted that England was unique in allowing an inventor time in which to submit the specification after the (conditional) grant of the patent and cited, by comparison, the French and American systems (although he disapproved of the American requirement of prior scrutiny by examiners in its Patent Office which caused delay, additional cost and many rejections - as experienced by his brother Thomas and recounted in *The Dust-Pressed Process*). He continued his narrative with an historical overview of the introduction (in about 1712) and subsequent growth of the enrolment of specifications in England; a slow process apparently and one which was much hampered by irregularities and incompetence within the Patent Office - he named many of the officers involved. The previously mentioned Koop's case was also referred to. He alleged that it had become common for agreements to be concluded between inventors whereby specifications were enrolled with another inventor's similar invention added between the provisional grant and enrolment. This allegation went further than the already long voiced criticism by some of the custom of allowing inventors to refine their invention and even add innovations during this period. Richard pronounced his view that:

The specification should be deposited at the time of applying for the invention - not an outline specification, as some have proposed, but the most complete one the inventor knows how to draw up.

He criticised the “loose” wording and inadequate drawings of most specifications which were drawn up in “indecent haste” and concluded with another attack on patent agents:

The Inventor is first mulcted by the Patent Agent in the shape of a ten-pound fee for passing a Patent through the offices (it is not pretended that any skill is required), and by heavy charges for the specification and drawings of a Patent which the Agent nineteen times in twenty knows is worth nothing. When Patents are taken out for England, Ireland, and Scotland, the Agency fees are trebled, and all the drawings have to be multiplied by hand; whereas, if the specifications were printed, much expense would be saved and accuracy ensured.

Gazette 24th February: Spence 19th February; Aitken 22nd February.

The *Gazette* dated 24th February contained a letter from Spence dated 19th and an even longer one from Aitken dated 22nd February.

The contents of Richard’s last letter, the “treat” he had misconceivedly hoped for, were dismissed by Spence as nothing that need “detain” him. Instead, Spence went to pains to clarify and expand upon the evidence he gave in 1848 including his support for cheaper non-renewable patents for minor inventions costing, say, £10 for three years protection - “These “small Patents” are, I think, adapted in many instances to the trade of Birmingham.” For “larger” patents he was in favour of the cost being paid by instalments and referred to the recommendations of the UIA: “On the application for the Patent, £10; on obtaining the Patent, £10; at the end of the third year, £40; at the end of the seventh year, £70.” and referred to the need for the administrative costs of the system to be recoverable from the fees collected. In conclusion he emphasised that he supported “one Patent for the one United Kingdom”. Spence had made it clear at the beginning of this letter that he hoped to persuade Aitken that their respective views were not as far apart as Aitken supposed.

Aitken, however, in his letter, written about the same time, adopted a much more aggressive and inflammatory tone and accused Spence (inter alia) of insincerity and egotism; he also referred to the UIA as Spence’s “pet Association”. Aitken covered much of the same ground as before but he did point out that the Society of Arts’ Committee, scorned by Spence, had published two “excellent” reports to the UIA’s none and alleged that the UIA members had been unable to agree on the draft of its “little bill”. (If true the reason for this assertion probably lies in the divergent views of the recently formed UIA’s founding members; the 1851 pamphlet seen in May 2022 listed not only the name of Woodcroft (who was on its Council) but, surprisingly, Richard’s as well, and those of Roberts, Fairbairn and many other names that appear elsewhere in this narrative.)

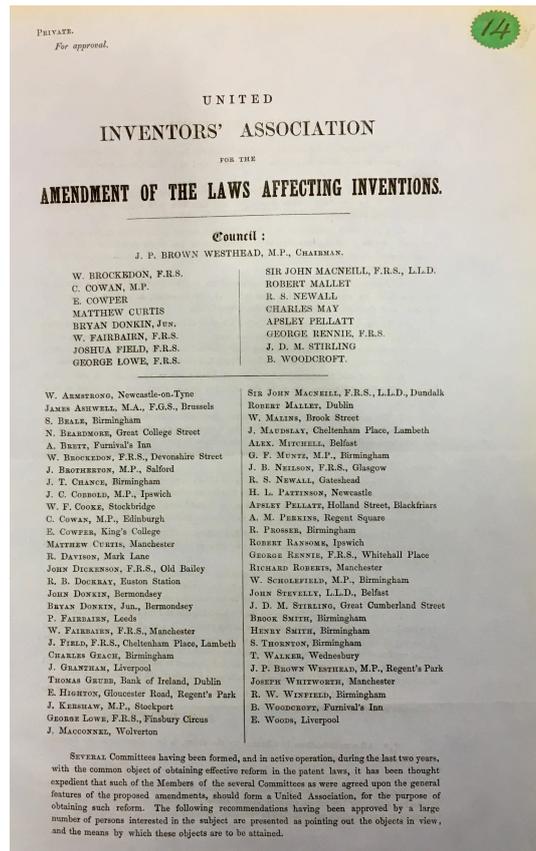


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Gazette 3rd March: Spence 26th February; Aitken 27th February; Richard 27th February

The *Gazette* dated 3rd March published a letter from each of the three disputants.

Spence's dated 26th February commenced:

"Sir - I hope Mr. Aitken will not think me "the reverse of sincere" if I pass over without remark all his allusions to me as an individual; but really respect for your space compels me to do so."

He continued with an examination of the roles of the judiciary and patent agents in the caveat process which expanded on his earlier obscure comments; he suggested that the process could be improved by the appointment of an independent and suitably qualified "Examiner" to assist the judiciary in considering the merit of the caveat holder's opposition to the proposed patent. He recognised that patent agents, who usually represented the respective parties at the hearing, may not have the relevant expertise themselves and said Woodcroft was "perfectly right" in 1848 when, answering the question "Are not the Patent Agents practically acquainted with most of the previous Patents?", he replied "Not one of them. I do not think any of them are acquainted with a tithe of the Patents that have been granted." Nevertheless, Spence defended the "integrity and capacity" of his

profession, other than those agents of “mushroom growth” who lacked adequate training.

Aitken’s letter dated 27th February (inter alia): described Spence’s proposal as to “small patents” as a misconceived and impractical “sop” pointing out the great value that minor improvements can add to a manufacture (citing Webster on those in the button industry as an example); addressed the cost issue yet again (citing the Mayor of Bradford as recently proposing a fee of just £5); cited in full the recommendations put by Roberts, Woodcroft and Prosser to the Attorney-General on 14th January; again cast aspersions on Spence’s motives; and addressed him directly at the end:

Mr Spence... It is just possible that in the present instance, backed by powerful interests, your wishes may be accomplished - you may succeed in arresting for a brief period the onward progress of Patent Law Reform. Learn, however, by the past, that claims founded on truth and justice return again with tenfold force, and invariably accomplish the overthrow of those who vainly attempt to stem their progress.

Richard’s letter also dated 27th February was not one of his essays but reverted to the subject of the “35 stages” denied by Spence and he reasserted that they did exist. He cited in support from the evidence given by Newton in 1828 of the numerous (often wasted) visits by an agent’s clerks (“boys”) to the various offices and the time expended waiting. He also quoted two other witnesses in 1828, both patent agents; one citing methods adopted in abuse of the caveat process and the other advocating the process would be supplanted if it was a requirement that a complete specification be lodged with the patent application (with a right for the inventor to refine it in the subsequent 12 months). Richard criticised Spence for lack of depth in his observations having earlier in his letter quoted Spence as giving evidence in 1848 that: "I have not, however, passed a great many Patents. My business has rather been the preparation of Specifications and advising upon cases."

Gazette 10th March: Robertson 6th March; Spence 4th March; Richard 6th March “Letter the Fifth”

The *Gazette* dated 10th March published three letters on patent reform.

The first, dated 6th March, was from the secretary of the Inventors Aid Association in London, a W. C. Robertson, who did not refer to the already ongoing debate in the newspaper. Robertson was concerned as to the opportunity for piracy of unpatented inventions exhibited at the forthcoming Great Exhibition and lobbied for immediate temporary statutory protection for such exhibits. He, also, put forward some reform suggestions of his own, including a requirement that a full specification be lodged at the outset of a patent application (with which Richard would have agreed) for examination by “a Committee of Investigation, composed of scientific men...” (to which

Richard would have objected - as he would have also to Robertson's suggestion of a fee of £100 for a UK patent).

The following letter dated 4th March was from Spence in which he clarified his proposals for "small patents" explaining that his suggestion related to duration rather than value/importance; in effect giving the inventor the option of a cheaper three year patent or a more expensive 14 year one. Spence continued with a discourse on a subject on which he had published a pamphlet in 1847, *Copyright of Designs: As Distinguished from Patentable Invention*, with particular reference to the button trade, before returning to the dispute with Richard over the "35 stages". However, he did not dwell long on this, after asserting that "Mr. Prosser can only make out his "thirty-five stages" by cutting up the real stages", he reaffirmed his view, one also held by Woodcroft, that, whilst he was, in fact, in favour of reducing the delays inherent in the existing system, the most important issue to be addressed was for inventors "to have the means of knowing what has been already patented". He, nevertheless, acknowledged that the current rules allowed for disgraceful "manoeuvring" and examples of every unacceptable "artifice that could enter the mind of a patentee, or of a Patent Agent", which he would like to see curbed. He indicated he wished to retain "the excellent practice of allowing six months to prepare the ultimate Specification", before concluding his letter with another dig at Aitken for his personal "observations".

There was much of interest in the third 'reform' letter in this issue of the Gazette.

Richard's letter dated 6th March was headed "Letter the Fifth", it took up the challenge contained in Spence's of 10th February to respond to six questions posed by Spence which, essentially, revolved around three contentions: the disincentive (perceived by reformers) to the introduction of improvements by poor inventors caused by the expense of the existing system; the dangers (perceived by patent agents) that cheap patents would result in the system being clogged up with an enormous number of useless patents; and that cheap patents would raise insufficient revenue to support the system's administration. Richard's comprehensive answers, as would be expected, supported the first contention and disputed the second and third. Of most interest, however, are the citations that he put forward to support his arguments which included: an account of the difficulties that, the then not wealthy, Brunel senior encountered in exploiting his early patent for his "beautiful little machine for winding sewing cotton" (a surprising reference bearing in mind Richard's later publicly voiced contempt for Brunel - see p.45); quotations from the very recently published Report on Patent Laws by an eminent Irish lawyer James Anthony Lawson, L.L.D. (1817-1887) Barrister-at-Law, Dublin; an account by Robert Fulton (1765-1815), the American engineer and inventor, of the launch of his first steam boat quoted from his biography; an extract from an "unpublished" letter of Watt's (in

Richard's possession?) and references to letters from Watt to Smeaton cited by Farey in 1828 (John Smeaton (1724-1792), the eminent civil and mechanical engineer, who is often described as "the father of civil engineering" and who, also, made significant contributions to the early development of steam engines); other references to and quotes from (inter alia) the poet Alexander Pope, Cardinal Wiseman, Galileo and, in the final paragraphs, a number of inventors whose successful ideas were initially discredited including, in one case, by Carpmael.

Gazette 17th March: Spence 11th March; Aitken 12th March

Spence's letter need not detain us. It concerned a recent meeting at the Institution of Civil Engineers at which Newton had presented a paper on patents; Spence was critical of the standard of the subsequent discussion between its members in expressing his own, already known, views on the comments made.

Aitken's letter was, for him, relatively short and replied to Spence's of 3rd March. He excused the personal nature of some of his previous remarks and blamed Spence for having brought them on himself: "the flippant and self-conceited language adopted by him in his introductory letter was not that with which a grave subject such as Patent Reform should have been treated." The rest of the letter concerned Spence's suggestion that an expert "Assessor" should be appointed to advise the sitting member of the judiciary in caveat hearings; Aitken rejected this proposal as misconceived bearing in mind that such "a gifted individual as this said permanent Assessor should be, never was, or never will be" giving examples (and alluding to those given by Richard in his last letter) of instances where subsequently successful inventions had been initially dismissed by supposed experts.

Gazette 24th March: Spence 18th March; Richard's "Letter the Sixth" (undated)

In his (as he pointedly noted) "Tenth" letter Spence first addressed the replies given by Richard on 6th March to his six questions; Spence's responses repeated his views, were not supported by evidence or any citations and are dull reading. He continued with a response to Aitken's comments on his proposal for the appointment of an "Assessor" contending that such an official's role (in caveat proceedings) would not be to advise on the novelty of the subject matter of the proposed patent but "to see that the inventor does not injure any one of the public by getting a Patent for what belongs to another...". This perplexing attempted differentiation was first put forward by Spence in his letter of 12th February and remained unconvincing.

The *Gazette* readers, hopefully, found the contents of Richard's letter to be more entertaining. He opened his "Sixth" by disparaging Spence's derogatory comment that patents agents had "little to care" (i.e. fear) from the "effects" of the Civil Engineers' discussions on Newton's paper

continuing: "Two effects were made manifest, viz the iniquity of the Caveat system, and the injustice of allowing six months after the Patent is granted to draw the Specification." He was referring to the "shrewd" concerns of one Civil Engineer (that the Great Exhibition would lead to piracy of some of its exhibits) when stating: "This state of things would not exist if the Specifications were filed when the Patents were granted, which is the practice in every country except our own." He included Spence and (by inference) Newton in

that class of Reformers of a timid Conservative turn, who would like improvement to be so slow as not to be "sensible to feeling or to sight," and no doubt venerates and thinks Patentees cannot too much venerate, the antiquity of "Mr Chaff Wax" because he holds his office by virtue of Patent 16 James and 3 Charles, confirmed by an Order in Chancery 17 Geo. 2, 28 Nov, 1743, as follows:-

He then: quoted from enactments in 1629 and 1723 confirming the terms of appointment of the office of "Mr. Chaff Wax"; condemned the abuses of the early patent system (including a long list of some of the manufactures that had been "appropriated to monopolists" by 1603, the year Elizabeth 1 died, citing a work by the antiquary and politician Sir Simonds D'Ewes (1602-1650)); and referred to the Statute of Monopolies enacted in 1623 which prohibited such monopolies but preserved that "upon which the law respecting Patents for inventions is founded" before concluding his attack on the much derided officeholder (and citing Webster's evidence in 1848):

Are we, in the reign of Victoria, to submit to the extortions of "Mr. Chaff Wax" and his deputy because they produce the Patents of James and Charles for the practice of their extortion, and to venerate the 27th Henry 8, c. 11, which was enacted for "the purpose of creating fees?" - Webster, Minutes of Evidence, Signet and Privy Seal, 1849).

Richard continued with his own assessment of Spence's proposal for the appointment of an "Assessor" to assist the sitting judiciary in caveat hearings (who were very senior lawyers):

If the Attorney and Solicitor-General require "assistance" - which is Mr. Spence's synonym signifying their incompetency - why not do away with all inquiry, especially as Mr. Spence says they neither go into the "novelty or utility of an invention?" They therefore take the fees, amounting to about £7000 per annum, for doing nothing in an incompetent manner.

France's patent system was invoked as an example of a process that was deemed "secure" notwithstanding that it allowed "no inquiry" into the novelty or merit of an invention and where patents, also, expressly stated that they were "Sans garantie du Gouvernement." (as was the case in England). Richard described how the French Government's disclaimer was introduced as a result of Napoleon's objection to being legally obliged to sign (and, thereby, being perceived to have endorsed) a particularly "frivolous" alleged invention called the "invisible woman" (the story appears to be an almost

exact quote from *The Law of Patents for Inventions* by Willard Philips published in the U.S in 1837). Towards the end of the letter Richard was to refer to the similar requirement imposed on Victoria:

It might produce a speedy reform if her Majesty (like Napoleon) happened to enquire why she should sign her name thirteen hundred times per annum to a lot of trumpery Patents. Her Majesty derives no benefit from the transaction, and it seems taxing her good nature and the pockets of patentees rather too much.

Before this he turned his attention, again, to patent agents and quoted Webster saying in his evidence in 1848 that “The London Patent Agent is a very mixed sort of person” when the barrister went on to name Carpmael, Newton and *The Mechanics’ Magazine’s* Robertson as scientific advisers on patents, in contrast to Spence who acted as both an adviser and an agent. Richard did not comment on the accuracy of this description, but he did challenge Webster’s assertion that the profession was a new phenomenon. In fact, Richard alleged that the profession first emerged when:

A Mr. Grubb, who was clerk to the Attorney-General, Sir Pepper Arden, afterwards Lord Alvanley, acted as Patent Agent. He was a proprietor of Drury-lane, and was so much in debt that he was obliged to reside within the Theatre, and in consequence (in 1776) to employ a clerk to do his business.

The clerk so employed was named as Poole senior, who is usually credited by modern commentators with being the first patent agent. Some further historical details of patent officers who had acted as early patent agents followed (in their midst, as an aside, the inventors Arkwright and Bentham were also mentioned - Bentham for his skill in drafting his specifications whereas the (illiterate) Arkwright had to get his 1778 patent “drawn by a Mr. Charles Wilkinson, who was a Schoolmaster at Nottingham”). After this historical overview of their profession, patent agents were accused of being against reform and even of frustrating a reform that had recently been implemented which allowed members of the public to copy (for a fee of only one shilling) specifications enrolled within the Rolls Chapel, one of the three enrolment offices; evidence was cited that agents thereafter ceased to use the Rolls Chapel. In conclusion Richard maintained that:

As to the “enormous value of Patent property within the last few years” (818, Minutes of Evidence) I think Mr. Webster is very much mistaken. Whatever the value of Patents may be (and the writer is inclined to put a very low estimate on their value) there can be no justification for the present method of extracting money from a class whose endeavours, whether successful or not, are to advance (with their own interests) the arts and manufactures, and to diffuse comfort either by producing new commodities or cheaper methods of producing old ones.

About five hundred Patents per annum are taken out in England, and there are about five Patents per annum extended for a longer period by the Privy Council - is it a just inference that the other four hundred and ninety-five are not worth the application for extension, or that they have paid so well that the Patentee has no need of renewal? This conundrum can only be solved by a Commission of Enquiry as to the past; but for the future a Return to the Board of Trade would remove all speculation as to whether Patents are so valuable as they are said to be, or if they are mere monuments of the ignorance of Inventors and the cupidity of Patent Agents. "Who drive fat oxen should themselves be fat."

(The final quote was an adaptation of a well known example of sarcastic criticism attributed to Samuel Johnson.)

Gazette 31st March: Richard's "Letter the Seventh" (undated)

Richard commenced his letter by quoting an enquiry "as to the proper time of enrolling a Specification" that he had received from "MSB". Gazette readers who also read *The Mechanics' Magazine* would have recognised these initials and may have identified the enquirer as Lady Bentham, widow of Sir Samuel. Her ladyship's enquiry was not as succinct as Richard had implied; in describing the difficulties of the issue, she, particularly, had sympathy for the poor (uneducated) inventor who would probably require assistance in drafting the specification but wished to preserve secrecy. (She, also, mentioned being present "as a scribe" (for her husband) when "apparently trifling" but essential details of an invention were being discussed.) Richard's response was complete and unequivocal:

Answer - In all countries except England the Specification of the invention accompanies the application for a Patent, and no inconvenience has resulted therefrom; in some countries an inquiry is instituted as to the novelty of the invention. In France Patents are granted in the order of their application without any enquiry.

It is no doubt a difficult thing to specify minutely all the stages of a new manufacture beforehand; there must of necessity be redundancies or omissions (or both) in a Specification prepared under such disadvantageous circumstances, depending on and varying with the nature of the invention. But if no Specification can be written the invention must be a mere nullity, and not in a state to patent.

The Specification should be deposited at the time of the application for the Patent, and should be as perfect as the inventor can make it; he should deposit other Specifications whenever he thinks fit, giving an exact account of his practice up to the time of the deposit. All the Specifications should refer back to the original Specification, and all should expire together. The public would then have the means of working the invention in as beneficial a manner as the Patentee, and

would thus receive an equivalent from the inventor for the right conceded to him.

The Patent should be forfeited on proof that the inventor secretly practised any part of his patent manufacture for twelve months without disclosing the same by filing an additional Specification; and during the last two years of the Patent the public should have free access, under regulations, to the premises where the patent manufacture is carried on.

The sufficiency of all the Specifications must be determined (if called in question) by evidence taken in the County Court. Nothing can be worse than the custom of trying Patent cases in the Courts of Westminster. Neither the Judge nor Jury in many cases comprehend the witnesses, owing to the peculiarity of technical terms and provincial pronunciation, and the want of acquaintance of the Court with mechanical operations.

A manufacturer lately copied the design of a grate registered by the Coalbrookdale Company. The case was tried in the County Court, in Birmingham, and seemed to give satisfaction to every body except the infringer. Patent cases might equally be tried in the County Courts.

After naming two early patent agents that he had omitted from his previous letter, Richard cited two Parliamentary reports recommending reductions in associated judicial charges and the over complicated bureaucracy of the patent system. There followed lists of the fees paid to “Mr. Chaff-wax” and the other patent officers for an unopposed patent totalling £94 17sh and an annual revenue of £56,400 on, a presumed, 600 applications. The letter continued with a table of fees alleging that the two firms of Newton and Carpmael charged an additional £23 3sh 6d and £49 13sh 9d respectively on an unopposed patent and ended:

The above charges have nothing to do with the Specification; they are the sums charged for getting the patent from the various public offices, which is done by boys of 12 or 13. Is this a part of the Patent practice which Mr. Spence would reform?

Gazette 7th April : Carpmael & Co. 2nd April; Newton and Son 4th April; Spence 26th March

The editor of the *Gazette* gave precedence to the responses of the two patent agents, each maintaining that Richard had misrepresented their charges. Carpmael demanded an apology; Newton accused Richard of claiming patent agents were dishonest, made an implied threat of proceedings and published their bill to Richard for his nail machinery patent dated 8th May 1839 (this actually, somewhat counter productively, indicated that their fees, 12 years earlier, were about £16).

Spence’s “Letter the Eleventh” was a response to Richard’s Sixth in which he had described Spence as one of the “Reformers of a timid Conservative turn”. Spence denied that this was the case on the grounds that his objection to some of the changes proposed were not based on some vague

uncertainty as to their impact but because “I see inherent harm in them; because I believe they must of their very nature do harm.” He proceeded to seek to justify his objection to some of the proposed changes: the abolition of the caveat system (although he did not refer to it as such objecting instead to the grant of patents without inquiry); the proposed compulsory filing of the complete specification with the application; and cheap patents, except in the case of his proposed “small patents”. His justifications were not, on the whole, very convincing. However, he did stress that he did not object to a reduction in the bureaucracy :

I am not antiquary enough to care a pin's-head what becomes of “Mr. Chaff-Wax”; he is a person with whom I have not the least acquaintance; and I am very indifferent about any of the formalities so long as there are means of making proper enquiries by the patentee or his agent as to the novelty of the invention, and by the Attorney-General, duly assisted, as to its interference with any party who may claim to be heard in defence of his interests; and lastly, an adequate tribunal before which to try Patent causes. I do not care how simple the granting of Patents is made provided these cardinal points are secured.

Lawyers he considered a preferable “adequate tribunal” to one composed of “practically scientific men”, e.g. engineers, as patent cases usually involved both legal and scientific issues:

lawyers of course require assistance in Patent matters, but their comparative ignorance of practical science is not a bar to their capability of understanding the points when furnished to them, because their minds have been trained to understand principles, and the eminent ones have passed through, a course of practice.

Spence ended what was to be his last letter in the *Gazette* debate with an endorsement of “Conservative Reform” as epitomised in the reforms brought about by the “Great Reformer”, the Conservative politician and Prime Minister, Sir Robert Peel who had died in July 1850. He finally remarked:

I hope Mr. Prosser will not think me ungrateful for the compliment he passed upon me when he called me a Reformer, albeit one “of a timid Conservative turn.”

Gazette 14th April: Richard “Letter the Eighth” (undated)

In his final letter in the *Gazette* debate Richard challenged both Carpmael and Newton for their “rude and uncalled-for observations” and pointed out examples of the additional agency fees they had each charged in the bills he had cited over and above the fees actually disbursed. He denied that he had accused patent agents of dishonesty but did not hold back in his criticism of the profession:

I am fully aware Patent Agents are a self-appointed, self-constituted, self-satisfied body; that, in the language of Mr. Webster, “The London Patent Agent is a very mixed sort of person” that they are not a

responsible body, and are therefore unaccountable, having in these latter particulars advantage over lawyers, doctors, cobblers, and tailors - the former are responsible for negligent practice, and the latter for spoiling the material on which they operate, but Patent Agents may vitiate by bad workmanship the most valuable invention without any responsibility; they may receive, as they do receive, by "Hook or by Crook," about twelve thousand per annum merely for passing Patents (by mere boys) through their "thirty-five stages;" and I am not aware that even for the receipt of this sum they are responsible or accountable beings - grateful they are, and ought to be. Happy! Happy! Patent Agents.

In "ventilating" their little bills I have had occasion to compare them with those delivered by the legal profession; and certainly if they took the same liberties with established law charges as Patent Agents have done, they would hear of it on taxation, and then be struck off the Rolls.

He included detailed breakdowns of three invoices for obtaining an "English Patent": an unnamed solicitor's, and one each of Carpmael's and Newton's. He concluded his letter:

I have placed the originals of Nos. 1, 2, and 3 in the hands of Thomas Slaney, Esq., Solicitor, 2, Newhall-street for the inspection of the curious - the puzzle being to separate the strictly legal from the fictitious charges, and to ascertain the profit to the Patent Agent on each account.

(The solicitor had charged the least, £105 7sh, compared to Newton's £123 12/6 and Carpmael's £145 11/8 - in 2021 the purchasing power (RPI) of £100 in 1851 was £11650 but £89,800 relative to average earnings (measuringworth.com); the cost of obtaining a UK patent that year was estimated at £4000 on the website of the Intellectual Property Office.)

This letter from Richard was to be the last published in the *Gazette* in the debate commenced by Spence in January 1851. Presumably Carpmael and Newton decided it was counter productive to reply to Richard's latest allegations. Later in the year, during June, July and August, the *Gazette* did publish a series of letters from Spence with his thoughts on various patent reform issues; neither Richard or Aitken joined in the discussion.

The end of the *Gazette* debate was to coincide with the passing of The Protection of Inventors Act on 11th April, but before then two Bills had been introduced into the House of Lords for the reform of the patent system. The introducer of the first Bill on 24th March was the renowned elder statesman (and a previous Lord Chancellor) Lord Brougham, an earlier proponent of reform whose efforts had led to the passing of 'his' Act in 1835 (see p.36). The second Bill, a counter proposal, was introduced by Earl Granville (1815-1891) on 10th April; the Earl, the Paymaster General and a Vice-President of the Board of Trade, was an unlikely supporter of reform as he

was, in fact, opposed to the grant of patents for inventions as a matter of principle. The introduction of these Bills led to the swift appointment of a Select Committee of the House of Lords under the Chairmanship of Earl Granville to consider both of the "Patent Law Amendment" Bills. The Committee proceeded immediately to call upon witnesses to give evidence before it during sessions which took place on 16 days over the period 15th April to 20th June 1851. *Image 2nd Earl Granville c1860 National Portrait Gallery CC License.*



Chapter 30

House of Lords' Select Committee (1851 - April to June)

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In all 33 witnesses were called of whom Richard was one. The names of about a third of these witnesses have already appeared in this and the other Stories of Richard's life.

Sessions 1, 2 & 3 - 15th April, 5th & 9th May: Webster and Carpmael

Webster was the first witness on 15th April. He probably remained in attendance at all the sessions as he was occasionally asked to give guidance on legal issues to their Lordships on later dates. Webster was one of the five witnesses who had appeared on 12th and 13th March before another earlier Select Committee, also chaired by the Earl, to report on the proposed Bill for the protection of exhibitors at the Great Exhibition;

Carpmael and Woodcroft were two of the other witnesses, all five of whom were called upon to attend before the later Committee.

In the fourth edition of his *The New Patent Law: Its History, Objects, and Provisions...* published in 1854 (first published in 1852), Webster was to add a note intimating at the bias of Earl Granville (and possibly other Committee members) against patents, which influenced the line of questioning and thereby, in some instances, the impression given by witnesses' answers:

...many of the witnesses were wholly unaware of the particular views which suggested the questions, and the result has been that several of the witnesses have been surprised on perusing their evidence in print, at the countenance which some of their answers appear to give to views against the policy of patents...

Webster's long examination by the Committee continued into its second sitting on 5th May. He spoke strongly in favour of reform of the existing system criticising (inter alia): its excessive bureaucracy (useless sinecures) and cost; the difficulties of tracing, accessing and copying specifications of previous patents (he mentioned Woodcroft's indices); the resulting duplication of patents; the abuse of the caveat system. He was in favour of: a combined UK system; some system of expert assessors/examiners; and limited protection for introduced foreign inventions. He reviewed the views of some of the reform bodies at length, including those of the Manchester Association and the Society of Arts' Committee, but was circumspect about some of their more radical proposals (including those for unrealistically cheap patents); he referred to the United Inventors Association as a recently formed "joint committee" comprising members (all patentees) from the other reform bodies. He believed that workmen formed the majority of inventors and were vulnerable to exploitation by their employers. When questioned as to their merit in principle, he defended patents, in particular, as a necessary incentive to inventors. In commenting in some detail on procedural and legal issues of a patent application, he contended that in reality there were only eight stages not the 30 to 40 claimed by others. His views on the two reform Bills were given.

Carpmael was the second witness and it would appear that his status as **the** leading patent agent (which he self importantly inferred himself to be on several occasions) influenced the time the Committee afforded to his questioning - twice that of Webster. His evidence can, however, be quickly summed up in his answer to the Committee's third question of him as to the working of the existing system, namely that "the time occupied... is objectionable, otherwise the practice works very well"; he denied there was much dissatisfaction with it from inventors "generally", the ongoing "considerable outcry" emanating from those who knew "very little about it".

He viewed the complexity and cost of the existing system as an advantage as it deterred “nonsensical” patents. He objected to publication of abstracts of patents (too often inaccurate) and, whilst desirable, the printing of specifications would be too costly. He disapproved of both Bills and (disingenuously?) contended that the proposed reform would actually increase his fee income.

Carpmael’s testimony took up the rest of 5th May and the whole of the next session on 9th May.

Sessions 4, 5 & 6 - 12th, 15th & 16th May

On 12th May another patent agent Paul Rapsey Hodge (1808-1871), who had also had practised in the U.S. for 16 years, gave evidence (contradicting Carpmael’s) critical of the British system and its cost; he endorsed the U.S. system on which he was examined in detail (he also knew of Woodcroft’s indices and recommended that the Government purchased them). The same day was to see the Secretary of the United Inventors Association, a solicitor, give evidence; he was not kept long; partly, perhaps, because his own practical experience was limited (he was speaking for the members of the Association). He confirmed the Bills contained some of the recommendations contained in a “paper” previously presented by the Association to the Select Committee.

On May 15th two more patent agents and a solicitor with a patent practice were questioned. The solicitor recommended many reforms consistent with those of the reformers; he had been preceded by one of the agents who was questioned at some length but had difficulty in expressing his, sometimes muddled, thoughts but broadly appeared in favour of retaining the status quo. The final witness that day was Spence whose views, already known to us, were, on the whole, concisely and clearly put forward.

Two sugar refiners were examined on May 16th primarily as to the impact of the Bills’ provisions on the colonies; both acknowledged that they were anti-patents in principle. They were followed by a patent agent, a son of William Newton, representing the family firm; much of his testimony related to one particular concern of the firm: namely the preservation of the right to patent foreign inventions introduced into the UK (under threat in the Bills). He also voiced objections to the publication of specifications and periodical payment of patent fees.

Session 7 - 19th May: Fairbairn, Roberts and Cole

Fairbairn (representing the Manchester Association) and Roberts both testified on May 19th; although each obviously favoured substantial reform some differences of emphasis were evident in their respective testimonies.

Fairbairn (like Richard) spoke in favour of the deposit of the full/complete specification on the initial registration of a patent, which Roberts considered would be impossible to do without risking loss of secrecy during the final development of the invention and therefore favoured provisional registration on deposit of a sealed brief description (fee payable £5) with six months allowed to file the complete specification (similar to the existing system but kept secret and anonymous). Roberts from his own experiences particularly objected (at some length) to the caveat system, whereas Fairbairn felt it was undesirable but declared he had insufficient experience/knowledge to comment on it.

Roberts, the mechanical engineer and inventor with more than a dozen patents to his name, had been an early advocate of patent reform and did appear to have a much better understanding of the patent system than Fairbairn, the civil engineer. Roberts had attended the interview in January before Romilly, then the Attorney General, with Richard and Woodcroft. Roberts was by far the most eminent of the three.

Roberts long testimony to the Committee was articulate, forthright and self assured; not unlike Richard's in manner but perhaps slightly less outspoken. Like Richard, Roberts considered patents should be granted without enquiry with enforcement left to those with a legitimate interest through the courts; he, too, was sceptical as to the competence of any appointed examiners/assessors. He advocated a simple and cheap system to encourage inventors to patent and make their inventions available to others for the benefit and advancement of the nation (he claimed to have "a hundred" inventions left, unused, "lying on the shelf" which he had deferred patenting due to the expense and in anticipation that this might be reduced if reform was achieved). He supported the proposals for periodic payments for patents (as both an encouragement to patent and a deterrent for continuation/renewal of unsuccessful patents) and suggested instalments totalling £20 in all (much cheaper than those suggested by Fairbairn (£120-£130 for a UK patent), who had testified that the Manchester Association had been persuaded that its initial proposal for very cheap patents would lead to the system being inundated with "useless" ones). In the past Roberts had wanted patents to be renewable for up to 20 years but had been told that this was not realistic. Roberts agreed with having one patent for the whole of the UK and some limited protection for foreign introductions. Notwithstanding his assertions as to shelves of his inventions lying unpatented awaiting reform, several questions were aimed at getting him to admit he would still have invented even if patents were not available, which he denied was so, particularly, in the case of his more important/valuable inventions. As for patent agents, Roberts dismissively stated he had "little use" for them except for the "formal part" of an application; he prepared his own drawings for his

draftsman to copy and wrote his own specifications (which he admitted was “rather unusual” - in this respect, Richard, too, was an exception to the rule).

Having been lectured at length by the formidable Roberts, their Lordships may have been relieved when they were given an excuse to ask the next witness, the opinionated and loquacious Cole, to return for examination on a later date.

Having confirmed a long held interest in patent law reform and his membership of the Society of Arts’ reform committee, Cole was then asked the question: “What have you before you?”. Cole had arrived armed with a copy of the resolutions passed by the Society’s committee and published in its Second Report together with a copy of a Bill intended to implement those resolutions, which, he confirmed, had been drafted by a properly authorised sub-committee. Cole was then requested to hand these papers to the Select Committee for its consideration so that he might be examined on the Society’s Bill on another day; this he agreed to, adding that an “explanatory paper” accompanied the Bill.

Cole had, also, told the Select Committee that, having drafted its “heads” of a Bill, the Society’s committee had suspended its deliberations when Parliament commenced its own “proceedings” on the Bill that led to the enactment of The Protection of Inventions Act; this suggests that the suspension took place about the end of February 1851.

Having quickly despatched, the potentially troublesome Cole, the Select Committee’s final witness on 19th May, a candle manufacturer, was not detained long. He was not a patentee himself but leaned to being in favour of patents in principle; he testified as to the nuisance caused by the multiplicity of patents for minor improvements to candle manufacture and felt that an instalment based fee process would reduce the number of “useless” patents in existence.

Sessions 8 & 9 - 20th & 22nd May: Fothergill, Cubitt, Woodcroft & Brunel

The Committee sat again on the following day, 20th May. The first witness that day was Benjamin Fothergill (1802-1879), a mechanical engineer, who testified that he had worked with Roberts in Manchester for 25 years (for the last five in partnership with him). He had recently retired from the partnership and had commenced acting as a consulting engineer including assisting in drafting specifications. When asked if this included acting as a patent agent he robustly responded that he had never done so “because I have repudiated the idea altogether under the present system”. Fothergill, a self made man who had “worked myself up from a poor boy”, declared he was a patentee of “several inventions” and would have taken out more if he could

have afforded to do so. He claimed extensive knowledge of the patent system which would “ultimately annihilate itself” due to its disadvantages and abuses - citing, as an example, a multiplicity of patents for the same process that he had found for a client aided by the indices compiled by his “particular” friend “Professor Woodcroft”. He accused patent agents of acting with complete disregard to the potential existence of a previous competing patent and sometimes even of knowingly duplicating patents. He confirmed he supported the proposed reforms having read both of the amending Bills.

In his long testimony Fothergill spoke forcibly: against the caveat system; for periodic payment of patent fees (suggesting £10 initially, £40 at year 3 and £70 at year 7); for the publication and printing of specifications (and indices citing Woodcroft’s again); for some form of enquiry into the patent application to obviate duplication and “useless” patents but not as to the invention’s novelty or utility (disputes as to the latter to be left to self regulation through the courts). Unlike Richard he would allow an inventor six months in which to perfect his specification provided the description accompanying the application contained “the sum and substance” of the invention. In support of his arguments he cited many examples from his own experiences and those of others where the existing system had contributed to unjust financial loss. He was also firmly of the view that cheaper patents would stimulate invention by workmen and was also for the introduction of inventions from abroad by their inventors (but was against patenting by mere importers). When asked if he wanted to add anything in conclusion he emphasised, again, the need for publication of all specifications.

Fothergill was followed by the, soon to be knighted, eminent civil engineer William Cubitt (1785-1861), the then president of the profession’s Institution and also the chief engineer of the Great Exhibition’s venue, the Crystal Palace. The Committee’s recognition of his responsibilities there, may explain why he was not kept very long. Cubitt, who had started out as a mechanical engineer, claimed to have invented “many things” but had patented only one (in 1807). He testified that his disapproval of the existing system had increased over the years but, despite much thought, he had been unable “to devise anything much better” or to decide whether abolition of patents might be preferable to reform. The remainder of his testimony reflected this uncertainty, but overall was to the effect that he considered the disadvantages of patents were greater than the benefits, that no harm would be done if they were abolished and that inventors would invent anyway if they did not exist - no doubt pleasing the Earl Granville and other ‘antis’ on the Committee.

Cubitt had mentioned that, whilst waiting his turn, he had spoken to a “gentleman outside just now” who had an “exceedingly good index” of existing patents, which would be of assistance in identifying patented pre-existing inventions, but, as he pointed out to the Committee, would not identify unpatented ones.

Bennet Woodcroft’s testimony was to extend into the next session on 22nd May; only Carpmael testified for longer. He gave his current occupation as “Professor of Machinery, in University College” and then surprisingly denied being examined in March before the earlier Select Committee under the same chairman (he was, briefly, - perhaps his “No” denial was a transcription error in the report). He affirmed that he did appear before the Select Committee on the Privy Seal and Signet Offices In 1848 and that his opinions then expressed had not changed.

On enquiry Woodcroft agreed that he had compiled a “very valuable index” of previous patents and proceeded to present the Committee with the first of the many documents that he had brought with him. This comprised a paper listing three defects in the existing patent system: insufficiency of protection on provisional grant (presumably a reference to the caveat system); exorbitant costs; and (not least) the difficulty of ascertaining previous patents. The paper suggested ten remedies to address these (and other issues) and was accompanied by extracts from his own index.

Woodcroft explained that his index actually comprised three separate sub-indices in which 13,716 patents were each listed chronologically and, alphabetically, by the patentees name and by subject matter (in about 493 classes each further sub-divided where appropriate). He described the difficulties he had encountered that led to his embarking on this enormous undertaking and asserted that by using his indices the time taken to investigate old patents would be a “few hours” not “several weeks”. The cost of printing and publishing the indices and the past and new specifications (four of his suggested remedies) was queried; he conceded it would be “considerable, but not great” and would largely be offset by receipts from anticipated sales to inventors and others - including public libraries (printing of future specifications to be paid for by the patentees). Woodcroft’s assertion, that the three enrolment offices refused to allow copying of specifications and charged heavily for official copies, was queried with Webster who confirmed that this was correct as it “detracts from fees”.

A brief discussion took place on Woodcroft’s proposal that an inventor be granted immediate priority on submission of a “brief specification” with some time allowed to perfect it provided no “fresh matters” were introduced.

Woodcroft had described invention as a “malady” and himself as one of its sufferers, but denied that patents were unnecessary as they provided the recompense that stimulated most inventors to invent (and the others, the obsessively afflicted, would otherwise keep their inventions secret). He did not object to examiners advising a prospective patentee on the novelty of an invention, but only as a deterrent if they considered it not new; the law courts being the best arena for determination of patent disputes. Some theoretical discussion took place as to: when improvements could be deemed a new invention; and whether a “principle” (as opposed to the mode of implementation of it) should be patentable, Woodcroft’s replies were equivocal (Richard would have objected).

In conclusion of his testimony on 20th May, Woodcroft was asked his views on what should be the “fair” cost of a patent to an “ordinary inventor” - he would not stipulate a figure but made the point that whilst he considered the current cost too great, he did not feel as strongly as others on the issue, and did not have “any desire to cheapen them too much”. He had in the paper initially presented to the Committee already stated that, provided the three defects he had stipulated were remedied, he considered inventors would be indifferent as to “how many stages the patent goes through”.

On 22nd May Woodcroft was questioned again, but in more detail, on some of the above issues, on his own experiences of patenting his inventions, his publications and as to his indices (he produced them for inspection). He concluded his testimony with an estimate he had obtained from a printer for the cost of printing specifications from which he assessed the cost, on average, at less than a penny per specification.

Probably the most eminent engineer of his generation was waiting to be called while Woodcroft concluded his long testimony. Still very famous today, Isambard Kingdom Brunel (1806-1859) was not detained as long by the Committee. His articulate testimony included an account of his experiences of the patent system since 1823, initially when working for his father, Sir Marc Isambard Brunel, and afterwards advising others and, also, opposing attempts to patent his own inventions.

Brunel stated he had never taken out a patent himself and hoped he never would, declaring the existing system “Productive of almost unmixed evil”. This view, long held, was, inter alia, based on his belief that: ground breaking innovation was, by then, a rare occurrence and most inventions were mere improvements to existing methods conceived mainly by workmen in the course of their employment; only by having an in depth knowledge of what had already been invented was it possible for a workman to substantiate the novelty of an idea; and the prospect of obtaining a valuable patent had

caused the ruination of many a workman, by encouraging him to develop his idea (necessarily in complete secrecy and incurring great expense in doing so) for him only to discover later that the idea was not new after all (or was impractical or too costly). He took the optimistic view that without patents a workman would be prepared to disclose his idea at the outset to his employer who, “in all probability”, would reward him suitably, if appropriate. Overall he regarded patents as a clog on inventive activity and of rarely rewarding inventors themselves.

Brunel ended his testimony by reaffirming his belief that the abolition of patents would be a great benefit to the country and to “that unfortunate class of men whom we call inventors”. When asked if this would remain his view if the system was made “simple and more effective”, he confirmed it would; he expected its “evils” would be increased and the system would fail in two years. He did, however, add that, in order to properly test it, any such reform must be thoroughly implemented, “make patents cheap, and have plenty of them”.

Session 10 - 26th May: Cole, Hill & Mercer

The next session on 26th May saw Cole reappear before the Committee. At his last brief appearance, the previous week, Cole had been told that on his return he would be examined on the terms of the draft Bill that he had presented to the Committee - the Bill that had been drafted on behalf of the Society of Arts' reform sub-committee. This did not happen. Cole was to be questioned in his personal capacity, although he was first asked to confirm whether the “Report of the Council of the Society of Arts” represented the views of all its members and had replied that it “pretty generally did” (whether this was a reference to either or both of the Society's two reports is unclear). Cole, also, acknowledged that the majority of the Society's members were inventors or manufacturers and that patent agents had not been invited onto its reform committee as they were not disinterested - they “gained from the present system and lost nothing”.

The initial series of questions put to Cole were a long interrogation by the Committee as to whether Cole considered the calls for the reform of the patent system were generated by public demand or merely represented the self-interested demands of inventors themselves - and if the latter whether there was any conflict of interest between inventors and the public. Cole responded that whilst inventors were “strongly” for reform, it was also demanded by manufacturers, lawyers and even patent agents; he considered that there was no conflict as the interests of the public and inventors in reform were the same - it being to the public benefit to encourage inventors to make their inventions available. He was asked to describe the defects of the existing system; cost, delay, unnecessary

complexity and uncertainty was his answer in a surprisingly brief response. The Society's First Report had recommended that the property rights of inventors in their inventions should have (time limited) legal recognition (as opposed to the existing grants of temporary privileges/monopolies by the Crown); the issue was raised with Cole (without reference to the Society's Report), whose reply conformed with the Society's views.

When asked to give his views on Brougham's and Glanville's Bills, Cole responded that he considered the original versions would "effect immense improvements" but that they could be "better" and described what he viewed as their defects and deficiencies in some detail. However, there was one provision in Brougham's Bill which he particularly endorsed namely a requirement that all specifications (past and future) be printed, which he considered would on its own transform the process for the better - more so than the provision of an index, though the additional availability of the latter would be advantageous.

Patenting of foreign patents was raised, which Cole was against in the case of an application by a mere importer. He confirmed he favoured periodical payment of patent fees and was not concerned that this would give rise to nuisance to inventors by an increase in "useless patents". He proffered the Committee an extract from the Society of Art's First Report as evidence in support of his last assertion - whereupon he was directed to withdraw. Brunel, and other witnesses, had been asked if they had anything they wished to add to their evidence before being asked to withdraw. (Notwithstanding their differences of opinion on patents, Granville and Cole were, in fact, on very good terms according to Cole's biographers: Elizabeth Bonython and Anthony Burton, *The Great Exhibitor: the life and work of Henry Cole* (V&A Publications, London, 2003))

The extract from the Society of Arts' First Report (that presented by Cole immediately before his interrogation was abruptly terminated) was included as Appendix C in the Select Committee's Report. Appendix D was a transcript from the Society's Second Report of the resolutions passed by the Society defining the objects of its reform committee and approving the "Heads of a Bill", which Cole had presented to the Select Committee the previous week on 19th May. The Society's draft Bill, prepared by its sub-committee, which had also been handed to the Select Committee on 19th May (together with an explanatory paper) was not included as an appendix to its Report. The Select Committee, for reasons unexplained, had decided to ignore the Society's draft Bill and did not give Cole an opportunity to introduce it into his examination. Perhaps, it had decided or been advised that it was beyond its remit to do so or might invite criticism from other interested bodies whose proposals were not examined.

Cole was followed by a witness who would have been well known to Richard. The former barrister Matthew Davenport Hill (1792-1872) was Birmingham born, a political radical and a brother of Sir Rowland Hill, the postal system reformer. He was the Recorder of Birmingham from 1839 to 1855. In 1848 and 1849 when still practicing and a Q.C., Hill had represented Richard in the proceedings he had brought to strike out the scire facias application to repeal his 1840 lap-welded tube machinery patent (see *Tubes: A Wealth of Trouble* Part One pp.114-121). Hill had ceased to practice as a barrister by 1851 but confirmed to the Committee that he had been a “good deal engaged” in patent law issues.

As one would expect Hill’s evidence was succinctly expressed. When asked if he approved of the existing system, Hill replied: “No, I think it works very ill.” When then asked to describe its “principal defects” he replied that they were “many and various” before describing what he viewed as one “great defect”, which he admitted he was unsure how to resolve. This was the fact that protection was not afforded until the specification was enrolled and the inventor remained at risk of having the invention pirated during the period between the provisional application and enrolment (the caveat system was not named but was no doubt in Hill’s mind). Hill described another exacerbating factor, namely, that until enrolment an inventor requiring capital to perfect his invention (and its specification) was placed in an invidious position as to who to trust and in the subsequent negotiations with the chosen investing capitalist. Hill agreed that granting protection from the date of the initial application would enable the inventor to negotiate “freely” with the capitalist and give the capitalist the assurance that the patent was secure. This ‘solution’ raised the difficult issue as to how ‘complete’ its description should be for an invention to be entitled to protection. Hill neatly addressed this quandary: “a specification... is composed of two very distinct parts; a description of the nature of the invention, and a description of the manner in which it is carried into effect;”. Hill argued that provided the first of these two descriptions was satisfied protection could be granted on the initial application. The time to be allowed for fulfilment of the filing of the second part of the specification, the method sufficiently described to enable a “competent workman” to implement the invention, was not discussed.

When asked if examiners should scrutinise patent applications, Hill answered that he was unable to give a definite opinion, but that he thought it might be useful to deter duplication of pre-existing inventions. The caveat system was then discussed, which Hill disapproved of; the difficulty of constituting a suitable tribunal to hear opposition proceedings was, also, examined and how such opposition should be invited if caveats were abolished (Hill - by advertisement of the application but the extent of detail a difficult issue).

Hill favoured the printing and publication of specifications supported by an index but admitted this would not help inventors in the case of unpatented inventions (of which, he claimed, there were 99 to every one patented). He vigorously supported patents when questioned at length on their merit. His own experiences in the courts were discussed (Hill - juries tended to favour the patentee).

Hill was, also, of the opinion that: each of the Bills was a “considerable improvement” to the existing law but not exhaustively so; a UK unified system was desirable (but the colonies should have their own); importers of inventions should have some limited (short) protection. He ended his testimony with an exhortation recommending the publishing of specifications and descriptions (supported by indices) of all inventions whether patented or not and praising the “admirable” indices of “Professor Woodcroft”.

A calico printer, the aptly named John Mercer, was called next and was not detained long. He was a patentee whose main concern was the difficulty in ascertaining novelty and he confirmed Lady Bentham’s view that the information contained in publications such as Newton’s *Repertory* and Robertson’s *Mechanics’ Magazine* was too incomplete to be reliable. He claimed there would be a great demand for printed specifications and indices if published. He, also, testified: that, when an employee, he had lost out on his first inventions because he could not afford to patent them; that patents, if cheaper, would incentivise workmen to invent, whilst their abolition would be a disincentive.

Session 11- 27th May

At the next session on 27th May the Committee examined a Genevan (the Consul General for Switzerland) followed by a member of the Prussian Board of Trade and Commerce and a Lieutenant-Colonel Reid of the Royal Engineers.

The Genevan testified that, from what he knew of the English system, the lack of any patent system in Switzerland was of no matter: “a country could get on quite as well without one”.

The more knowledgeable Prussian was also a member of his country’s Patent Commission, which he explained: was not “very liberal” in granting patents and would only do so where its members were satisfied as to an invention’s global novelty; nevertheless, charged no fees; and, surprisingly, never published patented specifications, which were kept secret even after the patents’ expiry - which he disagreed with.

Reid, the Royal Engineer, was a former colonial Governor (of Bermuda and the Windward Isles) and, more pertinently, the chairman of the Executive Committee of the Great Exhibition. Reid was decidedly anti-patents in principle, but he admitted that until very recently he was of the same opinion as “Mr. Cole”, his fellow Executive Committee member, as to “the expediency of cheapening and facilitating the granting of patents to the greatest extent”; he had changed his mind after researching the subject and had later found that his altered views were, also, held by a well regarded American mechanical engineer, a correspondent of his who thought “granting patents a great evil to the State”. The weight of Reid’s altered opinion was undermined by his later admission that he was not a patentee and had no practical knowledge of the existing system, but, nevertheless, he considered it very bad and impossible of remedy, which had led him to conclude that “it would be better to have no patent rights whatever”.

Session 12 - 30th May: Prosser & Brewster

On 30th May two witnesses were heard, the first answered nearly twice as many questions as the second but appears to have only taken slightly longer to do so.

Richard’s answers were succinct and robust - almost to the point of curtness but, nevertheless, courteous. Notwithstanding his expertise being in the field of mechanical engineering, he persisted, as he did throughout his career, in describing himself as “a civil engineer”, who had been “very much” attentive to the patent laws, was an inventor and a patentee “of about” 20 patents.

We already know his views on most of the issues on which he was interrogated, a PDF of his full testimony is available on this [link](#) to the [prossertheengineer.com](#) website.

The Committee clearly already knew where he stood on some of the issues. He was not asked about his membership of the Society of Arts’ reform committee, but might he have been called as one of the later witnesses as a result of the papers that Cole had presented on his first appearance?

During the course of his testimony, Richard took several opportunities to criticise patent agents: “very expensive” but an “absolute necessity” under the existing system, who, if his proposals were adopted, could be dispensed with altogether. Amongst other things, he accused them of knowingly patenting existing inventions for unsuspecting clients - as many as 20 by the same agent.

He exhibited his knowledge of the American system in criticising its process of examination of patent applications; he referred to his brother “residing there” as a source of a “great deal” of his knowledge.

He mentioned his ongoing dispute with “the house of Morrison”, for (apparently unknowingly) infringing his dust-pressed process patent, as an example of litigation which might not have occurred if the patent’s specification (of which Morrison was belatedly seeking a copy) had been printed and published on its enrolment in 1840 - see *The Dust-Pressed Process* pp. 79/80.

When asked if he considered the existing system was preferable to one where there was no patent protection his answer was surprising - the latter, he said, would be “very desirable, except that in that case we should lose all record of inventions after they have been made; a record of failures is as important as a record of successes.” He later reaffirmed that, in his view, the “publication of valuable secrets” was the “only advantage” of patents: “they afford a permanent record of what has been done; I do not think they tend much to the encouragement of invention.” He argued that, in the absence of patents, inventors would maintain the secrecy of their inventions but would still be able to sell them “by agreement”. It has to be said, that, this stance appears at odds with Richard’s own use of the existing patent system to exploit his inventions, but it was expressed in the context of a discussion on its defects which, he had asserted, had been the ruin of many - particularly, the ruination caused as a result of the difficulty of ascertaining what had already been patented (he praised Woodcroft’s indices).

Following a lengthy discussion on the patenting of foreign inventions (which he supported), Richard was asked to clarify his earlier assertion that patents did not encourage invention: “I do not think they do encourage invention; I think they encourage a set of charlatans, who make money by selling things that they know are worth nothing,…” - he was referring to the common selling ploy of advertising goods as patented.

Towards the end of his testimony he remarked that he considered most of the (about) 500 patents then taken out each year were presumably “useless” as renewal applications were so few (about five a year). He confirmed that he did not believe the number of “useless” inventions would be multiplied if, as he proposed, the patent system was made easier and cheaper provided specifications were printed; on the contrary he thought the number of useful inventions would increase: “... they would increase; the value of the inventions would be increased; we should then have *bona fide* inventions. I am certain I know 50 persons who would take out patents for inventions if they were cheaper.” Richard was then directed to withdraw.

Richard's final observation was to be endorsed by the other witness on 30th May, who was apparently called at short notice as he remarked in response to one question that he appeared unprepared and without certain papers as he was not expecting to be examined before the Committee.

Sir David Brewster, K.H.; L.L.D., (1781-1868) the eminent Scottish physicist and Principal of the University of St. Andrews, must have been in London on other business. The Committee's first enquiries were deferential when asking Brewster to state his credentials; in addition to his acknowledged scientific expertise Brewster confirmed that he had taken a particular interest in the "patent laws", had published an opinion and other writings on them and had taken an "active part" in the previous patent law measures before Parliament.

Richard's library included several scientific papers published by Brewster and Brewster's views on patents were probably well known to him. If he and Brewster had exchanged views on the subject Brewster would have found that, on the whole, they were very much of the same mind. Brewster was not only a supporter of patents, he advocated that they should be granted entirely free of expense to the patentee whatever their merit provided they were for "new ideas" as even seemingly "frivolous" ideas may contain "the germ of future inventions". His proposal that novelty should be determined by a "Board" may not have met with Richard's approval.

In expanding on his somewhat radical views Brewster put forward the concept that the Government should acquire each patent for the good of both the nation and the public, the patentee to be suitably compensated. Brewster also knew of many inventors whose valuable ideas had not been made available for the public good as the cost of patenting was too great.

By the end of the day's session Granville and the other "antis" on the Select Committee may have felt somewhat out of countenance.

Session 13 - 2nd June

The short session on 2nd June was to see a French professor examined on the French system.

Session 14 - 6th June: Rendel, Westhead & Hill

On 6th June James Meadows Rendel (1799-1856), a leading civil engineer who was to succeed Cubitt to the presidency of his profession's Institution later that year, gave his, not altogether assured, evidence.

On the whole Rendel was in favour of patents for inventions of merit. He felt it important that the initial application should be accompanied by a

specification describing the invention in its “matured” state. He blamed the existing system for, in particular, allowing too many “frivolous and unimportant” patents, which were bought up by “patent-mongers” with a view to “embarrassing” a large engineering (or other) scheme by claiming that some small part of the project infringed a patent that they had acquired, which had, actually, been granted for a different purpose entirely. He thought a Board of experts should be appointed to weed out “frivolous” patents citing (somewhat unrealistically) the likes of the younger Brunel and Faraday as suitable candidates. He favoured one cheaper system for the whole of the UK but was against the patenting of foreign inventions by mere importers.

The M.P. and textile manufacturer J.P.B. Westhead (1807-1877) was the next witness. Westhead, a patentee himself, was also the Chairman of the Inventors’ Association for the Amendment of the Patent Laws, which does not appear to have been one of the more prominent reform bodies. His views and experiences very much corresponded with those of other patent reformers. He was one of those who did advocate some initial enquiry to prevent the patenting of existing inventions as he considered the inevitable resulting litigation unacceptably increased the burden on the, already overstretched, courts. He was not aware that “patent mongering”, as described by Rendel, was a common practice, but knew that some owners of a valuable patent would buy any patents that might impinge on theirs, including improvements that might detract from their value (hence depriving the public of their benefit).

Before he withdrew Westhead had raised a question not mentioned by any other witness, namely how it was that the Admiralty and the Board of Ordnance were able to dictate lower prices for patented items. The Committee did not know the answer, which was supplied by the former barrister M. D. Hill who was waiting to be recalled to expand on his previous evidence.

Before doing so, on being asked, he explained to the Committee that every patent, a privilege granted by the Crown, contained a condition that it would be rendered void if the patentee did not meet the demands of any service of the Crown for the patented item at such “reasonable prices” as were set by the acquiring service itself (e.g. as in the cases of the awards made to Brunel senior and Jeremy Bentham described previously). Hill thought the practice should be retained in the absence of evidence of abuse. He, also, took the opportunity to argue for the discontinuance of the existing limit of twelve as the permitted maximum number of joint patentees before turning to his previous evidence.

Hill first clarified his previously stated support for the continuance of the right to patent foreign inventions before putting forward a proposal, which he had

drawn up with Webster, for a patent to date from the initial application, which gave rise to a long discussion.

Hill then gave his views on cost, a topic he had not “touched at all upon” previously: he was in favour of a graduating scale of payments “for the purpose of eliminating useless payments”. He considered that the increased revenue stimulated by, cheaper, initial periodical payments would cover administrative costs and supported the fee scale proposed by yet another of the lesser known reform bodies.

Finally, Hill addressed an issue that was acknowledged by many of the witnesses, namely that the more successful the patent the more it was likely to be litigated; he put forward as an example a patentee for whom he had acted, not Richard, but, the Committee’s fellow Parliamentarian, the M.P. Muntz, whose famous ship sheathing patent had been under attack (from several different sources) in the courts throughout most of its life (as was Richard’s 1840 lap-welded tube patent). Hill made the innovative suggestion that a patentee should have the option of being allowed to accept a shorter patent term in return for it being unimpeachable after a period of two or three years “probation”.

Session 15 - 17th June: Lloyd, May & Ricardo

The Select Committee did not sit again until 17th June when it heard the testimony of three witnesses.

John Horatio Lloyd (1798-1884) was a barrister specialising in patent matters; he had also briefly (from 1832-1835) been the first M.P. for Stockport. Lloyd’s testimony would have pleased Granville and the other “antis” listening to it. His professional experiences of the existing patent laws had resulted in his coming to the “unwilling” conclusion that they were “objectionable in principle, practically useless, and even injurious.” He argued that the existing system was harmful to both the public (by actually retarding invention) and to inventors as they would be “much better without” patents, which acted as an incitement to them to pursue “a shadow” which, in his experience, ended in failure in 99 out of 100 cases. In the absence of patents, he considered that inventors would still invent and that merit would still be rewarded. However, if abolition of patents was not an option, he agreed that they should “of course” be made cheaper and other “impediments” in the existing system should be removed, but that, overall, any reform of it was unlikely to do “much good” and “might aggravate” some of its “evils”.

Charles May (1801-1860) was already known to Granville and, probably, other members of the Select Committee having been one of the five

witnesses who had also testified in March to the Committee reporting on the proposed Bill for the protection of exhibitors at the Great Exhibition (the others were Webster, Carpmael, Woodcroft and Newton junior). May, an accomplished mechanical engineer, had trained as a chemist initially and, later in life, took an active interest in astronomy. In 1836 he became a partner in the Suffolk engineering firm of Ransome and Sons, which was mainly famous for its agricultural machinery. The firm changed its name to Ransomes and May, which remained its name until May left in 1852. Ransomes' commercial lawn mowers are still (2021) manufactured at Ipswich. According to one obituary May subsequently became a consultant and for some years appeared as an expert witness in most of the more important patent cases to come before the courts.

In 1851 May's evidence would have carried considerable weight. He confirmed that he had taken out a large number of patents. In March he had admitted that some were obtained for multiple inventions aided by his "friend" the patent agent Carpmael: "the cleverest man I know in putting incongruous things together". In June when this, much criticised, practice was queried he excused it on the ground that it was forced on patentees by the excessive fees charged per patent. He considered periodical payment of fees would not only end this practice but would also reduce the number of "useless" patents granted which would lapse when not renewed.

Although May had earlier in his testimony supported patents as an incentive to inventors and therefore a benefit to the public (though rarely profitable for inventors), he was rather put on the spot when asked to speculate whether, if there was no existing patent system in the UK, he would recommend the adoption of one. Although having doubts as to his own competence to answer the question, which would require the "gravest consideration", he was inclined to think that "under proper regulations, it would be beneficial to do so."

The evidence of the third witness heard on 17th June, for some unexplained reason, was not included in the Minutes of Evidence and, instead, was included as Appendix A to the Committee's Report.

The third witness was the businessman John Lewis Ricardo (1812-1862), M.P. for Stoke on Trent, one of the founders in 1846 of the Electric Telegraph Company (ETC) and one of its largest shareholders. In the course of his evidence Ricardo revealed that the purchase of the patent for the telegraph had cost £140,000 in 1845 and that £200,000 had since been spent in buying up numerous other patents that might endanger ETC's monopoly (or cause costly vexatious litigation). Brunel in his condemnation of patents in his evidence had referred to this practice of the ETC as one example of how

the patent system could be abused, contrary to public interest. It is therefore surprising that Ricardo, a loquacious witness (especially when exhibiting his knowledge of the history of invention and patents), himself condemned the system of granting patents and the monopolies thus created as being injurious to the public with no advantage whatever to inventors, adding that the perceived added value to an invention of a patent was illusory. He elaborated at some length on his reasons for these views in his testimony, which may explain why after leaving the ETC in 1861 he was to join the campaign for the nationalisation of the telegraph system - source [Grace's Guide website](#).

Session 16 - 20th June: Webster, Romilly & Wood

The final session of the Select Committee took place on 20th June. It was attended by Webster, the Master of the Rolls (the Lord Romilly, until recently the Attorney General) and the Solicitor General (Sir William Page Wood (1801-1881)), both of these members of the judiciary also being M.P.s.

Webster handed the Committee a draft Bill that he had prepared on its instructions which consolidated Brougham's and Granville's Bills and incorporated some additional clauses. He then commented on its 29 clauses at some length.

The draft Bill catered for (inter alia): a significant reduction in the patent offices to just two (one to be a new Commissioner's Office); priority of patent to date from the initial application for six months provisional protection (the first stage) costing just £5, further fees to be paid on the expiry of provisional protection and on renewal after three and seven years; the abolition of the caveat process (substituted by a system of notices (by advertisements) and objections); the unification of the U.K. system; the printing of specifications both new (immediately) and the old (as soon as practicable). As instructed Webster had, also, included a clause which in effect would have prevented the import of a foreign invention, a provision which he considered would give rise to great difficulties in practice.

After Webster had concluded his commentary, Romilly was asked for his views. After he had briefly commented on the interrelation of the judiciary's and the Commissioner's roles as outlined by Webster, the majority of the long discussion with Romilly revolved around the thorny issue of the "sufficiency" of the specification lodged with the initial application. Romilly would clearly have preferred that this initial specification reflected a substantially matured invention, but recognised that this might present difficulties, particularly in the case of the poor inventor and/or inventions that required capital investment to develop to a substantially matured state.

Wood's contributions to the discussions were limited, reflecting, perhaps, that he had had less experience in patent matters than Romilly.

Romilly in his final statement to the Committee, admitted that he was against patents as a matter of principle: "...I think it is a wrong principle to reward inventions by giving a monopoly; and I also think that the inventor does not get the real benefit of the patent...".

The Committee was then ordered to adjourn. It published its Report quickly on 1st July; consisting of only seven lines, it explained that the Committee had decided it was expedient to order the drafting of a "fresh Bill" uniting, so far as was possible, the objects of the two Bills of Brougham and Granville.

It was, therefore, Webster's redrafted Bill that was presented to Parliament for consideration with the Committee's, otherwise contentless, "Report" - and its accompanying 400 plus pages of the Minutes of Evidence of the witnesses and its various Appendices. The Committee, perhaps, itself unable to make any unanimous recommendations, in effect handed the knotty problem in its entirety over to their Parliamentary colleagues to debate.

Disregarding the three foreigners and five patent agents, about two thirds of the other witnesses before the Select Committee were in favour of patents, were critical of the existing system and were (mostly) in favour of major reform. Even two of the patent agents, Spence and Hodge, spoke in favour of meaningful reform; only the leading agent, the self important Carpmael, spoke out in defence of the existing system. Just eight of the witnesses were against patents as a matter of principle, but even they recognised the need for reform if patents themselves were not to be abolished.

How to achieve a satisfactory reform was the conundrum that had stymied previous attempts and the difficulties were made apparent in the variety of views and suggestions put forward by the pro-reform witnesses.

Granville introduced Webster's Bill into the House of Lords on 23rd June 1851; the Lords approved it and sent it down to the Commons on 4th July where:

The advocates of the existing system, and opponents of all reform and of patents generally, were not idle during the successive stages of the Bill...

Webster: The New Patent Law etc. (1854)

Many alterations to the Bill were made in the Commons, including a very significant one which would have denied the protection it granted to inventors from the date of the initial application for a patent. However, the continuing passage of the amended Bill was frustrated by much filibustering and the prorogation of Parliament on 8th August 1851. The recess was even

longer than was then usual, the next sitting was not to commence until 3rd February 1852.

Another Bill was, however, passed before the end of the 1851 sitting, which had been introduced in response to the recommendations contained in the 1849 Report of the Select Committee on the Signet and Privy Seal Offices. Webster explained that, when it became apparent that the hearing of the patent reform Bill would run out of time, the other Bill was hurriedly amended to include patents for inventions. Webster stated that the enacted statute thereby abolished three of the much complained about “stages” of the existing patent system (of which he had maintained there were only eight in his evidence in April - presumably more of the 35 stages alleged to exist by other patent reformers were abolished). According to Webster the anti-reformers tried to contend that this “small modicum of reform” was sufficient, but the pro-reformers in Parliament were not to be “diverted”.

Chapter 31

Birmingham Patent Law Reform Association (1851 - June/July)

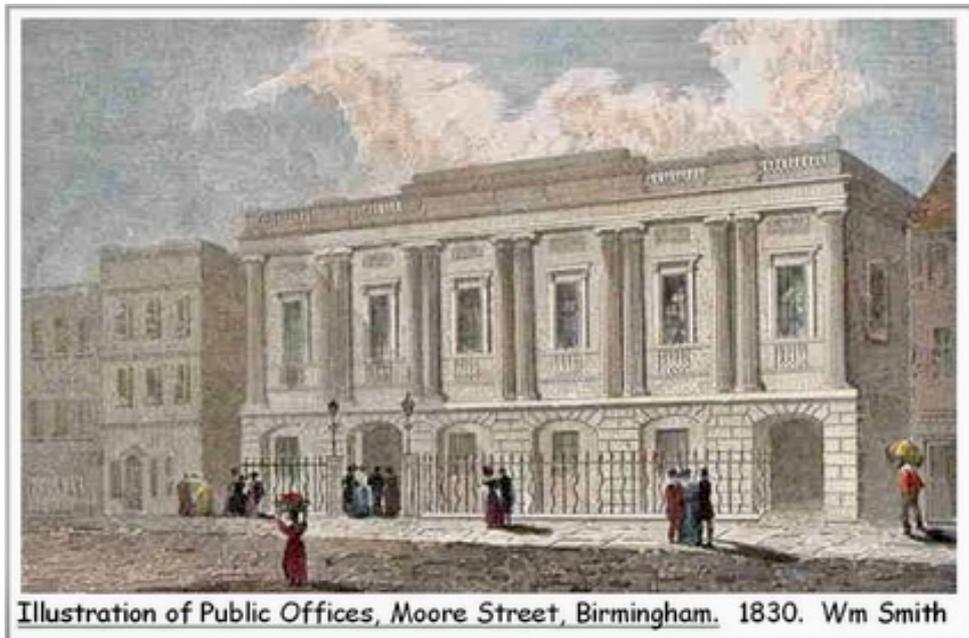


Illustration of Public Offices, Moore Street, Birmingham. 1830. Wm Smith

The commercial sector of Birmingham, the “workshop of the World”, appears to have been surprisingly slow in taking an active interest in patent reform. Richard and Aitken had both been vocal in the debate with Spence in *Aris’s Birmingham Gazette* earlier in 1851; Aitken had doubted the amount of public interest in the subject. However, it might be expected that the formation in 1848 of Manchester’s reform association would have prompted the manufacturers in Birmingham to form their own before 1851. Some authorities have suggested a movement did exist in Birmingham by 1850 but the first publicly constituted committee was not appointed until June 1851.

Richard had given his evidence to the Select Committee on 30th May 1851, the only representative of Birmingham to do so; less than a week later on 6 June 1851, he was the main speaker at a meeting held at the Public Office in his home town. According to the report in the *Birmingham Journal* dated 7th June the meeting had been arranged by “the friends of patent reform” in the light of the two Bills before Parliament then still being considered by the Select Committee. The report listed a number of the attendees of whom Richard was the first to be named, amongst the others were prominent local manufacturers and Aitken. It is reasonable to assume that Richard was, or was one of the main, initiators of the meeting. The *Birmingham Journal*

précised Richard's speech describing how he "detailed in an exceedingly graphic manner the defects of our laws as they now exist" and concluded "his eloquent address by moving that immediate steps be taken to organise a society for expressing the feeling of inventors generally, and those more particularly interested in the subject". *Aris's Birmingham Gazette* reported the meeting and Richard's speech at greater length in its issue dated 16th June as described earlier on pp. 32-34.

A notice published in the *Birmingham Journal* dated 28th June announced the formation of an "Association for the Reform of the Patent Laws" at a meeting held in the Public Office on 26th June. The precise name of the body was not confirmed in the notice but in 1864 the Birmingham Patent Law Reform Association was named as one of the nine leading reform bodies in existence in 1851 (1864 Patent Law Commission Report Appendix to Mr Woodcroft's Evidence p.149). *Image BJ 28 Jun 1851 © The British Library Board all rights reserved*

PATENT LAW REFORM.

AT a Public Meeting of **INVENTORS** and Others, held on Thursday, the 26th of June, at the Public Office, Birmingham, to consider the question of **PATENT LAW REFORM** ;
F. WILLS, Esq., IN THE CHAIR ;
 It was moved by Alderman **BALDWIN**, seconded by **R. PROSSER, Esq.**, and unanimously Resolved—

- 1.—That in the opinion of this Meeting it is expedient to form an Association for the Reform of the Patent Laws ; and that a Subscription be forthwith opened.
- 2.—That **F. Wills, Esq., Joseph Sturge, Esq., R. Prosser, Esq., Messrs. Alderman Baldwin, R. M. Wood, E. C. Osbourne, T. P. Salt, Aitken, Britten, and R. F. Sturges**, be a Committee, (with power to add to their number,) to receive topics for discussion, and to carry out the objects of the Association.
- 3.—That the Thanks of this Meeting be presented to Messrs. Prosser and Aitken, for the valuable information they have given in the papers which they have read this evening.
- 4.—That Mr. Sturges be requested to act as Honorary Secretary, and Mr. Baldwin as Treasurer.
- 5.—That the Thanks of this Meeting be given to **F. Wills, Esq.**, for his kindness and ability in presiding.

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In addition to those of Richard and Aitken, two of the names of the Association's first Committee members are familiar: the solicitor F. (Frederick) Wills had acted for Richard in the litigation over his dust-pressed process and tube patents; Alderman (James) Baldwin, a paper manufacturer, was a neighbour of Richard's in Kings Norton and his son was one of the other pupils named in the 1849 account of the schoolboy Richard Bissell Prosser's *Tour to the North*. Of the other members Joseph Sturge (1793-1859) remains the most well known, a Quaker who was successful in business before his retirement in 1831 to concentrate on the politically Radical, philanthropic and other causes he devoted himself to for the rest of his life - pacifism, working class rights and, in particular, as a leading participant in the anti-slavery movement. "R. M. Wood" was possibly another Birmingham solicitor Robert Myers Wood of Waterloo Street; "E. C. Osbourne" was probably the partner in the printers E.C. & W. Osbourne in Bennett's Hill; "T.P. Salt" could have been the surgical instrument maker of that name in Bull Street (unless the reporter misheard and it was the "T.C. Salt" (identified in one press report as Thomas Clutton Salt) who seconded a resolution at a later meeting); R.F. (Richard Ford) Sturges was an electro-plate manufacturer in Broad Street,

whose wares are now collectibles; the otherwise unidentified “Britten” must remain so.

Wills chaired the meeting, but, although the notice confirmed that Sturges and Baldwin were appointed Secretary and Treasurer respectively, there was no mention of the appointment of a Chairman. Richard or, possibly, Aitken, the debaters opposing the patent agent Spence in the *Gazette* earlier in the year, were the most obvious candidates for the position. If the meeting had been unable to agree on the appointment, might Richard’s second “marriage” in 1850 to his deceased’s wife sister have been a factor?

Such marriages had been illegal in England since 1835 on sacrilegious grounds but a well publicised campaign to reform the legislation had been conducted in Parliament over the following years. The Bill that had been voted out in March 1851 was the last of several that had failed to get past the opponents to such reform (led by Anglican clergy members, including the Archbishop of Canterbury, in the House of Lords). In Birmingham, following a public meeting and petition to Parliament earlier in the year, moves were probably already afoot by the end of June 1851 for the formation of a Birmingham branch of the Marriage Law Reform Association established in London in January. An extensive advertising campaign, commenced in July in the *Gazette* inviting support, was replaced in its weekly issues from 13th October for the next five months with a notice announcing the formation of a local committee of the MLRA with Richard as its chairman and the M.P. William Scholefield as its treasurer. This proposed reform was of greater public interest and far more controversial than that of the patent system. (The story of Richard’s second “marriage” and its background was told in more detail in Part 2 of *Tubes: A Wealth of Trouble* pp. 24-38.)

At the public meeting on 26th June establishing Birmingham’s Patent Law Reform Association and prior to the passing of the resolutions referred to in the notice (image p.123) the attendees were addressed, clearly at some length, by both Richard and Aitken. The *Journal*, in the same issue, had reported these speeches - a long “abstract” of Richard’s and a, not much shorter, “slight sketch” of Aitken’s. Richard read a paper which addressed the principal issue to be discussed according to an advert for the meeting: “Should inventions be protected by law, or not?” (source: a copy of the advert held in the British Library’s Woodcroft Collection).

Richard had concluded his reading by answering this question firmly in the affirmative and went even further, according to the report, with his final statement: “that the inventor should have the right in his invention for life”. His preceding arguments had included several citations, some of which, possibly, confounded most of his audience - including those to the Dutch

lawyer Hugo Grotius (1583 -1645) and a Cambridge University Professor of Divinity Thomas Rutherford (1712 -1721). Longer quotes were included from Benjamin Franklin (1706-1790) and from his fellow engineer and, probable, friend John Farey's evidence to the 1829 Select Committee (Franklin had been also quoted at length by Richard in 1850 in his contribution in the *Mechanics' Magazine* to the Stephenson v. Fairbairn debate). Richard, also, gave several examples of inventors who had never benefited from their successful inventions and of those who had been ruined in the course of their development. He cited Watt as the only inventor who had been adequately rewarded of the several who had contributed to the invention of the steam engine.

The "slight sketch" of Aitken's speech suggested his was a more impassioned address than Richard's. He referred to "the proud position which England occupied amongst the nations of the world" due to its manufacturing success, which he attributed to "her mechanics and inventors...the true Prosperos". He then decried the lack of protection afforded to inventors by the nation's antiquated patent laws. Much of the rest of his address dwelt on the defects of the country's existing patent system, particularly its cost and drew comparisons with the American system. He considered it "an absurdity" to suggest that inventors did not deserve reward, was in favour of legal protection of inventions and was much encouraged by the "cheering evidences" of support for the "present [reform] movement" including Brougham's and Granville's Bills (then still being considered in Parliament).

In the discussion that followed his friend Alderman Baldwin may have disconcerted Richard by proclaiming: he was against patents for inventions; that the present law could not be bettered but was "disgraceful"; he was in favour of the greatest good for the greatest number principle; that he had invented some "little things", which he had protected by keeping them secret and would never incur the expense of a patent. Richard pointed out that, in keeping his inventions secret, Baldwin was contradicting his avowed "principle". It was later clarified that Baldwin's opposition to patents was based on his assumption that "the law could not be remedied". Salt and Osbourne, who were later elected to the new Association's Committee, both supported patents and reform.

(The *Gazette*, no doubt, reported the meeting in its issue dated 30th June but this is missing from the *BNA*. Richard's collaborator and friend the potter Herbert Minton attended the meeting; a brief report in the Staffordshire press mentioned that he had contributed to the subscription raised before the meeting ended - *The Staffordshire Advertiser* 28th June 1851.)

The only other meeting of Birmingham's Patent Law Reform Association reported in its press in 1851 took place in a committee room of its Town Hall in the evening of 18th July and was chaired by the town's mayor, William Lucy. In their intervening issues, since their reports of the previous meeting, the *Journal* and *Gazette* had each paid greater attention than in previous issues to the progress of the patent law reform Bill through Parliament. Both papers reported the proceedings in Birmingham on that July Friday evening at some length together with a notice of the resolutions that were passed, the most significant one of which read:

That although the Bill for the Amendment of the Patent Law does not in the opinion of this Meeting supply all the defects of the existing law, yet, as it must be admitted to be an important step in the right direction, it is not deemed expedient to offer any suggestions for its improvement, which, at this late period of the Session, would probably have no other effect than to endanger the passing of the Bill.

This resolution was proposed by Richard (who, in introducing it, had described the Bill as "very objectionable in some respects") and was seconded by the Chartist Thomas Clutton Salt (1789-1859), a lamp manufacturer, who had been a founding member of the Birmingham Political Union, a prominent activist body in the campaign that led to the passing in 1832 of the Great Reform Act and the subsequent election of Birmingham's first MPs.

Before the resolution was put to the vote the attendees were addressed by Birmingham's Recorder the Q.C. Matthew Davenport Hill, who had given evidence in May to the Parliamentary Select Committee a few days before Richard. Hill explained that on his way that morning to preside in court he had seen a placard advertising the meeting, which had prompted him to contact "his friend, Mr. Prosser, with the view to ascertain whether it was quite prudent to make, at the present moment, any opposition to the bill now before Parliament." Hill, knowing of Richard's views, may have been alarmed that he might encourage the meeting to reject the Bill in its present form and, as he explained, any attempt to seek alterations might give its opponents in Parliament an excuse to delay its progress. Hill continued to describe how in his communication with Richard:

his suggestions were met with a degree of candour which much pleased, but did not surprise him, because he knew that the only object the gentlemen of Birmingham had who had taken up the subject was to promote as far as possible improvement in the law of patents, and that they were not so bigotted that if the principle of the new measure did not entirely meet their wishes they would reject it altogether. It required very little examination to see that the bill now before Parliament would secure a very large measure of improvement.

The above quotes are taken from the *Gazette's* report on 21st July, its reporter's record of the remainder of Hill's address was more complete than that in the *Journal*. Hill vividly described the existing system's defects and pointed out the main improvements contained in the Bill (periodic payment of fees - the initial application only costing £5; the immediate protection granted; the proposals for printing of specifications and indexation). In urging his audience to accept the Bill despite its shortcomings, he named Granville, Brunel and Cubitt as opponents of patents and eloquently and convincingly discredited their reasons for doing so.

Hill's entreaties were endorsed by the next speaker, one of Birmingham's M.P.s Charles Geach (1808-1854), who reiterated that any attempts emanating from Birmingham to alter the Bill would be taken advantage of in Parliament by those opposing patents, who had already made its passage difficult. Geach referred to Richard when, perhaps optimistically, suggesting that: "There might be defects in the proposed measure, but hereafter intelligent gentlemen like Mr. Prosser could point them out, and easily get them remedied." (Geach has already featured in *The First Story Rescuing Richard* p.134.) Following support from three other speakers, the resolution was passed.

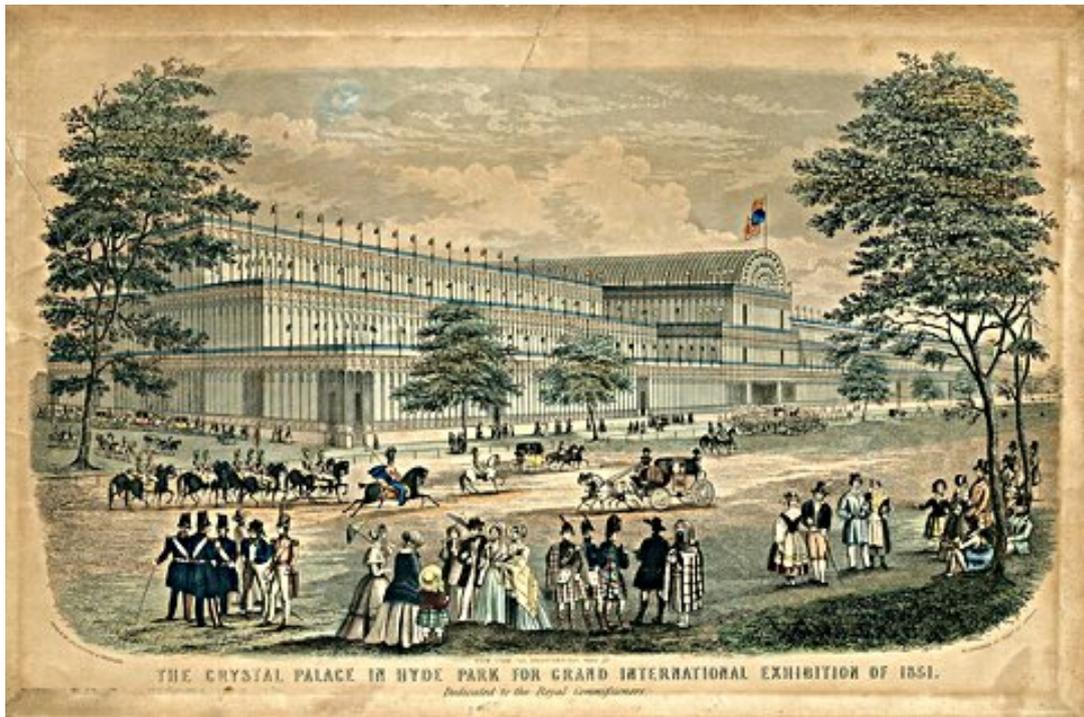
Richard's acquiescence to the Bill's "defects" may have surprised some who knew him. In fact, a week previously Richard had attended a meeting of the Society of Arts' Committee on 10th July at which a resolution couched in similar terms had been passed, the other attendees included Cole and Woodcroft (*The Morning Chronicle* July 10th). Whether Richard supported this resolution may be revealed when the Committee's minutes become available, but his acting as the proposer of Birmingham's resolution suggests he probably had.

Birmingham's support of the Bill was to no avail, both of its papers continued to report its progress until its passage was thwarted by Parliament's prorogation on 8th August. The *Journal* dated 9th August, in an editorial, roundly blamed the House of Lords ("which gave it existence") for the Bill's failure.

Its interest having surged in July and August, patent law reform was hardly mentioned in the press in Birmingham (and elsewhere) for the remainder of the year; any activities of the town's Patent Law Reform Association were not reported.

Chapter 32

1851 - Other Matters including The Census & Great Exhibition



View from the Knightsbridge Road of The Crystal Palace in Hyde Park for Grand International Exhibition of 1851.

Dedicated to the Royal Commissioners., London: Read & Co. Engravers & Printers, 1851. Public domain.

Much of what else is known of Richard's life in 1851 has already been told in the earlier Stories. It was a census year and on the night of 30th March, when the enumerator called, Richard was in residence at his home in Kings Norton with all of his family, other than his eldest son Richard Bissell Prosser. He had described himself as a civil engineer and farmer of 60 acres employing four men. "Hannah S. Prosser" was recorded as his wife. The five children (Eleanor, George, Marianne, William and Robert aged 14, 10, 9, 7 and 5 respectively) were each described as a "Scholar at Home" and had a live-in unmarried Governess, 35 year old Hannah R. Lockwood, who gave her birthplace as Clerkenwell, Middlesex. In addition to two household servants, another employee of Richard's, William A. S. Hodges described as a "Clerk", was living at the house on the census night. The unmarried

Hodges' age was recorded as 24 (he was actually 27) and gave his birthplace as Millbank, Middlesex.

I had not made the connection previously, but the "Clerk" must surely have been William Algernon Sydney Hodges, a son of William Robert Hodges, the wealthy investor in the business manufacturing the lap-welded tubes made under Richard's 1840 patent. Hodges senior had been the dupe of his dishonest solicitor George Selby, who had introduced him to the business in about 1844. In early 1850 Hodges senior had discovered that Selby had been defrauding him for over 20 years in connection with another investment and terminated his partnership with Selby in the tube manufacturer. In 1851 Selby still owed his ex-partner a considerable amount for his share in the business. The affair is just one of the tales told in *Tubes: A Wealth of Trouble* of the many disputes and business entanglements involving Richard's 1840 lap-welded tube machinery patent.

In 1847 Hodges junior's name had appeared as a litigant in the dispute between the Selby/Hodges partnership and another tube manufacturer. He may also have been the witness (to Richard's signature) identified as "T.H.S. Hodges" in the transcript (published by the U.S. Patent Office) of the abridged specification of Richard's 1850 anti-weld tube patent which was granted to his brother Thomas in the U.S. in 1852 as Richard's assignee. I have previously speculated that "T.H.S." might have been another son of Hodges senior, but there is no corresponding baptism record amongst those I have found for his children. I had also wondered whether the Hodges family might have remained involved with Richard after parting ways with Selby and even been investors in the anti-weld patent. This speculation was strengthened by the realisation that in 1851 a member of the, still wealthy, Hodges family was residing with and supposedly working for Richard.

As for twelve year old Richard Bissell Prosser, my searches for him in the 1851 census have been to no avail. He was no longer at Nesbit's school in Kennington and may already have been attending University College School then based in Gower Street, Bloomsbury, where he was recorded as a pupil during the years 1851-1853. UCS was not a boarding school and young Richard Bissell would have had to lodge elsewhere.

In 1851 Richard would have been keeping a close eye on the tube manufactory (now wholly located in Smethwick and jointly owned by Selby and a new partner) the source, probably, of much of his income. Richard would have known that Selby could not be trusted to declare the production data on which the royalties payable were calculated accurately. (Selby's indebtedness to Hodges senior would have been another reason for the Hodges family to want to remain on good terms with Richard.) Richard was

himself exporting lap-welded tubes to the U.S. to his brother Thomas in New York. The anti-weld tubes were probably still under going testing by the railway company LNWR; testing which may have been time consuming and worrying for Richard as it was to result in an unsuccessful outcome for this hugely costly invention.

The relocation of Richard's business in Birmingham to the Cambridge Street tube works previously occupied by the Selby/Hodges partnership must have been concluded in early 1851. The move had probably prompted Richard to have laid the Minton encaustic tiles to identify the adjacent street known as Baskerville Place; Richard was a great admirer of John Baskerville (1706-1775), the famous printer who had lived nearby (see *The Dust-Pressed Process* p.235).

His previous Birmingham base, the long leasehold Watery Lane workshops and house, were advertised for sale in March and May, the lease still had nearly 70 years unexpired (the selling agent was Robert Bromfield Potter, who was probably related to his two wives, the sisters living and dead).

In the 1851 census his, now very elderly mother, Eleanor, and older sister, Hester, were recorded as living near the tube works at 18 Broad Street, which was also given as Richard's address in trade directories. Richard's sister-in-law, 31 year old Emma Potter, resident with them in 1841, was still living with Eleanor and Hester, but was described as their servant, a cook; how competent Emma was in the kitchen must be questionable (she was to be recorded as an "imbecile since childhood" in the 1901 census). The Broad Street household had one other resident servant, a fifteen year old housemaid.

The reforms of the patent and marriage laws plus any continuing attempts to overcome the problems encountered with the anti-weld tubes would have occupied much of Richard's attention and time in 1851. On 21st February, shortly after attending the meeting with Labouchere and whilst contributing to the debate with Spence, he had enrolled the specification of his eleventh English patent (*Tubes: A Wealth of Trouble* Part 2 pp.13/14).

However, another event would have also made the year memorable not only for him but for the whole nation - the Great Exhibition.

The Second, in particular, and Third Stories in Richard's life have already told of the significance of the Exhibition for the products made by the licensees of his dust-pressed and tube machinery patents. Minton's displays of its ceramic wares earned his firm a Council Medal, the Exhibition's highest award. These displays included specimens of dust pressed floor and wall

tiles and samples of decorative tiling; the latter included “mosaic” pavements which received an especial mention in the Juror’s Report. A lap-welded tube exhibited by the Smethwick tube business was awarded a Prize Medal. Neither of the awards made any reference to Richard’s contribution, his name was only mentioned in the Juror’s report on another ceramic product.

Prior to the opening of the Exhibition by Queen Victoria on 1st May, a series of notices had appeared in *The Times* and the Birmingham press under the heading “Prosser’s Patent Agate Buttons” in which Richard and Herbert Minton threatened to sue importers of buttons made using the dust-pressed process. For undisclosed reasons, Minton had actually ceased to make the buttons in 1848, but he and Richard had continued to oppose the importation of the “Agates” made by the French manufacturer Bapterosses, who they considered had pirated the process. While Minton and Richard could enforce the English patent against infringement by importation of the French buttons to England, the U.S. patent granted to Thomas Prosser had proved unenforceable (the U.S. market for “Agate” buttons was huge). Minton’s representations appear to have dissuaded the Juror’s from awarding Bapterosses a Council Medal; he did, however, receive a Prize Medal with an additional “Very Special and Honourable Mention”.

The Exhibition did not close until 15th October 1851. How many times Richard was a visitor is unverifiable. Amongst the Prosser memorabilia passed down to his descendants there is one fragile paper survivor suggestive of a family outing: a souvenir telescopic/expanding view of the Exhibition - a “peepshow”. *Image example of a Great Exhibition peepshow from an auction catalogue.*



In giving evidence to the Select Committee on Small Arms in 1854 Richard was to remark “I thought the Yankees were going to eat me” when referring to the altercation he had at the Exhibition over an American reaping machine, which he had asserted was not a new invention.

Another member of the Prosser family was said to have visited the Exhibition, one of the many visitors who had crossed the Atlantic from the U.S. to attend the very first international trade fair. As previously recounted Thomas Prosser was said to have first encountered Alfred Krupp at the Exhibition; a friendship and business relationship with the founder of the mighty German steel and armaments manufacturer ensued which was to make Thomas enormously wealthy. It may also be that Thomas’s visit was

the occasion of the two, now reconciled, brothers' first meeting since the bankrupted and disgraced Thomas had emigrated to the U.S. in 1838 following their bitter feud.

Little else is known of Richard's life in 1851. In September he was reported to have made one of the larger donations, £5, towards the building of a new church in Balsall Heath (*Aris's Birmingham Gazette* 22nd September 1851). In October Minton was reported to have been granted a patent for making ceramic clock faces using the dust-pressed process (*Staffordshire Advertiser* 11th October 1851). *The Times* issued on Monday 15th December published a letter dated 11th December from Richard which was reported subsequently in the Birmingham press and elsewhere. The letter concerned a report in *The Times* dated 9th December of an explosion on a ship, the *Fortuna*, caused by the spontaneous combustion of coal being transported from Cardiff to Stettin in Poland. The explosion had resulted in at least one fatality. Richard referred to this and also to the fears reported for a French vessel carrying coal which had not been heard of since it left Cardiff. He continued:

It appears that the Captain of the Fortuna had taken the precaution of leaving the hatches open for two days after leaving Cardiff, as the cargo had but recently been taken from the pit. The 'precaution' of leaving the hatches open was, no doubt, the cause of the accident, by admitting the atmospheric air; but, whatever may have been the cause, a very simple remedy was pointed out in 1822 by Dr. Faraday, which I propose to give in his words, extracted from the 'Fifth Report on Roads, from London to Holyhead, etc, Steam-boats,' etc., page 195...

(Michael) Faraday (1791-1867) in 1822 had attributed the spontaneous combustion of coal that had occurred on steam vessels to its pyrite content and recommended that only the "purest" coal be used - as now occurs (pyrite, an iron sulphide also known as 'fool's gold', is treated as a waste product of coal mining). The eminent scientist had also suggested a simple method of monitoring the temperature of stored coals by placing iron bars on top of their containers and measuring any heat so generated in them.

Presumably, the Report of the 1822 Parliamentary Select Committee formed part of the final lot in the two day auction in 1855 of the deceased Richard's library: "[Lot] 741 About 200 Reports of Committees of Houses of Lords and Commons, various".

Chapter 33

A Close Run Thing: Reform Enacted (1852 - Jan to July)



*The New Houses of Parliament - Illustrated London News 28th Feb. 1852
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On 28th January 1852 the Society of Arts published its Third Report. What meetings of its reform Committee preceded its publication will remain unknown until the Committee's minutes become available. This final Report, which does not appear to have generated any comment in the press, has the 'stamp' of authorship by Cole but was relatively short.

Having remarked on the success of the temporary Protection of Inventions Act, which had afforded protection to over 700 exhibitors at the Great Exhibition, the Report turned its attention to the "Patent Bill" that had narrowly failed to get enacted in the 1851 session of Parliament. Concern was expressed that the Bill had been "considerably altered" in the House of Commons, but the Committee had not been able to ascertain what the

precise alterations were as the amended Bill had not been printed before the prorogation of Parliament. Nevertheless, the hope was expressed that the alterations might have removed some of the more objectionable provisions in the original Bill, approved by the Lords, which would have led to the perpetuation of an unacceptable level of bureaucracy and of cost of infringement proceedings. Citations of authorities (including Farey and Webster) were repeated from the First Report as were the Committee's nineteen resolutions published in the Second Report, which were endorsed without any change.

The Third Report mentioned that the Committee had felt it "incumbent" to acknowledge the views held by "some few persons, eminent in legislation, law and even science" against patents in principle. Such views the Committee considered were based on the abuses arising as a result of the defects of the existing system and ignored "the good uses of an improved law". To counter the continuing opposition from these "few persons" more extracts of its arguments from the First Report were repeated and long passages of writings in support of patents by Jeremy Bentham, John Stuart Mill and Adam Smith were cited.

The next point was forcibly made, namely that, irrespective of the arguments over the existence of a patent system, it was essential that there should be some system of registration so as to keep the public informed of new inventions and inventors informed of what had already been done. To meet the need for such a register the Committee were unable to suggest any alternative to a system whereby inventors were encouraged to register their inventions in return for a temporary monopoly - a patent system, but a patent system improved in accordance with its suggestions, in particular as to cheaper periodical fees. Richard in his testimony before the Select Committee had asserted that the "publication of valuable secrets" was the only merit, "advantage", of the existing defective and expensive system, which in his view did not encourage invention.

The Third Report concluded with recommendations as to the desirability for detail (completeness) in specifications of inventions, their printing and availability at a low cost.

The lack of any significant reports in the press suggests that the patent reform campaign had largely remained dormant during the second half of 1851 pending the opening of the next session of Parliament, which did not occur until 3rd February 1852 after a long recess of nearly six months.

While the Society of Arts' Third Report failed to gain any coverage, the London press did report meetings in early February of the National Patent

Law Amendment Association and the United Inventors Association. The north-western press gave some prominence to meetings of the Manchester and Blackburn reform associations. There was no mention in the rest of the country's press of any reform activity elsewhere in England in early 1852; in fact during the six months of its passage through Parliament the Birmingham press gave only the briefest of reports of the progress of the new reform Bill.

Petitions seeking reform were to be presented to Parliament from various bodies during the early part of the session, including from the Manchester and Blackburn associations and the UIA.

A Bill was introduced into the House of Lords by Lord Brougham on 13th February:

who spoke in a scarcely audible tone, was understood to say, that the measure was similar in principle to that which had been under the consideration of Parliament last Session, but that it did not embody the Amendments introduced into the Bill of last year by the House of Commons.

The *Morning Chronicle's* report on 14th February reflected the above transcript from *Hansard*; other papers who reported that Brougham had described the Bill as "nearly identical" to the Bill as amended by the House of Commons in 1851 must have misheard Brougham's murmured introduction.

However, on 16th February Lord Edward Stanley of Alderley (1802-1869), the newly appointed successor to the Earl Granville as Vice President of the Board of Trade, on being questioned by Brougham, advised the Lords that the Government intended to introduce its own Bill in the Commons in a form that did not materially differ from that amended by the Commons in 1851. Brougham had already commented that his own Bill had excluded those of the Commons' amendments that had been made by those opposed to patents and, even worse, those that would give patent agents a "virtual monopoly"; he urged the Government to adopt the unamended Bill as passed by the Lords in 1851 - that drafted by Webster and recommended by the Select Committee. (In the absence of a report in *Hansard* various press reports have provided the content of this description of the exchange - inaudibility was often an issue which resulted in differences of emphasis.)

In a subsequent sitting on 19th February the Government was again urged to produce its Bill; some speakers gave the impending expiry of the temporary protection afforded by the Protection of Inventions Act as a reason for the urgency for reform. Stanley indicated introduction of the Government's Bill was imminent, but this was to be delayed for a further month by an

intervening event - the following brief account of the circumstances is taken from the biographies of the Prime Ministers concerned on *Wikipedia*.

On 21st February the minority Whig Government lost a vote on a militia bill, a defeat engineered by its former Foreign Secretary, the dynamic and popular Lord Palmerston (1784-1865), who had fallen out with the Prime Minister Lord John Russell (1792-1878). Russell immediately resigned and on 23rd February the Earl of Derby (1799-1869), the leader of a disunited Conservative party, was sworn in as Prime Minister to form what was to be another short lived minority Government, which, due to the Conservative party's internal differences, was largely composed of inexperienced cabinet ministers and officers.

On 25th February the *Morning Advertiser* was one of the papers to report that Brougham's Bill, comprising 58 sections, had been printed, published and awaited consideration in the Lords.

The fragility of the new Government gave rise to concern that patent law reform might again fall victim to an early dissolution of Parliament. However, on 19th March its own Bill was introduced by Lord Colchester (1798-1867), the new Vice-President of the Board of Trade, who, according to the *Morning Chronicle* dated 20th March, emulated Brougham in speaking so indistinctly as to be "nearly unintelligible". Differing versions of Lord Colchester's address were widely reported but the *Hansard* transcript confirms that he began by explaining that the new Government had decided: to adopt the Bill prepared under its predecessor with "some alteration"; continued with an outline of the Bill's provisions including a reference to the reduction of cost to patentees; and ended that "having expressed his opinion that it would be a vast improvement on the present law, he trusted that the House would agree to the Motion that the Bill be read a second time." However, his predecessor at the Board of Trade, Stanley, responded with the suggestion that, whilst agreeing with his successor as to the merit of the Bill, it and Brougham's, "not materially" different, Bill should be referred to "the same Select Committee" for the purpose of making them "harmonious". Lord Colchester had no objection to this suggestion with the result that both Bills were referred to the previous year's Select Committee headed by the anti-patent Earl Granville.

On 5th April the *Morning Post* reported that the Select Committee had issued its report on the Patent Law Amendment (No. 2) Bill, the Government's Bill, and had recommended that Brougham's Bill should be dropped, "not proceeded with". On 6th April the *Post* and other papers reported that the Lords had passed the Bill as approved *pro forma* by the Select Committee on the understanding that any amendments would be discussed at the third reading in the Lords.

The third reading took place on 20th April after Lord Colchester had first told the Lords of the alterations made by the Select Committee, which were not reported in Hansard nor in the press (due to inaudibility according to *The Sun's* short notice on 21st April).

On 23rd April a widely reported meeting took place with the Prime Minister, the Earl of Derby, at Downing Street when a deputation from the National Patent Law Amendment Association told him that the Government's Bill was "objected to by all parties" on various grounds. The Prime Minister promised to give the points raised consideration.

On the 7th May in the House of Commons the leader of its anti-patent contingent, John Lewis Ricardo the M.P. for Stoke-upon-Trent and one of the final witnesses to give evidence before the 1851 Select Committee, put a question to the President of the Board of Trade, Joseph Warner Henley (1793 -1884). He enquired whether it was the Government's intention that its Bill should "come on" that evening and, if so, would the President have any objection to the Bill being referred to a (Commons) select committee in accordance with "the understanding with the late Government". The recently appointed Conservative President responded to the first of Ricardo's enquiries in the negative, due to lack of time, and continued that he was not aware of any such "understanding" which would necessarily put the Bill in jeopardy of not being enacted in the current session if it was to be a repeat of the 1851 Lord's Committee's detailed examination of witnesses; he was, however, open to a referral to a Commons' committee after the second reading of the Bill in the Commons (when witnesses could not be called). The President was supported by his Whig predecessor Labouchere, who corrected Ricardo's "misapprehension" with the clarification:

There was no objection to refer the whole subject of the law of patents to a select committee; but it was on the understanding that that should not delay this Bill, which the late Government was anxious to pass as soon as possible.

Later in the sitting another Member stood and accused Ricardo, by his efforts, of being the principal cause of the "bill of last year" being thrown out, to which Ricardo responded that "the gallant gentleman gave him too much credit". (*The Daily News* May 8th)

On 13th May *The Morning Advertiser* was one of the papers to report on a meeting of the NPLAA, intended to be the first of a series, in London for the purpose of considering the provisions of the Bill. A variety of views were expressed by attendees, however, all agreed, though some were more critical than others, that the Bill insufficiently remedied the defects of the existing system.

Some of the press briefly reported that the Bill had its second reading on 17th May without apparently any debate or objection and that the Prime Minister had announced on 18th May that it had been referred to a Commons' Select Committee merely "to consider its provisions and not to take evidence on it" with a view to expediting, not retarding, its progress (*The Morning Chronicle* 19th May). *Hansard* was silent on the subject on both dates.

Whether the press reports accurately reflected what had occurred on 17th May must be questionable as subsequent reports indicate that the order for the Bill's second reading was not moved until the sitting on 27th May. *Hansard* and much of the press contained a full report of the vigorous debate that preceded the second reading and subsequent referral to the Committee.

The Commons went "into Committee" to consider the Bill on 21st June by which date the Earl of Derby, on behalf of his minority Conservative Government, had already announced that Parliament was to be prorogued on 1st July for a General Election to be held. The Bill was only one of several that the Government wished to get enacted before the end of the session. The report in *The Morning Advertiser* dated 22nd June suggests that the majority of the 56 sections in the Bill were agreed to without discussion. Amendments put forward on just two sections were accepted. Ricardo raised a couple of questions and complained that they were legislating on a very difficult subject "in great haste" and the only good that would come out of the Bill was to "upset the present patent system altogether, which was bad from one end to the other."

Having hurriedly been passed through the Commons sitting in Committee the amended Bill was ordered to be reported in the House itself. The next day, the 22nd June, the Bill was reported (a Member had beforehand attempted to introduce a new provision, which was rejected). On 23rd June the Bill was read for a third time and passed.

The next step in this arcane process was to refer the amended Bill to the Lords for consideration of the amendments. This took place on 28th June, when Earl Granville was one of the objectors to some of the amendments whereas Lord Brougham, quoted from *Hansard*, counselled that: "The Bill as it stood was a great improvement upon the old patent law, and he should recommend their Lordships to do nothing that should endanger the Bill for the present Session." *Hansard's* abbreviated conclusion reported that:

Some Amendments agreed to; some disagreed to; and a Committee appointed to prepare Reasons to be offered to the Commons for the Lords disagreeing to certain of the said Amendments: The Committee to meet immediately: The Committee reported Reasons prepared by them:

The same were read, and agreed to; and a Message was ordered to be sent to the Commons to return the said Bill, with the Amendments and Reasons.

Hansard's sketchy report of the Commons response on 30th June perhaps indicated the continuing rush to get through all of the Government's uncompleted 'business' on the day before the scheduled prorogation. Some of the Lords' amendments were accepted, others were rejected:

Committee appointed, "to draw up Reasons to be assigned to the Lords for insisting upon certain of the Amendments to the said Bill to which the Lords have disagreed":—

*Report of Reasons brought up, and read: Reasons read and agreed to:—
To be communicated to The Lords.*

On 2nd July the press reported that the Bill was amongst several that were given the Royal assent on 1st July immediately before Parliament was prorogued.

The 1852 General Election (7th - 31st July) was narrowly won by the, still divided, Conservative party but the returned Earl of Derby's Government was only to survive until 17th December 1852.

The Patent Law Amendment Act 1852 as enacted comprised 57 sections. Its commencement date was delayed until 1st October 1852 as there was much reorganisation to be done.

The Act provided for the administration of the patent system to be the responsibility of "Commissioners of Patents of Inventions", a body composed of certain members of the existing judiciary and such other appointees as the Crown deemed fit to hold office (at its discretion); the powers of the Commissioners to be exercised by a minimum of three of them (of whom one must be the Lord Chancellor or the Master of the Rolls). The Commissioners' authority was to be evidenced on documents by their own seal, in lieu of the multiple authorisations by seals and otherwise of the sinecure holders within the old patent system (which had often led to complications in litigation according to Webster in his 1852 commentary *The New Patent Law*). The Crown's overriding prerogative as to the grant or withholding of patents was nevertheless preserved. The Commissioners, who were authorised to make rules and regulations for the proper administration of their business and to appoint clerks and officers for this purpose, were required to issue a report to Parliament each year. The Treasury was authorised to provide a building for the use of the new office; one office to replace the several that previously had to be attended by or on behalf of a prospective patentee. As to all the old office holders whose

services were no longer required, including the Deputy Chaffwax, provision was made for them to be compensated if they were not reemployed on commensurate terms within the new office or elsewhere as a public servant.

The Act preserved the definition of invention in the Statute of Monopolies of 1624, “any Manner of new Manufacture”, which will have pleased Richard, who was said to have been largely responsible for the Society of Arts’ support of its preservation. How much the Society’s views influenced Webster in his overall drafting of the Act is unknown, probably not as much as Harrison was to suggest in 2006. Webster’s recommendations to the 1851 Select Committee would have taken on board the views of the United Reform Association and other reform bodies, some at least as influential as the Society, in addition to his own as an experienced patent lawyer.

Importantly, the Act provided that (except where specifically ordered otherwise) a patentee’s protection commenced on the date of the initial application, whereas under the old system it dated from the date of sealing and enrolment, usually six months later. Whilst the latter approach had the effect of extending the life of the patent, the patentee was at risk of invalidating the patent if he used or published it before it was sealed (e.g. by inviting capitalists to invest) or of having the invention pirated during the intervening period.

As to the cost of a patent, one of the principal complaints of the reformers, the Schedule to the Act set out a fee scale. In effect the cost was to be met by fees levied at certain stages. The total of the fees charged for the initial three years of a patent’s life was £20 (plus stamp duty (a tax) of £5); to renew it for a further four years a fee of £40 was payable (and stamp duty of £10) and thereafter £80 was charged (stamp duty £20) for a renewal of a further seven years. So the total cost in patent office fees for 14 years protection was still a hefty £170, not far short of that payable under the old system, but the patentee was given the option whether or not to incur much of this expense. The fee at the outset of the application, on filing the petition for the patent, was only £5, followed by fees of £5 each for the three successive stages ending with the filing (not enrolment) of the specification, which finalised the initial three year grant. Furthermore, the Act did unify the British patent system, so the fees incurred covered a patent for the whole of the UK, the Isle of Man and the Channel Isles (plus, if expressly sanctioned by the Commissioners, some or all of the colonies).

Arguably, the financial burden on a patentee was much less than under the old system, but, as will be seen, Richard continued to advocate for a much greater reduction in the fees payable. The sum of £20 was still a

considerable amount for a poor artisan to raise in 1852 (2021 purchasing power (RPI) £2300/relative average earnings £17800 - measuringworth.com).

The Act provided that the fees received by the Commissioners were to be paid into the Government's coffers, the Consolidated Fund, and the running costs of the new office were to be met by the Treasury. Those reformers who had speculated that the new patent office might actually be profitable and that such profits could be used to create a museum of invention, were no doubt disappointed at this outcome (but Woodcroft was not to be thwarted).

As to the other principal complaint of the reformers, the difficulty of finding out what had already been patented, the Act did seek to address this issue. Not only were the Commissioners required to have the specifications of all new patents printed and published as expeditiously as convenient, they were also required to compile and make available for inspection indices of the specifications of new patents and, also, of those of all the previous patents. In addition, the Commissioners were authorised, "may cause", to have these indices and the specifications of 'old' patents printed and published. The Act, also, required the Commissioners to make copies of all such prints available for purchase. A new patentee was to be allowed to have up to 25 free copies of the specification and copies could also be provided to "public Libraries and Museums". A register of patents granted under the Act was to be kept together with a register of proprietors (the Act also removed the previous limit of a maximum of twelve owners). The Commissioners were, also, authorised to direct that all the old enrolled specifications (previously stored in three separate offices) be transferred to an office specifically maintained for the filing of specifications under the Act (in fact this repository came to be housed within the Commissioner's office). The Commissioners were given a complete discretion as to the manner in which they carried out their duties and as to the price of the printed specifications and other publications.

The Act did not attempt to address the other great difficulty - that of identifying unpatented pre-existing inventions, which would have been a bridge too far.

The much abused and abhorred caveat process was replaced by a procedure whereby a notice, containing the grounds ("Particulars") of any objection to a proposed patent, had to be lodged before the date stipulated in the advertisement that the Commissioners were required to publish of the applicant patentee's intention to proceed. The fee for filing an objection notice was £2 and the objector would be at risk as to both parties' costs of the subsequent investigation and any hearing.

On the issue of the long established right to patent foreign inventions introduced into the UK, which was prohibited under patent systems of some other countries including the American system, a compromise was introduced. The right, supported by Richard, was to be curtailed to the extent that where a foreign patent had been granted a subsequent UK patent could not remain in force after the foreign patent's expiration.

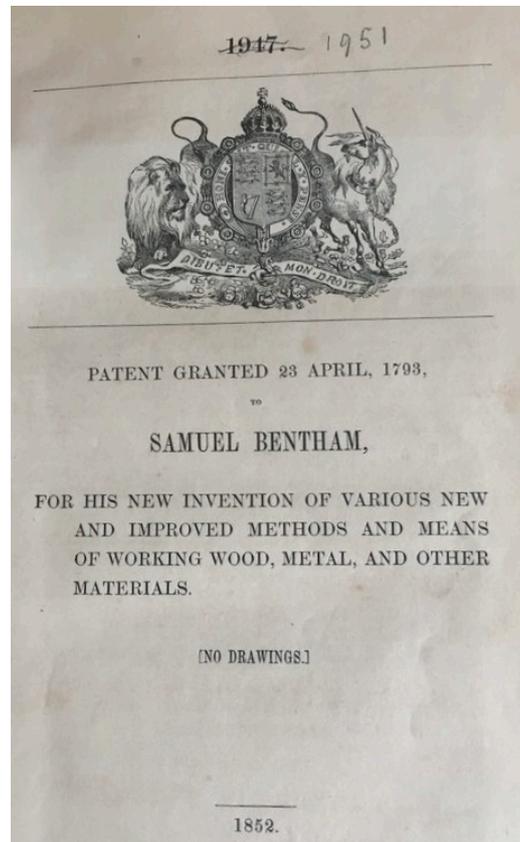
As Webster pointed out in 1852 the Act, also, improved the means available to a patentee to protect the property rights granted in the invention. In *scire facias* applications to repeal a patent, an anomaly that had hampered the defendant patentee in making his case at the hearing was rectified and the applicant was not allowed to 'ambush' the patentee by introducing objections and evidence at the hearing not specified in the application. The most significant improvement, however, was that which allowed a patentee to seek an injunction for infringement in those courts that then dealt with common law issues, whereas previously such relief could only be sought in one of the notoriously slow, cumbersome and costly courts of equity. This extension of their jurisdiction only applied to the superior common law courts though; Richard's, somewhat optimistic, hope that such relief could be sought in the, only recently created, county courts was not realised.

The new procedures established by the Act for obtaining a patent were the subject of a pamphlet to be published by Richard in October 1852. (These procedures have already been discussed in Part Two of *Tubes: A Wealth of Trouble* pp.18-22.)

Prior to his pamphlet's publication Richard was to seek the opinions of, amongst others, inventors and patentees on points of particular concern to him in the new legislation. He was, also, to commission a Birmingham firm of printers to typeset and produce prints of three 'old' specifications.

Chapter 34

A Circular and some Suggestions (1852 - Sept/Oct)



*Title page of print of Bentham's 1793 patent enclosed with the circular.
Darby collection.*

Included in the items that Beryl Leigh had produced for us on our second visit to the British Library in March 2012 was a collection of replies to a printed circular that Richard had sent out in September 1852. The number actually sent is unknown but 22 of the recipients' responses are included in the collection. Of these about two thirds were from addressees in Birmingham or its vicinity and included a few from familiar names: Aitken and another fellow Birmingham reform committee member R. F. Sturges; Edward Oliver, a solicitor who had been in partnership with Frederick Wills, when their firm had acted for Richard in the litigation over his dust-pressed process patent. Sturges responses, dated 1st September (in a different hand), were written on what appears to be an initial handwritten and incomplete draft of the printed circular.

Amongst the Birmingham manufacturers solicited for their views were makers of buttons, thimbles, pens and hooks and eyes among other small wares. An engineer inventor of a “rotatory engine”, brass founders, wire drawers and another solicitor Henry Reynolds were other Birmingham based respondents; an iron master from Tipton and a japanner from Wolverhampton in the nearby Black Country also replied.

The Birmingham born and bred inventor, chemist and metallurgist Alexander Parkes (1813-1890) was probably not very well known in 1852 (when he was living temporarily in South Wales). He is best known as the creator in about 1855 of Parkesine which led to the development of plastic. His responses to the circular’s queries would have pleased Richard.

There were eight responses from further afield and all were from people of some note in their day. Herbert Minton, Richard Roberts and Lady Bentham require no introduction to readers of *Prosser The Engineer* nor does the 1851 Select Committee witness Sir David Brewster (see p. 115).

Under his signature on his response William Buckle (1794-1863) had inserted “Royal Mint” where he was then in charge of the coining department. Buckle, an accomplished mechanical engineer, had only recently been appointed to this post in London after over 25 years employment at Boulton and Watt’s Soho Foundry as its manager including responsibility for its mint. (Source - William Buckle Grace’s Guide) It is reasonable to speculate that Buckle, during his long employment in nearby Handsworth, would have become personally acquainted with Richard.

John Donkin (1802-1854), another accomplished engineer, was the eldest son of his more famous father the engineer Bryan Donkin (1768-1855), the founder of the eponymously named family engineering firm based in Bermondsey. (Source - John Donkin Grace’s Guide)

Robert Stirling Newall (1812-1889) was a Scottish engineer who had patented machinery for making wire ropes and in 1851 was part owner of the wire rope making manufactory, R.S. Newall & Co., in Gateshead. He became best known for his firm’s success in laying sub-marine telegraph cables and may have been the originator of the idea of encasing a cable within a wire rope. (Source - Robert Stirling Newall Grace’s Guide)

An unidentified representative responded on behalf of the firm of Peel, Williams and Peel of Soho Iron Works, (Pollard Street,) Ancoats, Manchester, “iron and brass founders, forge-masters, makers of steam engines, boilers, hydraulic presses, mill gearing, etc.” with an extensive entry in Grace’s Guide (Peel, Williams and Peel Grace’s Guide).

An image of the circular completed by Richard Roberts appears below:

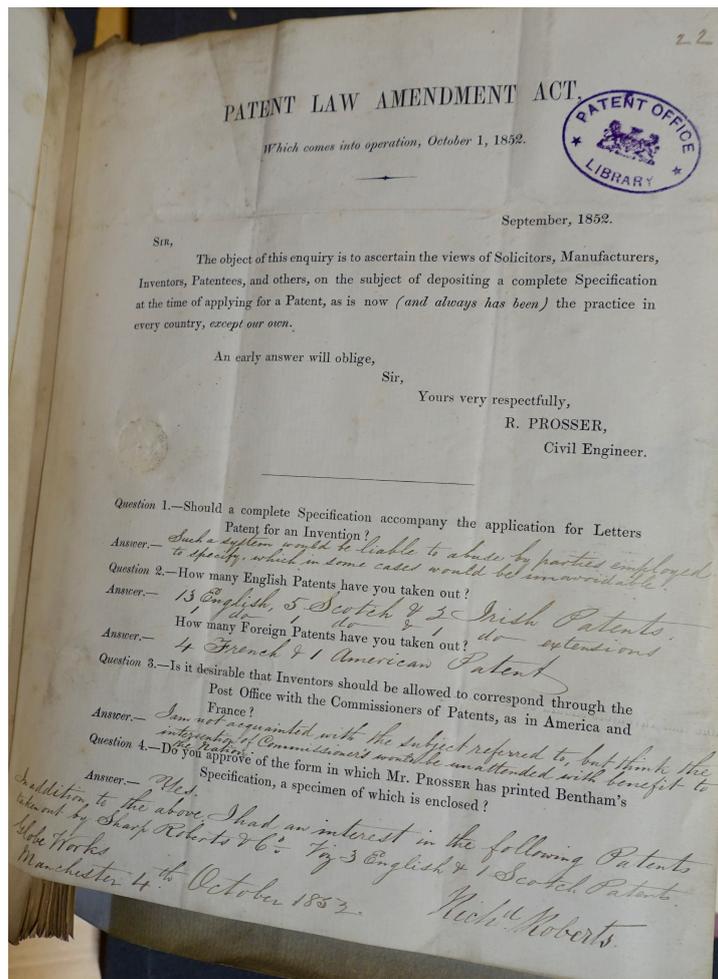


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The recipients were, in fact, questioned on more points than indicated in Richard's opening explanation for his seeking their views, which purported to be solely on the issue as to the "completeness" of the specification filed with the initial application for a patent. The new Act had given the intending patentee the option to file a "complete" specification or a "provisional" one (the latter to be concluded by filing a "complete" specification within six months). Richard had previously voiced his own view in the press that the specification accompanying the initial application should be "not an outline specification, as some have proposed, but the most complete one the inventor knows how to draw up" (*Aris's Birmingham Gazette 17 February 1851*) - a view that he expressed before the 1851 Select Committee and elsewhere. The state of maturity that an invention had reached for a patent application to be acceptable had been the subject of much debate, particularly the desirability of enabling a poor inventor to invite financial support during the perfection of the invention having already been granted

provisional protection based on an initial brief description. The first question in the circular addressed this issue.

All but four of the respondents agreed with Richard. Roberts disagreed but on the ground that it put the inventor at the risk of having his invention pirated if he employed a third party to draft the specification (a risk which he admitted “in some cases would be unavoidable”) - the way Roberts had testified in 1851 that he drafted his own. Minton, whose replies all appear somewhat tentative, thought that at least three months should be allowed for the specification to be perfected. Brewster, who was not questioned directly on the issue before the Select Committee, vehemently opposed Richard’s stance: “Certainly not. Because it does not allow the inventor time to perfect his invention.” The representative of Peel Williams and Peel did not answer any of the questions in the circular instead responding by letter that the firm had “never taken out a Patent but we have introduced several things which ought to have been patented and probably would have been so had the Patent Laws been in a more satisfactory state”; as such the respondent did “not feel competent to answer your questions simply for want of the necessary experience”.

Lady Bentham’s reply made the point that “proofs exist of Bentham’s having been in a state of readiness to furnish complete specifications at the times he applied for his several letters patent”.

The respondents were, also, each asked to confirm the number of “English” and foreign patents they had taken out. Roberts claimed to have been granted the most.

The circular then posed two unrelated questions, but each on issues on which Richard had previously expressed particular concern.

Nearly all the respondents were in favour of being allowed to correspond through the Post Office with the Commissioners of Patents rather than by personal attendance. Sturges remarked that only patent agents could have any objection to such a proposal. Roberts was again an exception but appears to have misconstrued the enquiry and his reply demonstrated his continuing distrust of bureaucracy: “...that the intervention of Commissioners would be unattended with benefit to the Nation”. The new Act was silent on the issue but it was within the powers granted to the Commissioners to authorise such a means of communication.

The final query was: “Do you approve of the form in which Mr. Prosser has printed Bentham’s Specification a specimen of which is enclosed?”. The Act had authorised, but not required, the Commissioners to print the

specifications of all the patents granted prior to its enactment of which there were over 13,000 according to Woodcroft's indices. In his obituary for his friend, Aitken was to refer to Richard as having "agitated" for the publication of the specifications in groups and that:

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.

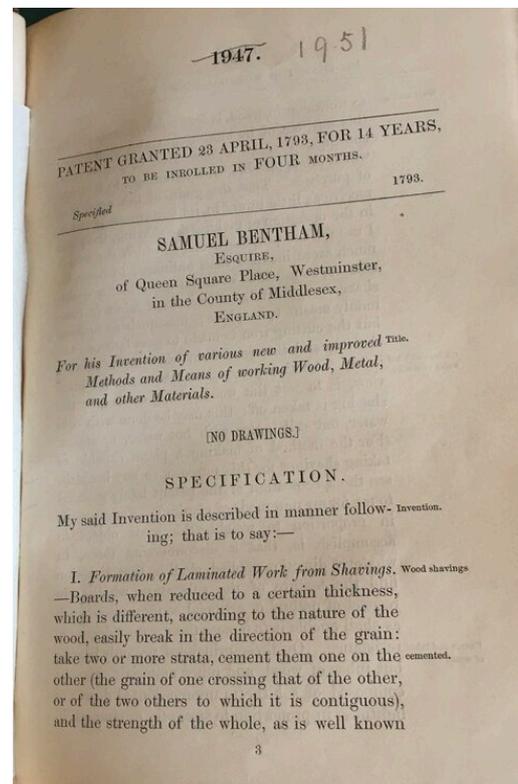
"Bentham's Specification" was, of course, that granted to Sir Samuel in 1793, which both Richard and Lady Bentham considered had been unjustly ignored and unrewarded due to the, generally accepted, attribution solely to Sir Marc Isambard Brunel of the success of the pulley block machinery introduced into the British naval dockyards earlier in the 19th century (see Chapter 26 *The Bentham Affair*).

A few of the respondents did not answer this question but the remainder not only approved of "the form in which Mr. Prosser has printed Bentham's Specification", some praised it for being "clear and explicable", "in a simple intelligible manner" and being "well drawn". Both the solicitor Reynolds and Lady Bentham commented on the usefulness of the marginal notes. The, no doubt gratified, widow of Sir Samuel commented:

I cannot but highly approve of that form, since by the marginal contexts[?] Mr Prosser has so ably annexed to the Specification, its contents are rendered of easy reference; & further these marginal notes concisely exhibit Bentham's extensive views of manufacturing operations which enabled him to class them according to operations instead of handicrafts.

It was in a letter sent to Richard the following day (adding a patent omitted from the list of the patents granted to Sir Samuel in her reply to the circular) that Lady Bentham had given some indication of their speculated close friendship described in *The Bentham Affair* (see p.55) *Image Darby collection*.

The print of Bentham's specification which accompanied the circular was 73 pages in length. While the printing cost might not have been significant,



much time and attention must have been given to the proofreading of the transcription of the original manuscript and the drafting of the marginal notes.

If, as perhaps can be presumed, the majority of recipients of the circular replied and their responses are all included in the collection, then, admittedly, it can hardly be said to have been an extensive poll - possibly more a 'testing of the waters' in anticipation of two other initiatives contemplated by Richard. (However, in May 2022 on a visit to the BL we found a copy of the identical circular (completed by an unidentified recipient) within the Woodcroft collection with his name substituted as the originator - the poll may therefore have been somewhat more extensive than had first appeared.)

The earlier responses received to the circular must have encouraged Richard to proceed, if he had not already done so, with the preparation of the printing by the same Birmingham firm of printers of two other specifications. Both also related to woodworking machinery for use in naval dockyards, that of Brunel's 1801 patent and that dated 12th March 1763 in respect a patent granted on 6th December 1762 to Elizabeth Taylor, the widow of the recently deceased Southampton block maker Walter Taylor, for machinery her late husband had developed said to be the first to go some way to mechanising the block making process. The Taylor family's business had prospered until the Navy Board took block making "in house" following the Board's introduction to Brunel. Both the Bentham and Taylor families must have felt some animosity towards Brunel, the former with more justification than the latter.

There are two known survivors of these three prints each contained in a small bound volume. One now held in the British Library formed part of Woodcroft's contribution to the founding collection of the new Patent Office Library in 1853, the other was passed down to my late mother-in-law, Richard Bissell Prosser's only grandchild.

Bentham's long specification takes up most of each book, Taylor's is only eight pages; Brunel's nineteen page description is accompanied by a large drawing containing 19 diagrams drawn to scale.

Each specification was preceded by a cover sheet headed "Patent Law Amendment Act, 1852" above an engraving of the Royal Coat of Arms of the United Kingdom followed by the title:

Suggestions as to the form of printing the past and future specifications of letters patent 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.

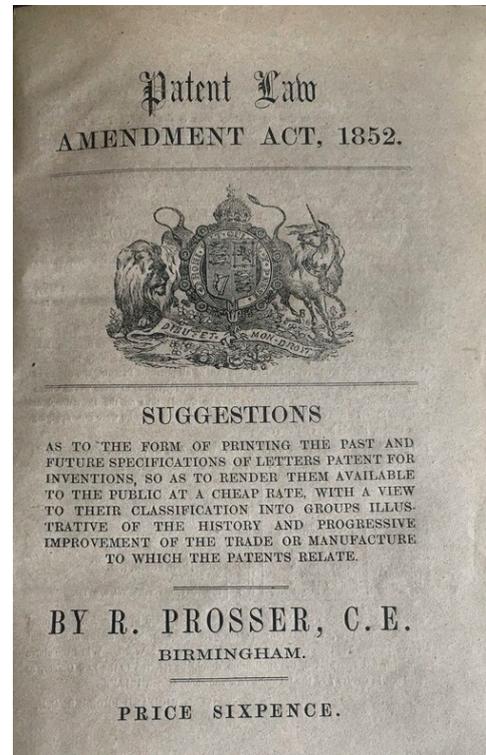
By R. Prosser, C.E. Birmingham.

The price of each print was published below: Bentham's six pence, Taylor's one penny and Brunel's the most expensive at seven pence (because of the drawing). In 1852 Brunel's could have been bought for the equivalent of about £3 in 2021 (purchasing power (RPI) but about £25 relative average earnings - measuringworth.com). A comparatively "nominal price" as Aitken had indicated in his obituary for Richard. Richard was later to assert that the prices quoted reflected the actual printing cost. Certainly, Richard could not have expected to recover any of the costs he incurred for showing how the printing of specifications "could and ought to be done".

Image: Darby Collection

On the reverse of the cover sheet of each specification there was an explanatory note by "Richard Prosser C.E. Birmingham" dated 14th September 1852.

The note contained recommendations detailing the manner in which a specification should be printed including incorporation of headlines and marginal notes, the type font and weight of paper. Woodcroft's indices were referenced, Richard having adopted the numbers allocated by Woodcroft to each of the three patents (in fact these were later altered in the case of Bentham's and Brunel's as pointed out in pencil corrections in the surviving copy passed on by my late mother-in-law). The praise given to the indices by some of the 1851 Select Committee witnesses was cited, including Richard's own endorsement. He referred to the need to submit either a complete or provisional specification with the application to the new Commissioner's office. He, also, recommended that a schedule containing brief details of previous patents of "similar inventions" (taken from Woodcroft's indices) should be endorsed on the specification for the benefit of the officer dealing with the application and, after it had been granted, those interested in the invention who bought a copy of the specification. An example of such a schedule was included for each of the three patents; that for Bentham's mentioned ten earlier patents including that of Elizabeth Taylor's, Brunel's mentioned two more including Bentham's.



However, of most interest in the small volume left by my mother-in-law are the additional pages pasted into it at the beginning by her paternal grandfather Richard Bissell Prosser.

On the first of these insertions is a manuscript note dated 29th December 1901 written by Richard's eldest son. The note commenced:

At this distance of time it is impossible to ascertain with certainty who was the first to suggest that the specifications of letters patent for inventions should be printed separately & sold.

It then pointed out that, whilst the 1852 Act required the Commissioners to print the specifications of future patents, it was silent as to the printing of earlier ones (in fact, this was not strictly correct as the statute allowed for such printing at the Commissioners' discretion). The note then described how the printing of the earlier specifications was accomplished by Woodcroft "as a sort of 'coup d'état'...who quietly did the work but without any express authority" (Woodcroft's relationship with his superiors in the new office was often strained due to his tendency to ignore the limits of his own job specification). The note continued:

I have no doubt that my father, who died 21st May 1854, contributed to make things easier by the printing & circulation of these three specifications."

The writer (Aitken?) of the article published in the *Birmingham Journal* on 9th June 1855 (quoted on p.9) was more supportive of Richard's role in the success of the initiative alleging that it was "entirely due to the exertions of the late Mr. Richard Prosser", including the printing of the three specifications, that persuaded the Commissioners to adopt "His" (i.e. Richard's) recommendation.

Richard's son had, also, pasted in a press clipping of Aitken's obituary for his father from the *Birmingham Journal*, which had more forcefully acknowledged this contribution along with the following attribution:

To him we owe the possession by the Government of the "Indices of Patents", compiled by Professor Woodcroft,...

On 23rd February 1853 legislation, supplemental to the 1852 Act, was enacted which included a provision authorising the Commissioners to purchase Woodcroft's indices (in lieu of preparing their own) at a cost not exceeding £1000 - an extraordinarily generous sum (2021 purchasing power (RP1) £116,000/relative average earnings £890,000! - measuringworth.com). In 1851 the patent agent Paul Rapsey Hodge had recommended that the Government purchase the indices in his evidence to the Select Committee, no doubt there was other support for this proposal. In the absence of discovering any evidence to substantiate Aitken's contention, I initially thought that the extent of Richard's influence over the decision must remain entirely speculative "at this distance of time".

However, a search made on my behalf by Steven Campion (Librarian and curator of the British Library's IP collection) in April 2022, for another document, resulted in Steven finding a partial photocopy of a petition, a "Memorial", by Richard and others addressed to the Patent Commissioners. The original document has not yet been traced within the vast old POL archive but the substantive parts of the petition and first four signatures were photocopied at some date together with some other documents and stored separately. The petition, with due deference, requested the Commissioners to implement two "practical" steps to facilitate "the efficient and economical working" of the recently reformed patent laws with particular reference to the potential benefit to those inventors of "limited pecuniary means...who constitute a considerable part of the applicants" for patents.

The two steps were: authorisation of communication to the Patent Office via the Post Office; and that the size of drawings accompanying specifications should not be permitted to exceed "Imperial paper" (22 x 30 inches) nor be coloured or shaded unless proved "absolutely necessary for the elucidation of the Invention".

Having emphasised the importance of the second of these suggestions not only to inventors but to members of the public wishing to purchase copies of specifications at an affordable cost, the petitioners referred to their attention having been directed to the "price of three Specifications printed and published by Mr. Richard Prosser for the purpose of showing the cheap manner in which such Documents can be printed Copies of which Specifications accompany this Memorial". Having confirmed their approval of "these forms" the petitioners urged the Commissioners adopt them. Might the copies of the three specifications contained in the bound volume held by the British Library be those that accompanied the "Memorial"?

The petition continued with a plea to the Commissioners to provide "good" indices of "existing" patents of which only those "prepared by Professor Woodcroft" were known to exist and begged leave to suggest that they should immediately be procured by the Commissioners for "the benefit of the public".

The first four signatories to the petition were Richard, his fellow BPLRA member T. Clutton Salt, an unidentified James ?Herrick and, somewhat surprisingly, the subsequently discredited George Selby of "Smethwick Tube Works Tube Manufacturer". Presumably, if found, the original manuscript will disclose many more signatories and also its date. To what extent the petition did, in fact, influence the Commissioner's decision to buy Woodcroft's indices in early 1853 remains unknown.

In addition to Aitken's obituary, other items had been pasted into the other known surviving bound volume of Richard's "Suggestions for Printing Specifications", that left by my late mother-in-law: a ticket for a dinner to be held in Birmingham in November 1852 (another of Richard's initiatives according to his son); a receipt dated 23rd January 1906 from the British Museum Department of Printed Books for a donation of a copy of the book (a search for this in the online catalogue of the Museum's Library was unsuccessful). Immediately before the print of Bentham's patent, a note had been inserted by Richard Bissell Prosser verifying that the model bequeathed to the Science Museum by Lady Bentham was of one of the machines described in the specification and was that made by his father described earlier in Chapter 26, *The Bentham Affair*.

One other item also appears to have been a later insertion and was pasted between the back cover and the drawing accompanying Brunel's specification. It is probably a sample of a printed schedule that Richard intended to publish every Saturday of patents granted during the previous week including relevant details such as: a brief description of the invention, the name of the patentee, the date of the application, the patent number allocated to it and whether the specification was complete or provisional. The schedule is headed "Prosser's Weekly Circular, For Patentees, Inventors, Capitalists, Manufacturers and Solicitors". Whether this initiative ever progressed is doubtful but it was probably associated with a pamphlet that was published by Richard shortly after The Patent Law Amendment Act 1852 came into force on 1st October.

The issue of *Aris's Birmingham Gazette* dated 27th September 1852 contained the advert in the image below.

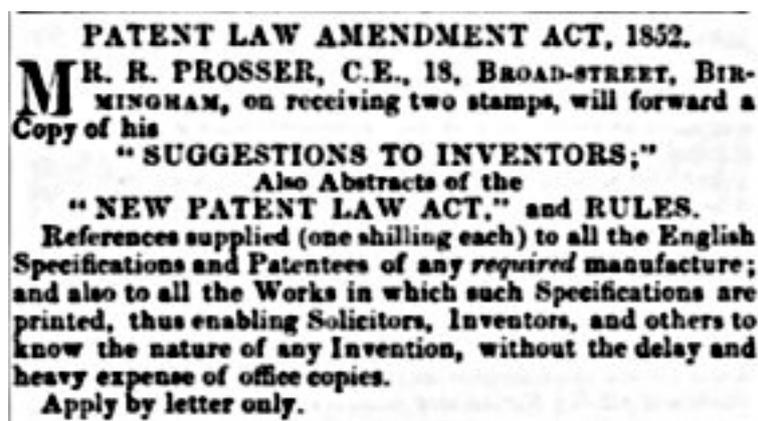


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The *Birmingham Journal* carried a similar advert in its issues on 18th September and 2nd October. Unsurprisingly, many other adverts offering advice were to appear following the passing of the Act placed by lawyers,

patent agents and others seeking to profit from its enactment. Richard's request for two stamps suggests he was merely seeking to recover the postage costs for forwarding the pamphlet. The additional service he offered hardly looked remunerative at one shilling for supplying details of all patents relating to a particular manufacture. Perhaps Richard quickly realised that this initiative was not sensible as the adverts were not repeated.

The British Library holds a copy of the eight page pamphlet which has been bound in a bright yellow cover; its catalogue states it was contributed by Woodcroft. Printed by the same Birmingham printers as Richard used for the three specifications, it is dated 1st October.

The first part of the pamphlet consisted of: a short summary of about half of the sections in the Act (those omitted were described as "merely Technical, of no interest to Inventors"); a transcript from the Act's Schedule of the new fees and stamp duties payable; and a short abstract of the first set of rules and regulations made under the Act on 1st October by four of the new Commissioners being the most senior members of the judiciary (the Lord Chancellor, the Master of the Rolls, the Attorney General and the Solicitor General). The rules and regulations (inter alia) stipulated such minutiae as the size of paper and parchment and margins to be adopted by the applicant patentee; parchment to continue to be used in the case of the "complete" specification. The difference between a "provisional" and "complete" specification as defined by the Act was explained, the former having only to "describe" the "nature" of the invention i.e. similar to an initial application under the old system except that provision was made for some scrutiny. A "complete" specification, however, was one that must "particularly describe and ascertain the nature of the Invention, and in what manner the same is to be performed".

The second part of the pamphlet, "Suggestions to Inventors", was an analysis contrasting the 'pros and cons' of submitting a "provisional" as opposed to a "complete" specification with the initial application. Bearing in mind the views previously expressed by Richard, it is not surprising that the analysis concluded with a recommendation that "much trouble, expense, and uncertainty" would be avoided if a "complete" specification was filed at the outset. His "Suggestions" consisted of advice to any aspiring patentee, first to be satisfied that they had made a "discovery and test it" by applying the Act's requirements for a "complete" specification: "if you cannot do this, you have not made an invention, and have therefore nothing to patent". He continued by advising utmost secrecy of any confirmed "discovery" and advice as to the importance of investigating for any earlier existence of the same invention (perhaps this course should have been advised as the first step). It has to be said that Richard appeared to have ignored the plight of

the poor inventor without the resources to “test” their “discovery” for whom many reformers had advocated the concept of protection for a “provisional” specification.

The pamphlet concluded with a description of the services that Richard proposed to offer - including that referred to in the press advert for the provision of details of previous patents relating to a particular manufacture. He also offered to recommend (without any responsibility) suitable “mechanical draughtsmen” to draw up specifications.

What the response was to the adverts in the Birmingham press remains unknown, but Richard was to practice what he preached. On 11th November 1852 Richard filed the two “complete”, but very brief, specifications described in Part 2 of *Tubes: A Wealth of Trouble* (pp. 15-23) having executed them the previous day in Birmingham before the solicitor Thomas Slaney. It is reasonable to assume that Richard probably attended to the filing in person at the office of the Patent Commissioners. Richard did not conclude the procedures required to obtain full protection under the new Act and the result was that the temporary protection granted to both patents lapsed after six months. His reasons for adopting this course are speculative as previously discussed (*Tubes etc. ibid*).

On the Tuesday of the week preceding that of the execution and filing of the “complete” specifications, an event had occurred in Birmingham which was reported at length in the press nationally. The image below is of a notice that had appeared in *Aris's Birmingham Gazette* on 27th September immediately above the advert shown in the image on p152. The dinner referred to was to take place on the evening of 2nd November at Dee's Royal Hotel in Temple Row Birmingham and was attended by some significant figures in the patent reform campaign.

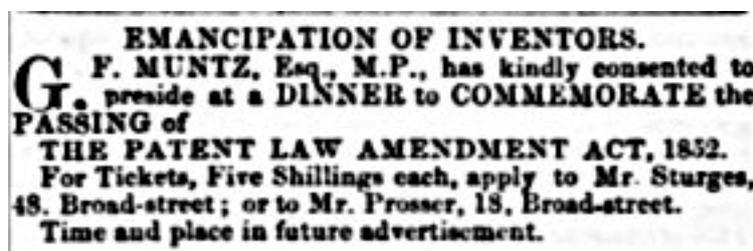


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Chapter 35

The “Emancipation of Inventors” Dinner (1852 - Nov)

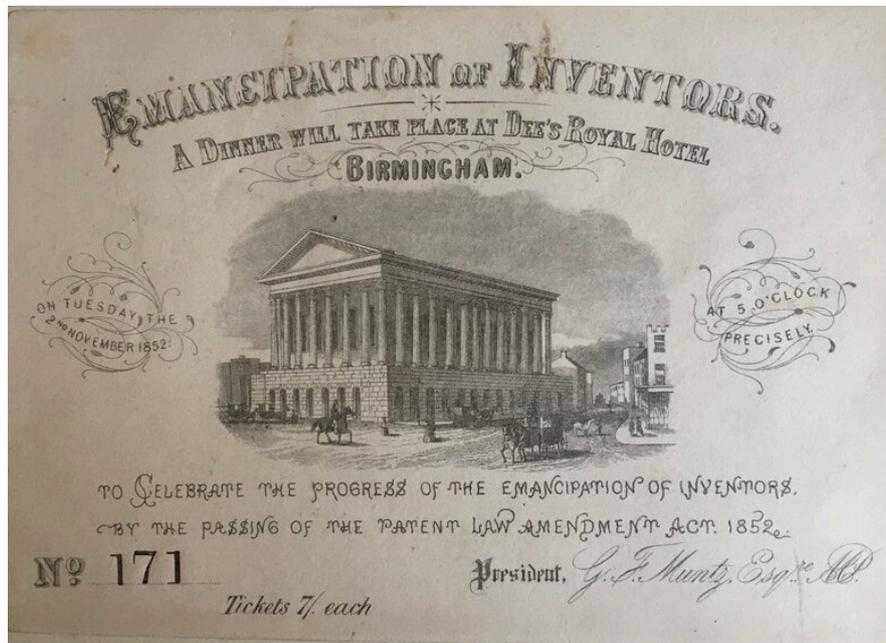


Image: Darby collection

As briefly mentioned previously, Richard Bissell Prosser had pasted a ticket to this dinner in the copy of the “Suggestions for Printing Specifications” he passed down to his family. He had also written a short note on the previous page:

The dinner referred to on the next page was got up by my father who designed the ticket.

The note continued with references to an article in *The Mechanics’ Magazine* reporting on the dinner and to a subsequent letter received from Webster “(father of the present Lord Chief Justice)”.

The image on the front of the ticket is of Birmingham’s Town Hall and the title of the dinner is emblazoned above an engraving of this relatively recent addition to the town’s civic architecture (opened in 1834). The word “Emancipation” did and does, of course, have other connotations - although the concept of aligning the plight of inventors pre-1852 with that of the enslaved must be questionable. The dinner was to celebrate “the progress”

made in such “emancipation” by the passing of The Patent Law Amendment Act - hinting that there was more to be done.

The pictorial lithograph printed on the reverse of the ticket is of greater interest in that it contains evidence of Richard’s input into its design (the lithographer, Billing of Birmingham, is identified in tiny print).

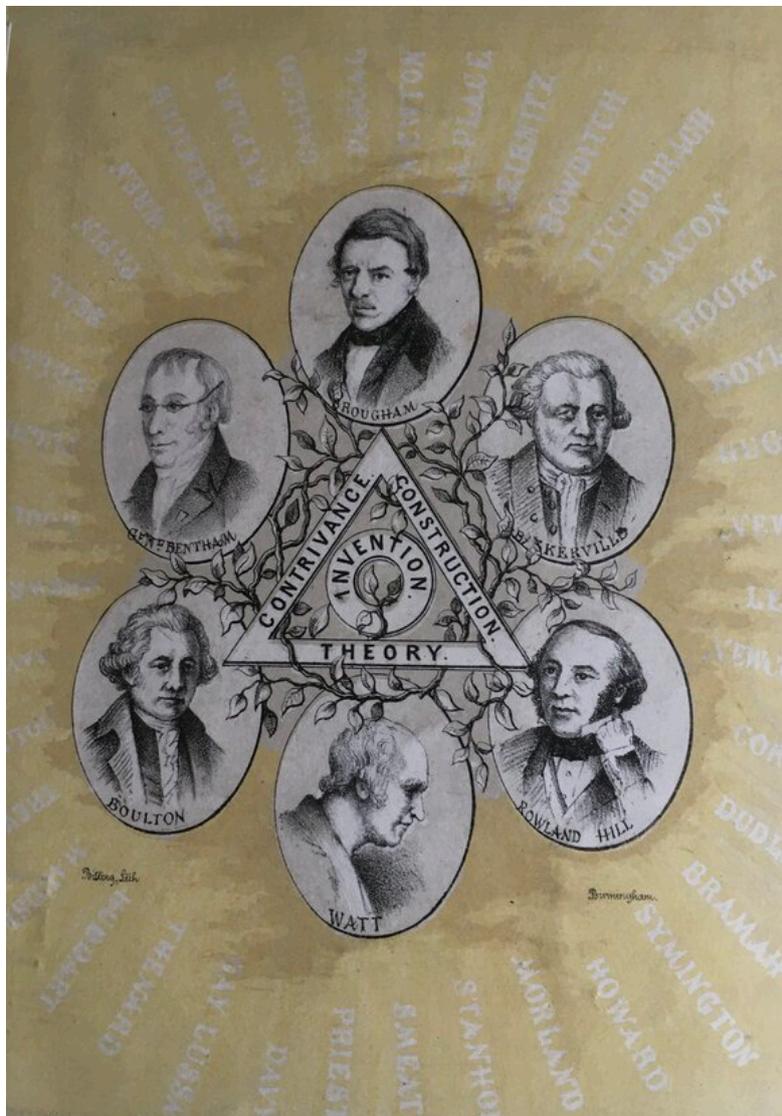


Image: Darby collection

The word “Invention” within a roundel is surrounded by the words “Theory Contrivance Construction” contained within a triangular diagram - echoing Richard’s comments on Aristotle’s description of the process of artistic creativity in the Pamphlets he had written for the Society of Arts in November 1850.

Six portraits extending from leafy branches surround this central motif. Lord Brougham was seemingly given precedence at the top, presumably for his long and sustained support of patent law reform; below him are featured

“Gen. Bentham” and the 18th century Birmingham resident and printer (John) Baskerville, two of Richard’s “hero’s”; the lower portraits are of Birmingham’s Boulton and Rowland Hill with a surprisingly benign-looking Watt dividing them below. A sunburst surrounds these portraits, which upon close inspection turns out to be a roll call of eminent scientists in various fields (including astronomy, physics, chemistry, mathematics), philosophers, engineers and, of course, inventors. Many of the names (listed below) are well known and/or readily identifiable (notwithstanding some misspellings). Unfortunately, the size of the ticket had been reduced to fit into the book and some names were cut short; I have hazarded a guess (in italics) at two of these and at some of the other less easily identifiable names:

Papin, Wren, Copernicus, Kepler, Galileo, Pascal, Newton, Laplace, Leibniz, Bowditch, Tycho Brahe, Bacon, Hooke, Boyle, Huger? (*Huygens?*), New?, Le?, Newco? (*Newcomen?*), Cort?, Dudle? (*Sir Robert Dudley?*), Bramah, Symington, Howard (*William Howard?*), Morland (*Samuel Morland?*), Stanhope (*Charles Stanhope?*), Smeaton, Priestley, Davy, Gay-Lussac, Thénard, Huddart (*Joseph Huddart?*), Trevithick, Tolland (*John Toland?*), Fulton (*Robert Fulton?*), Rolle, Bell (Alexander Graham Bell, who dominated all attempts to search online, was only five in 1852, but a deeper search into the digitised 1885-1900 edition of the *DNB* revealed a biography of *Patrick Bell* (1799–1869) “one of the first inventors of the reaping machine”, who seems a likely contender in the light of Richard’s altercation with the “Yankees” at the Great Exhibition).

Although Richard may have been the driving force who “got up” the dinner, he was clearly assisted by Sturges, a fellow committee member and the Secretary of the Birmingham Patent Law Reform Association. In the later adverts for the dinner those wishing to buy tickets were asked to apply to either Sturges or Richard. The cost, seven shillings, was the equivalent of about £40 in 2021 (purchasing power (RPI)/relative average earnings £312 - [measuringworth.com](https://www.measuringworth.com)).

As the ticket indicated, one of the Birmingham MPs, the self-important and usually loquacious G. F. Muntz, had accepted an invitation to preside at the dinner. By mid-October the adverts named other confirmed attendees: some other local MPs Scholefield, Geach, Spooner and Newdegate; the reform Act’s draftsman Webster; “Professor Woodcroft”; and the Birmingham solicitor William Wills, who had played a prominent part in *Rescuing Richard*. On 23rd October the *Birmingham Journal* contained a short article on the impending dinner and added the patent lawyer Hindmarch to the other “... London, gentlemen well versed in the workings of the patent law” intending to attend. The mayor of Nottingham had received an invitation according to the *Nottinghamshire Guardian* dated 28th October, he was not the only civic

or other dignitary to receive one. At the dinner apologies were read from a number of eminent individuals including: the 1851 Select Committee witness and circular respondent Sir David Brewster; Rowland Hill; Professor (Charles) Babbage, the mathematician and mechanical engineer credited with the invention of the first computer (with allegedly some input from Ada Lovelace, a daughter of Byron); Professor Eaton Hodgkinson, Fairbairn's collaborator on tubular bridges; Sir C(harles) Fox, the railway engineer (the firm of Fox and Henderson had also constructed the Crystal Palace); Apsley Pellatt an MP and glass manufacturer (who in 1843, at a meeting of the Institution of Civil Engineers, had reported that he had seen dust-pressed buttons being made with one of "Mr. Prosser's machines" in a discussion concerning brick making - *The Dust-Pressed Process* p.176); "Mr. R. H. Edge of Globe Works Manchester" has proved elusive (but Richard Roberts' engineering works in Faulkner Street, Manchester were called the "Globe Works").

The press later reported that about 140 diners in total had attended the dinner, however, surprisingly, these did not include Woodcroft who "was kept in town by an imperative engagement" (perhaps related to his impending appointment to a position within the new office of the Commissioners of Patents). In addition, the MPs Newdegate and Geach found themselves unable to attend after all; the former due "principally" to parliamentary business and the latter as he "had engaged to be present at the Free Trade Banquet at Manchester".

The Manchester banquet was organised by the Anti-Corn Law League (a national body, based in the city, which was by then nearing dissolution - its objective having been enacted in 1846). It had originally been due to take place later in early November, but in mid-late October its date was also to be fixed for 2nd November. Whether this unfortunate clash of dates resulted in other non-attendance at the Birmingham dinner besides Geach is unknown, but the greater "pull" of the northern city's event can be judged by the number attending - about 3,000 according to press reports, including numerous other MPs. Manchester and Birmingham were acknowledged industrial rivals, but it seems rather far-fetched to speculate that the late change of date by its great northern competitor was a deliberate ploy to divert attention from Birmingham's, comparatively little, patent reform celebration.

I have found no press report of any celebration of the passing of The Patent Law Amendment Act taking place in Manchester, notwithstanding the prominence of its reform association in the campaign. In fact, the only reports found for another such celebration were six short ones, in some of the London press, of an earlier dinner held on 28th October at the Belvedere Tavern in Pentonville by the National Patent Law Amendment Association.

The number of diners is unknown but it appears to have been a much smaller affair than the Birmingham dinner, the only recognisable name mentioned was that of the Association's secretary, (Frederick William) Campin, a patent agent who had been an 1851 Select Committee witness.



*Royal Hotel Temple Row Birmingham c1800
Drawn by T. Hollins & engraved by F. Eginton*

The dinner held in the assembly room of Birmingham's Royal Hotel, then in the ownership of Mr. Dee, would appear to have been a grander occasion in comparison to that in the Belvedere Tavern and, if not in magnitude, also to that taking place on the same evening in the Free Trade Hall in Manchester. The audience dining in Birmingham was, perhaps, more select and may have dined better than the huge crowd attending Manchester's "Banquet" - *The Illustrated London News* dated 6th November commented that "the banquet reflected but little honour on the stewards or the caterer" in its short account; *The Times* dated 3rd November was equally disparaging ("a mere dessert"). Much of the London press and that, of course, in Manchester reported at great length on the speeches heard in the northern city as, to a lesser degree, did the rest of the national press - except for Birmingham's, which ignored it.

The *Birmingham Journal* (on 6th November) and *Aris's Birmingham Gazette* (on 8th November) both reported at length on the dinner in their home town, as did the *London Daily News* (on 4th November). On the whole the rest of the national press merely briefly noted that the event in Birmingham had

taken place. However, *The Illustrated London News* dated 13th November, in fact, devoted more column space to it than it had for the “Free Trade Banquet” and its report was accompanied by the image below.

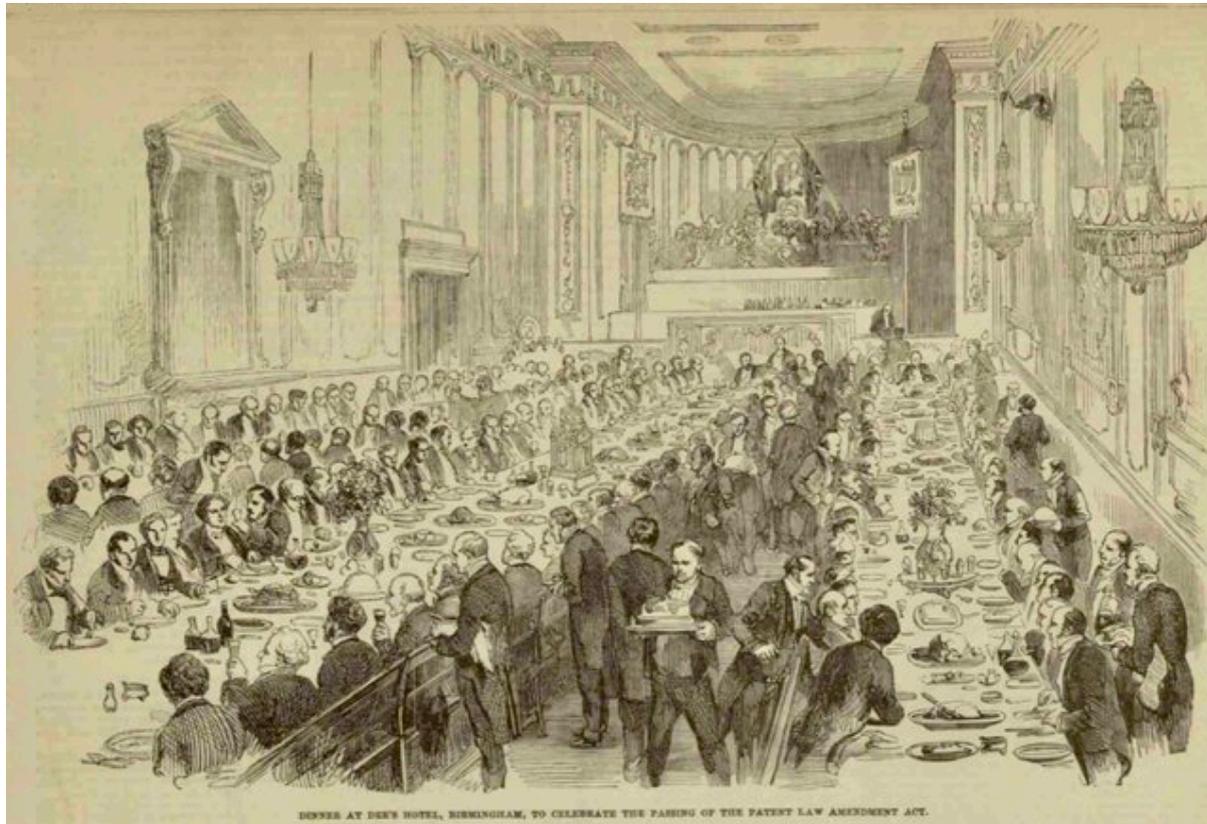


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The following account of the proceedings at “The Emancipation of Inventors” dinner is largely taken from the report in *Aris’s Birmingham Gazette*, which commented that: “The dinner was served by Mr. Dee in his usual excellent style, and the wines were of a high class”, an endorsement that was echoed in the report in *The Daily News*.

As indicated in the adverts, Muntz presided over the dinner as chairman. His fellow MP Scholefield acted as the vice-chair. Amongst those named as in attendance were a number of Birmingham Aldermen and Councillors including Baldwin (Richard’s neighbour in Kings Norton) and various other members of the Birmingham Patent Law Reform Association, including Richard, Aitken and Sturges. Another familiar name was that of “Mr. Selby of the Tube Works, Smethwick”.

As was usual, the speeches were preceded by toasts, not only to the Queen, but to Prince Albert as well, (proposed by Muntz) and then to the subject of the dinner itself, “The Emancipation of Inventors”, (proposed by Scholefield).

Muntz then responded to the last toast, speaking, as was his wont, at length and with much self aggrandisement: he had accepted the invitation notwithstanding the heavy demands on his time of Parliament and other business; he, from his own experiences, was only too well aware of the importance of the recent Act as “Few men felt more deeply the imperfections of the old Patent Law” than he. Although his story was already “notorious”, he recounted the travails and expense, “£10,000”, he had incurred in defending his famous patent and the savings, “£200,000”, that had accrued to the public benefit as a result of his invention - an invention to which he would not have committed without the incentive of a patent. (He did not give any indication of the enormity of the wealth by which he had profited from “Muntz’s Metal”.) Having expounded on the vicissitudes of the poor inventor, including Watt’s dependence on the financial support of Boulton, he welcomed the reduction in cost introduced by the Act, which enabled an inventor to secure a patent for three years for just £25 (sic). He ended his address by informing his audience that:

He took all the pains he could when the bill was passing the House of Commons to amend and improve the law. He had made several suggestions, some of which had been adopted, but others had been rejected, for it was difficult to make persons who were not practically conversant with the subject understand the real bearing of the different details....All he could say was, that it would be gratifying to him if he could assist in still further improving the law. His advice had been asked on the subject when the bill was passing through Parliament, as that of one whose opinion would carry weight on such a question. He did not hesitate to give his opinion. He thought that a great improvement was effected in the patent law of the country, and if it was thought desirable to carry still further the emancipation of inventors, or to assist in realising the present advantage which had been gained, he would be ready to devote his best attention to the subject when the time arrived.

The “hon. gentleman” then “resumed his seat amidst loud cheers” - some eyebrows may have been raised when Muntz made his closing remarks without reference to the contribution of his Parliamentary colleague, whose portrait headed those on the reverse of his invitation - Lord Brougham.

Mr. PROSSER next spoke to the toast. He said the emancipation of inventors was no doubt one of very great importance, but he might still say to inventors, "There is a good time coming, boys, wait a little longer" - (cheering).

Might there be a hint of his Welsh ancestry in Richard’s opening remark? If Richard had actually used the term “boyos” it was ignored by the press. Whether the likes of Muntz appreciated being addressed as a “boy” must be doubtful.

The next part of Richard's speech appears to have lost some of its clarity in its transcription (below) by the *Gazette's* and other reporters who tried to keep up with him. However, it is clear he inveighed at some length against the pre-Act English patent system (including its lack both of recognition of property rights in invention and of the need for a 'complete' specification at the time of grant of a patent). Unfavourable comparisons were made with that of other countries. The reference to a patentee previously having up to 18 months to produce a specification may be to the procedure in much earlier times.

The patent law of England was now, and always had been, peculiar in its character. It differed from that of every other nation in this respect, that in England the patentee had two, four, six, fifteen, or eighteen months to specify what his invention was before he could obtain a patent for it. Some patents had never been specified, and up to this day it was not known what those patents were granted for. The law of all other countries required the inventor to come with a complete specification, and to declare that he wanted a patent for it; and this was made a matter of record. But in England this could not be done, for inventors were supposed to be so stubborn that it took a long time to get an invention out of them. They consulted agents and parties who said to them, "wait, don't specify, but take out a patent." The time for specifying was now six months, and this was obtained by fraud. The inventor who wanted to take out a patent for England was advised to say that he wanted one for Ireland and Scotland too, by which means he got six months, whereas if he said he wanted one for England only, he got but two months. At any time during the six months could say that he had altered his intention, and would only have an English patent. It was evident that the inventor was entitled to some sort of reward for his invention, because all civilised nations granted patents to protect invention. In England the practice of granting patents commenced in the reign James, and they were granted for fourteen or fifteen years. The American patent law dated from 1790. Since that period there were 15,000 patents granted in that country, and Congress did everything that it possibly could to encourage the arts and sciences by securing for a limited time to inventors the exclusive right to their inventions. The French law dated from 1791, and it stated that inventors had an indisputable right in their discoveries, and that protection ought to be afforded this species of property.

The subsequent interjection is of interest in that Richard identified both Earl Granville, the chair of the 1851 Select Committee (and introducer of the first reform Bill), and one of the witnesses, the MP and telegraph entrepreneur, Ricardo as opponents of patents in principal. The latter was attacked with some gusto.

In 1851 Lord Granville brought in a bill to amend the patent law in this country, but he stated that he had a great objection to patents; and Mr. Ricardo, who had from fifty to sixty patents, and secured at cost of something like £120,000 the patent to the electric telegraph, told the Committee of the House of Commons that patents were bad things. If they were such bad things, let Mr. Ricardo give them up. Let him give up the electric telegraph patent, and messages would be sent cheaper than they now were.

Richard then admitted that he had that afternoon availed himself of Ricardo's telegraph system to enable him to impart a valuable piece of information to his audience as evidence of the value of the 1852 Act.

The number of patents taken out altogether in England was 15,000, and the average rate at which they had been taken out during the last twenty years was 500 per annum. Now the number of patents taken out during the single month that the new law had been in operation was no fewer than 608 up to four o'clock that afternoon, as he had just learned by telegraphic message. Nothing could be more conclusive and satisfactory as to the value and necessity of that Act than the fact he had just mentioned.

The speech next turned to an issue which had been catered for in the Act, but had not yet been addressed, and which had been one of the main complaints of the reformers - the almost insurmountable difficulty of discovering what had already been patented. In referring to the need for "correct indices", it is, perhaps, surprising that he failed to mention Woodcroft's.

Inventors had been charged since the time Queen Anne no less than £4,500,000 in the shape of fees, and in return for this large sum they had not a single record of any kind, and there was no place where a man could get information respecting the name of any inventor, the date or the nature of his invention. In America there were commissioners and clerks to give this information; in France patents were obtained and recorded for everything, except financial schemes and quack medicines. The specifications were published in seventy-six quarto volumes, the cost of each of which was about £100 and a man could easily find whether a certain invention had been already patented or not. In this country there was no specific publication in which this information was to be obtained, and if a man wanted to obtain it he was directed to the Rolls or Petty Bag Office, but there was no use in going there without knowing the name of the inventor and the date and nature of the invention. Without these the mere title was of no value. The want of correct indices was a source of great trouble, misery, and expense, for thousands of persons had in ignorance taken out patents for inventions

already patented, and thus the time and labour of the inventor and the money of the capitalist who assisted him, were spent to no purpose whatever. This would not occur if there had been correct indices by which persons could get the information necessary on this subject.

If the chairman of the dinner, Muntz, was paying attention to Richard's speech, he may have been somewhat disconcerted by the direct reference that was made to him in the next section. In pointing out that only the patents of successful inventions were litigated, Richard referred to the costly litigation that Muntz had endured arising from the claims of the patentee in 1800 of a metal alloy very similar in its constituent metals to that of Muntz's patented in 1832. Richard appeared to insinuate that there was merit in the claim of William Collins and that his suit had only failed due to poor presentation of the evidence. Was this a deliberate attempt to embarrass Muntz, who had agreed to chair the dinner at the express invitation of the organisers?

There was this peculiarity about patents, that if they were failures no person minded them, and the inventor might keep them himself as long he liked ; but if they were good, then there were several other claimants, who cried out that because they were good they must be old, and demanded the advantage for themselves. If they met with a refusal, they brought the question to a trial, and perhaps showed that the invention was old. In the case of their hon. President, an action had been brought by Collins, and from forty to sixty witnesses had been brought to prove the case for him, but the specimens which had been produced were not well selected, and therefore Collins failed.

Richard then turned to the issue of the need to have all the pre-1852 patent specifications printed, which he pointed out was authorised by the recent Act but was being "objected to on the ground of expense". He produced the three specifications he had recently had printed (Taylor's, Bentham's and the senior Brunel's) and took the opportunity to accuse Brunel, as he had at the Birmingham Exposition in 1849, of unjust enrichment at the expense of the nation (and Bentham). He contended that this injustice would not have occurred if proper indices and printed specifications had previously existed. He quoted the cost of printing each of the three specifications as evidence that the objections raised to this proposal by the (unidentified) authorities were "futile".

The want of proper indices were a source of great cost likewise to the nation. He had brought with him three specifications which he had got printed, two of them for the first time. One was that of Elizabeth Taylor, dated in 1761, the second was one of General Bentham, dated 1793, and the third was that of the late Sir Isambard Brunel, dated 1801, for block machinery. It never was printed or published before. Brunel

received as his remuneration for the invention the sum of £16,708 8sh. 10d. Now, the patent of Elizabeth Taylor, which was dated more than thirty years before, was for partly the same thing, and that of General Bentham, dated nine years before, for entirely the same thing; and if the question were raised now General Bentham would get the merit and the reward he was entitled to, and Brunel would get nothing. Now, if there had been a correct system of indices this state of things could not exist. But what could they expect but confusion with 15,000 specifications in existence, not one of which was printed by authority. The Act of 1852 authorised the printing of the specifications, but it was objected to on the ground of expense, but when he told them that the printing of two of the specifications which he had referred to, and which were above the ordinary length, did not cost more than 6d. or 7d. each, and that of Taylor did not cost more than 1d., it would seen how futile this objection was.

The conclusion of his speech commenced with so radical a declaration that, it has to be said, only the most optimistic or naive in his audience could have viewed it as a realistic proposition. He continued with a call to inventors to rally together and demand the rights due to them, which had been undeservedly ignored by successive Governments. He cited the well known case of the unfair treatment meted out to John Harrison (1693-1776), the inventor of the chronometer that calculated longitude.

When they get a specification for 1d, and patent for 2sh. 6d. then the time of the emancipation of inventors was come. That time would depend on inventors themselves, and not on any one else. Inventors as a class had no existence. Five hundred inventors in the year constituted but a small and widely scattered portion of society, but now that they rose to be 608 in a month they would take that rank in the scale of society to which they were entitled. The Government of this country was never in favour of inventors. In the time Queen Anne a reward of £20,000 was offered to the person who could discover the longitude within half a degree. Harrison, a journeyman carpenter, who worked on the subject for twenty-five years, made a chronometer which kept the longitude within the terms of the Act of Parliament. He received his reward, but such restrictions were imposed on him that he was worn out, and he died shortly after having received it. Many improvements had been made in the chronometer since 1714 by different makers, but it was still imperfect, for all invention must from its very nature be slow. In conclusion, Mr. Prosser observed that Governments had always been barriers against intellect, and inventors would never obtain their rights until they shamed the Legislature into giving them what was their due.

(The editor of *The Mechanics' Magazine*, the patent agent Robertson with whom Richard appeared to have been on good terms for several years until

the revival of the patent reform campaign, was to make the following comment in his report of the dinner in the issue dated 6th November:

With regard to Mr Prosser's observations we must say we hope for the sake of the inventors themselves that the day he is looking forward to may be very far off for if patents are ever granted for so purely nominal a consideration the market will be glutted and they will become valueless. Let inventors be satisfied with their present position for with some modifications if we are not much mistaken the new law will work well for their interests.)

“Mr. Prosser’s observations were much applauded” according to the *Birmingham Journal’s* reporter.

Muntz was then called upon to make a toast - to Brougham. This he did in a somewhat begrudging fashion according to some press reports, whereas the barrister who responded to the toast was said to have “eulogised” the noble lord for his achievements as a law reformer - not just in the field of patent law.

The patent lawyers Hindmarch and Webster were then called to respond to the next toast to “The Further Amendment of the Law”. Hindmarch was in favour of inventors “agitating” for further improvements to the reformed, but still imperfect, system, including for cheaper costs. The *Gazette* reported that: “The learned gentleman concluded by urging the importance of fully describing the inventions at the time patents were granted for them.” Webster was more circumspect about seeking further reforms too soon and urged caution: “be thankful for what you have got, and take care of it” so as not to risk Parliament retracting any of the gains that had been made “after a hard fought battle”(The *Daily News* 4th November). He agreed with Hindmarch that it was desirable that a ‘complete’ specification should be deposited at the outset of the patent application, but pointed out that there were cases where this was not practicable. He cited Muntz’s invention as an example and, in doing so, may have sought to limit any damage caused to the reformers’ cause by Richard’s earlier comments on the influential MPs patent:

It was an exact illustration of the class of cases in which it would be extremely inconvenient that the complete specification should be enrolled in the first instance as a final document. Mr. Muntz conceived the beautiful idea that the sheet metal either oxidated too much or too little, and that the thing to be discovered was such a combination of zinc and copper as would keep the bottom of the vessel clean, but not more than that, for more would be destructive. How could he effect this unless he had some interval during which he could make experiments on the subject?

Webster considered that the new law, which enabled six months' provisional protection to be obtained for only £5, would be "especially advantageous to the poor inventor" including the workman who required specialist help to perfect his idea in the, by then, more advanced state of "arts and manufactures".

(In *The Mechanics' Magazine* dated 13th November a letter from Webster was published which criticised its inaccurate reporting of his speech in its previous issue. This was the letter referred to in Richard Bissell Prosser's note on the dinner in his copy of "Suggestions for Printing Specifications". Webster emphasised that, contrary to what had been reported, he was very much in favour of a 'complete' specification being deposited at the outset of a patent application if possible. He also corrected Robertson on another issue.)

The dinner continued in a bibulous fashion with five further toasts during which Aitken and Sturges briefly spoke and the MPs Scholefield and Spooner engaged in some banter. One toast, to the iron trade, gave a Wolverhampton iron master the opportunity to expound at some length on the state of his trade to the, surely, weary audience. The final toast, to "The Press", was followed by a few remarks from a barrister, Mr. Rupert Kettle, before "the company separated".

The last toast had been acknowledged by the correspondent from *The Daily News*, the only London newspaper to report the speeches in full. The *Morning Advertiser's* report on 5th November was very short but its Birmingham correspondent did include a longer mention in his report on "The Trade of Birmingham" in its issue dated 8th November in which, in commenting on the obstacles previously faced by inventors, he referred to Richard's continuing commitment to yet further reform:

This evil has, however, been in part remedied, and great hopes are now entertained that the speedy emancipation of inventors from the restrictions even of the improved laws will take place, and for which relief, whenever it may be afforded, the public will be in no small degree indebted to Mr. Prosser, of Kings Norton.

My searches in *The Times* digital archive revealed no mention at all of the "Emancipation" dinner. Many provincial papers carried short reports, some mere announcements. The *Wolverhampton Chronicle* of 10th November was a longer exception, but only because it quoted the local iron master's speech in full. *The North British Daily Mail*, published in Scotland, referred to the "statistics" supplied by Richard and his attack on Brunel in an article on 11th November, which was attributed to a report (untraced) in the "Mining Journal".

However, the news of the dinner did make its way into at least one foreign publication. The issue dated 4th December of *Scientific American* carried a report (below), which in view of some of its inaccuracies, must have been taken at least in part from *The Mechanics' Magazine's* article. Webster would, again, have been disconcerted if he had read it - even more so as Robertson's comments were attributed to him. The final quote in the account of Webster's speech at the end of the article did not appear in the British press or Robertson's comments - they appear to be a complete fabrication. It may be relevant that Richard's New York based brother Thomas was a frequent advertiser in the weekly journal (which was published in the city), was a patentee himself and had, during at least the latter half of 1849, acted as Robertson's New York agent.

On the 3rd of last month, (Nov.) one hundred and fifty gentlemen interested in patents sat down to a sumptuous dinner in Birmingham, to celebrate the British Patent Law Amendment Act. Muntz, the inventor of the metal which bears his name was there, so was Prosser, another eminent inventor, and Hindmarch and Webster, the two able counsellors and authors of works on patents were among the number. Some fine speeches were made, and inventors were congratulated on the boon they had obtained. Mr. Prosser said he was not yet satisfied, he looked forward to the time when patents would be obtained for half a crown, and specifications for one penny, (he forgot that the copyist needs pay as well as the inventor). Mr. Hindmarch spoke sensibly; he advocated the enrolment of the complete specification on receiving the patent. Mr. Webster contended that a mere outline description of an invention was enough when the patent was granted, always allowing six months for enrolment. He considered that with a few modifications the patent law was a good one, and he hoped, for the sake of inventors, that it would be long before Mr. Prosser's hopes were realized. He considered that low fees would make patents less valuable in England; this statement was allowed to be true, and met with a general response. He made a fierce onslaught on the opposition which was manifested against the bill by some members in the, House of Commons, and completely demolished the trashy arguments (like those advanced in the New York Daily Times,) against patents. "The foolish idea," he said, "had got into the head of some men that patents were bad things, this was an idea which should be got rid of by every man who entertained it."

Very little else has come to light of events in Richard's life in 1852. At the beginning of the year he had twice successfully sued the London firm of importers Morrison Dillon & Co for infringing his 1840 dust-pressed process patent (*The Dust-Pressed Process pp. 78/79 and 220/221*). His business now located at the Tube Works in Cambridge Street was still, presumably, predominantly involved with the development of tube manufacture and,

possibly, also the manufacture of tubes for export including to the U.S. where his brother Thomas acted as his import agent. Early in 1853 he was to apply for a patent involving a manufacturing process in an industry which was a new departure for him; an invention which he probably initiated in (or before) 1852.

Chapter 36

Patent Reform - Richard's Role



*Henry Brougham, 1st Baron Brougham and Vaux
by W. Bosley, after Antoine Claudet lithograph, 1849
National Portrait Gallery CC License.*

The Birmingham dinner was the last identified participation by Richard in 1852 in what was to be a continuing debate on patents and further reform of the system for many years thereafter. In January and February 1854 Richard was to enter into a spirited discussion at the Society of Arts with opponents of patents. Richard's premature death aged only 50 on 21st May 1854 was to silence a voice which, as intimated in one of his obituaries, would no doubt have been heard in the later debates if he had survived "to three score years and ten, which marks the appointed span of man's sojourn on earth" (*Aitken*).

In the first issue of its new weekly publication, the *Journal of the Society of Arts*, dated 26th November 1852, there was a report of the Society's meeting on 24th November. Cole, in the chair, reported on the activities of the Society since the commencement of the year and had this to say on the Society's role in the recent reform of the patent system:

It is almost unnecessary to advert to the active part taken by many members of the Society in the proceedings which led to the present change in the laws relating to inventions. The views put forth by our

Patent Law Committee really constitute the most important principles of the present Patent Law.

Cole continued with an acknowledgment that the reform achieved still left “a good deal to be desired”. He continued with a reference to the Society’s long held support for the creation of an “institution” where patented inventions were kept and exhibited as evidenced by the Society’s former annual exhibitions (which, in opposition to Webster, he had previously succeeded in halting due to their expense). Cole announced that inventors had already been invited to submit their recent inventions for the Society’s intended six week exhibition to commence that December. The exhibition duly opened on 15th December; the revived Society had recently benefited from an influx of new members and was in a healthier financial position.

In my researches I have come to the view that the role of the Society of Arts in the 1852 reform of the patent law was not as influential as Cole (in the quote above) appears to indicate and as Harrison was to assert in 2006. The proposals of its Patent Law Committee were similar to those of many of the other bodies lobbying for reform at that time including the relative newcomer, but perhaps more influential, British Association (for the Advancement of Science), which had only existed since 1831. The Society and the British Association had members in common and Webster was a prominent member of the latter as was Fairbairn and Brewster. In terms of press coverage the Society does appear to have achieved the most publicity for its patent reform activities, probably thanks to the influential Cole’s input within the Society and as a publicist.

Of the other London reform bodies, the short lived Patent Law Reform League made some initial impact in the press before there appeared to be some internal dissent resulting in the formation of the National Patent Law Amendment Association, which gained some press exposure for its activities ending with that for its dinner. Some excitement was caused by the formation in October 1851 of the Patent Laws Reform Association instigated by “Henry Maudslay C.E.” (presumably Thomas Henry Maudslay a son of the deceased Henry Maudslay who had worked with Brunel snr. and Bentham) and Joshua Field of the noted Lambeth engineers and machinists Maudslay, Sons and Field, but little else of its activities was reported. As for the United Inventors Association, supported by Webster and the patent agent Spence, it attracted little press attention apart from the criticism it received in the debate between Spence and one of its founding members, Richard and his friend Aitken in *Aris’s Birmingham Gazette*.

The Manchester Patent Law Reform Association received little notice in the London press and, unsurprisingly, that of the later emerging Birmingham

group does not appear to have been mentioned at all in London except, belatedly, thanks to the “Emancipation” dinner.

As to the individuals concerned in the reform, perhaps, as suggested by the acknowledgments shown in the portrait of him on the reverse of the invitation to the Birmingham dinner and by the toast to him during the speeches that evening, Lord Brougham should be awarded the greater recognition. Presuming Richard was the originator of these acknowledgments or, at the least, endorsed them, he must have thought so.

Brougham had met and spoken to Richard at least once, in 1843, when he interrogated Richard as a witness before the Privy Council in 1843 at the hearing of the application to renew Wright’s encaustic tile patent (*The Dust-Pressed Process* pp.213/214). Brougham must have been aware of Richard’s outspoken support for the cause in 1850 and 1851.

Webster, also, was a key player for his measured approach as both a witness before and the guiding legal mind in the consideration of the evidence given to the Select Committee led by Earl Granville, an opponent of patents, and in the drafting of the Act.

Woodcroft’s attitude to reform had been relatively cautious as evinced by him to the 1851 Select Committee; his evidence mainly concerned the issue that he had sought to address in the compilation of his indices of patents (examples of which he produced to the Committee) and for which he gained much publicity from Richard and others in the run-up to the passing of the Act. Woodcroft had published his own pamphlet in 1851 setting out his views on reform which Richard (and Aitken) would have probably regarded as of a “timid Conservative turn”, the description Richard accorded to Spence’s stance in the debate with him in *Aris’s Birmingham Gazette*. Spence had endorsed the reform proposals of the United Inventors Association in the debate - as previously recounted, Woodcroft was one of the UIA’s Council members. Woodcroft’s principal contributions to the achieved reforms were to come later - in their implementation.

On 15th November 1852 Woodcroft was appointed Assistant to the Commissioners of Patents with special responsibility for specifications - an “anomalous title” which did not reflect its responsibilities according to his obituarist Richard Bissell Prosser. In 1864 he was promoted to Clerk to the Commissioners on the retirement of the post’s previous incumbent with whom Woodcroft had, to say the least, an uneasy relationship. As Clerk he was in “sole control of the department” a position which he held until his retirement on 31st March 1876.

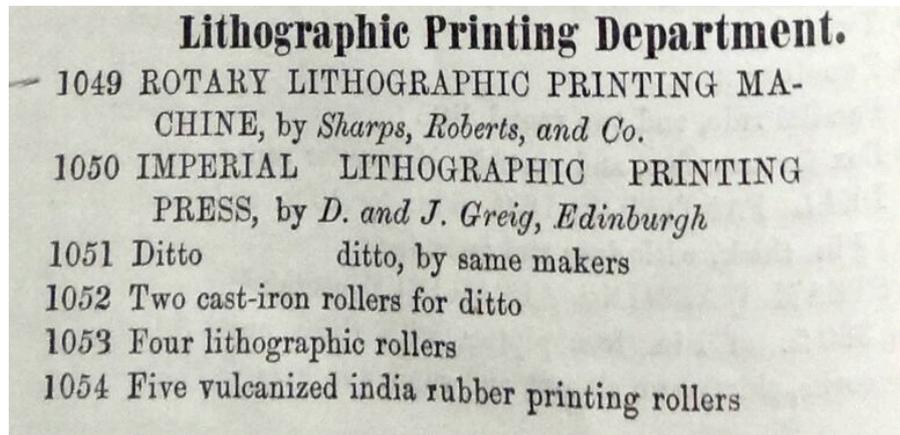
The decision to appoint Woodcroft in mid November 1852 must have been made by the members of the senior judiciary named as the first Commissioners in the Act, which had been enacted over four months earlier on 1st July. It was not a hasty decision and must have been made on recommendation after consultation. Woodcroft would probably have had many eminent and well qualified supporters in the inventing world but perhaps the opinion of the likes of Webster within the legal profession may have carried more weight. Woodcroft was also available to take up the position and was no doubt eager to end his uncomfortable tenure at University College, notwithstanding that he had continued to call himself “Professor Woodcroft”.

Whether Richard had been asked his opinion on the appointment is unknown, but he and Woodcroft appear to have had a close working relationship during the remainder of Richard’s life. However, this was only to continue for another year and a half.

I have decided that any conclusion as to the importance of the role played by Richard in the reform is best left to others, those identified at the outset of this part of the narrative of Richard’s life - his contemporaries and the more recent commentators Harrison and Hewish, and, of course, Beryl Leigh for whom Richard was an “unsung hero” of the reform movement. The latter three’s respective careers at the Patent Office and its Library gave each of them a significant insight into the relevant circumstances.

Chapter 37

1853 - The Last Patent, a Library, a Museum and Lithography



(Image - Extract from December 1854 Sale Catalogue of Machinery etc. at Cambridge Street Tube Works. Reproduced with the permission of the Library of Birmingham: ref. L78.1PRO/279287)

It has to be said that 1853 has proved to be a rather a barren year in my researches for contemporaneous source material evidencing Richard's activities that year.

Financial Background - Inferences Only

It would seem likely that for Richard much of the year was overshadowed by the financial loss incurred as a result of the failure of the anti-weld tube machinery patented in 1850; Richard had invested as much as £20,000 into its development according to his eldest son, Richard Bissell Prosser (2021 purchasing power (RPI) £2.15 million/relative average earnings £17 million - measuringworth.com). There must also have been in his mind the impending and inevitable loss of income which would shortly occur on the expiry of the 14 year patents granted to him in 1839 and 1840.

In addition, while royalties would still have been accruing to him under his lucrative 1840 lap-welded tube machinery patent, the current owner of the Smethwick tube company, Selby, was in severe financial difficulties and was using the business as a cash cow to sustain his extravagant lifestyle and to fend off the creditors of his less successful speculations. In June 1853 the licensees of the patent from Richard were to be successful in the latest of a series of actions against Selby and his unfortunate ex-partner Hodges, who were sub-licensees of the patent, to recover royalties which Selby had

deceitfully sought to avoid paying. The wealthy Hodges had financed the purchase and expansion of the tube business but in 1850 had resigned from the partnership on discovering that Selby, his trusted solicitor, had in fact been defrauding him for many years. In 1853 Hodges, who was also one of Selby's many creditors, was still contractually bound to pay the royalties to Richard's licensees. It would seem probable that, until they received settlement, Richard was kept waiting by his licensees for payment of the royalties they were due to pay to him. (See *Tubes: A Wealth of Trouble* for the full Story.)

Richard's other sources of income in 1853 are uncertain. Whether he still had any involvement in developing nail making machinery is unknown. His 1831 and 1835 patents in this industry had expired and were, in any event, probably sold outright for a one-off payment rather than licensed. This may, also, have been the case later for the new nail machinery introduced from France; the 1839 patent application for this had been allowed to lapse (no specification was enrolled). Likewise his 1839 and 1840 patents for the Chunk and Vesta stoves may have been sold outright; if royalties had been reserved they were probably much diminished (due to waning popularity) and had ceased, or were shortly to cease, to be payable. (See *Rescuing Richard* for the background to the nail machinery and stove inventions.)

It is not surprising that Richard had not attempted to obtain a renewal of his nail and stove patents. Renewal proceedings were very expensive and renewal would only be granted by the Judicial Committee of the Privy Council if it could be shown that the patentee had not been adequately rewarded for the invention during the patent's initial term. In the case of Richard's nail machinery and stove inventions these had probably been overtaken by later improvements in any event. This was not the case for his 1840 lap-welded tube machinery invention, which was not to be replaced for many years, but, notwithstanding the costly litigation over it (much of which had probably been borne by his licensees), the alleged enormous royalties received by Richard may have meant any renewal application by him had little prospect of success.

However, his 1840 dust-pressed process patent, due to expire in June 1854, was a possible candidate for renewal. Having licensed the patent to Herbert Minton in 1840 Richard subsequently sold a half share to the Stoke potter in October 1841 for the sum £500. Richard appears to have remained the joint owner of the patent with Minton until its expiry and would have been in receipt of royalties initially due principally from the production by the Stoke pottery of "Agate" buttons (and, to a lesser extent, tesserae) and latterly from that of tiles. Minton had ceased the manufacture of the buttons in 1848 (probably mainly due to competition from the French button manufacturer

Bapterosses) and the eventual successful application of the process to tiles was only beginning to be fully exploited in the later years of the patent term.

The dust-pressed patent had only been taken out in England in 1840, probably on grounds of economy; to extend the patent to cover Scotland and Ireland would have trebled the cost to about £300. This additional expense had been incurred for Richard's lap-welded tube and other tube patents, but there must have been considerations that deterred the incurring of the extra expenditure for the dust-pressed process.

However, in 1853 a decision was made, presumably early on in the year, to apply for the patent in Scotland and Ireland; the patents were granted on 13th May and 17th August respectively. Both applications must have been made pursuant to a provision in the reforming legislation (The Patent Law Amendment Act) enacted in 1852 which entitled a subsisting pre-reform patentee in any one of the three jurisdictions to apply for the patent in the other jurisdictions at a third of the cost prescribed by the Act for a new patent. The operation of the provision is unclear but the duration of the patent in the extended territory could surely not have persisted beyond the date of the original patent. Whilst the Patent Office fees incurred may have been comparatively trivial, the other associated costs would have been significant for the grant of patents in Scotland and Ireland affording only about a year's continuing protection from what was unlikely infringement in those territories. The more likely reason for incurring this expense was probably to facilitate the renewal of the patent for the whole of the UK.

In order that up to date evidence of the deficiency of the remuneration received by the patentee could be presented to the Judicial Committee, it was not advisable to commence renewal proceedings until about six months before the patent's expiry date.

It is clear that a renewal of the dust-pressed process patent was still contemplated in 1854 either by both or one of the two joint owners as evidenced by the notice dated 1st April 1854 that appeared on 3rd April in *Aris's Birmingham Gazette*. The notice, placed by a London solicitor, was of an intended joint application by both Richard, the patentee, and Minton to renew the patent. Any such genuine proposal by both parties must have been abandoned very quickly as none of the other required notices were advertised and, in fact, it was much too late to commence renewal proceedings for a patent due to expire in just over two months. The possible reasons for the failure to renew the patent are discussed in *The Dust-Pressed Process* (pp.218-222) and in its *An Early Addendum*.

Although Richard must have had concerns at the prospect of the drying up of patent income streams in 1854, it should not be overlooked that he may not have patented all his inventions. Some, as in the case of the nail machinery introduced from France in 1838/1839, may not have been patented to preserve the secrecy of the invention, which was lost when a specification was enrolled at the Patent Office. A prospective buyer or licensee of an invention may have demanded that it remain unpatented, if maintenance of its secrecy was a practical method of securing a monopoly.

In 1853 the Tube Works in Cambridge Street were probably also a manufactory as well as Richard's inventive headquarters. Evidence that he gave to a Select Committee in March 1854 suggested that his business had been supplying tubes to America and France.

The Final Patent

On 5th February 1853 Richard filed a provisional specification at the newly established Office of the Commissioners of Patents for an invention applicable not to a Birmingham or Midlands industry, but one that predominated in its rival industrial hub, that of Manchester. The patent was numbered 1853/316 under the new system adopted by the Commissioners and was titled: "Improvements in the construction of printing rollers used in machines for printing calicoes and other substances."

The filing of a provisional specification was contrary to Richard's often repeated assertions in the past that best practice required dispensing with a provisional specification and the initial filing to be of a "complete" specification. The complete specification for patent 1853/316 was filed on 4th August 1853 and its narrative occupies barely a page of text, it was accompanied by the two drawings which had been filed with the provisional specification which briefly described the nature of the "Improvements". A PDF of the patent can be downloaded from The Patents page on the prossertheengineer.com website.

Why Richard departed from his previously declared policy can only be a matter of conjecture. The invention is not of any complicated machinery but of an improvement to textile printing machinery already in existence. The invention clearly met with some success as the patent was renewed after three years under the renewal provisions of the 1852 Act on 2nd January 1856 to secure a further four years protection, which would have incurred a renewal fee of £40 plus stamp duty of £10. However, I have not traced that the patent was renewed in 1860 for the final seven year extension to which the owner of the patent would have been entitled (at a total cost of £100).

Evidence of Richard's continued interest in the patent's subject was given by Richard's obituarist and friend William Costen Aitken:

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 would not be surprising to learn that Richard had been encouraged to direct his inventive talents to improvements to textile machinery by his friend Bennet Woodcroft, who had recently been appointed Assistant to the Commissioners of Patents with special responsibility for specifications. Woodcroft was himself a patentee of inventions in the field of textile printing and would have had many contacts in the industry from his earlier career in Manchester.

The Patent Office Library Loan

As previously recounted (p.29), on 21st January 1853 Woodcroft had visited Windsor to report to Prince Albert on a proposed library at the Office of the Commissioners of Patents. He had also disclosed an offer by Richard to immediately lend the Commissioners "several thousand volumes of purely mechanical works" from his own library until replacements could be found.

The Prince had taken a considerable interest in the recent reform of the patent system and in December 1852 had summoned Woodcroft to attend on him to explain his duties as a newly appointed Assistant to the Commissioners and the background to his appointment - Woodcroft, apparently, was not sparing in his explanation (Hewish: *The Indefatigable Mr. Woodcroft*).

Richard must have devoted sometime in 1853 to the selection of the 705 books (comprising, perhaps, about a third of his extensive library), which he actually lent to the Office of the Commissioners of Patents that year. A loan which formed a substantial part, if not the majority, of the initial founding collection of the Patent Office Library (POL) which opened officially to the public in March 1855 (some limited access having previously been allowed - Hewish: *ibid*). By 1857, when its first Catalogue was published, the collection still only comprised 1,827 titles - of which Woodcroft had contributed 388.

The credit for the creation of the POL has, in the main, been attributed to Woodcroft and he certainly sought to take the credit for it as already described (pp. 17 and 29). Whether its creation was solely conceived by Woodcroft it is impossible to know but Richard was, at the least, a very willing participant and his contribution, "a bibliophile's dream" (*ibid*. p.13) was by far the most numerous and valuable.

The 1852 Act had provided that the Commissioners should provide a repository for the storage of patent specifications (old and new), which was to be open to the public for search and viewing purposes. Space was found for the repository within the Commissioners' Office in Chancery Lane. One historian did, indeed, suggest that the idea for expanding this new facility had, in fact, emanated from Richard.

In his *London Past and Present* published in 1891 Henry Benjamin Wheatley (1838-1917), in his dictionary's entry for the Patent Office, described how "it occurred to the late Mr. Richard Prosser, of Birmingham,.. that a collection of scientific works would be a valuable adjunct to the printed specifications". Wheatley had been the Assistant Secretary of the Society of Arts since 1879, which may add some credibility to this statement.

The importance of the POL, "the first Free Library in London", and of Richard's contribution to it, was acknowledged in an article in 1898 in *The Standard* dated 9th April occasioned by the relocation of the POL pending the construction of new premises to house it.

...The growth of the Library has been remarkable. In 1852 the Patent Law Amendment Act required that all specifications of letters patent should be printed and published, and open to free inspection. This necessitated the formation of a Library. Mr. Richard Prosser, of Birmingham, who took a prominent part in Patent Law reform, placed at the disposal of the Commissioners of Patents a large portion of his private library. That gift, to which was added the smaller collection of Mr. Bennet Woodcroft, Chief of the Patent Office, was the nucleus of the finest Library of scientific and technical works in the Kingdom.

The reporter's reference to Richard gifting his books was an error. In 1856 the Commissioners were to purchase the collection from the executor of his, supposedly insolvent, estate. The executor was his widow Hannah Somerton Prosser. Woodcroft in June 1865, when giving evidence to a Parliamentary Committee on the Patent Office accounts and as to expenditure incurred (inter alia) on the POL, commented:

There was another set of books, a number lent by Mr Prosser, and used in this office long before the establishment of the Public Free Library; some very scarce and valuable books. He said that if he died without disposing of them they should belong to the Commissioners. He did so die, and the creditors were clamorous. They were purchased in 1856-57, and the amount paid to the creditors.

Earlier in his evidence Woodcroft had confirmed that in 1859 he had been paid £270 (2021 purchasing power (RPI) £28,800 -[measuringworth.com](https://www.measuringworth.com)) for the books he contributed to the POL. Hewish, in an internal report written in

1988 on “The Nineteenth Century and Earlier Collections” of the BL’s Science Reference and Information Service, was to confirm the amount paid to Woodcroft and then added that “no figure for Prosser’s more valuable books is reported”. A search conducted at the BL in May 2022 in the relevant Patent Commissioners’ Journals and annual Reports by ourselves and Steven Campion (Librarian and curator of the British Library’s IP collection) confirmed Hewish’s comment. The Reports were meticulous in setting out details of even the most trivial expenditure; the 1859 Report referred to the payment to Woodcroft that year so the omission of any reference to a payment to Richard’s estate is surprising (the purchase was mentioned in the Commissioners’ Journal issued on 8th August 1856, but the price paid was not mentioned).

Under Woodcroft’s management the collections held in the POL increased enormously. By 1898, according to *The Standard’s* reporter, the scientific and technological works held numbered 80,000 in addition to over 100,000 volumes and boxes containing specifications of patents granted mainly in the UK but, also, elsewhere in the world.

The POL collection remained housed at its new premises off Chancery Lane until 1999, however, by then, what remained of it had become part of the British Library where it is now located at its St. Pancras headquarters within BL’s Business and Intellectual Property Centre. During the 1960s the control of the collection had passed for a short period to the British Museum before being transferred to the BL, during this period some of its books were sold or otherwise dispersed.

The work of integrating the remainder of the POL collection into the BL’s online catalogue is still ongoing. How many of Richard’s 705 books have survived remains to be seen. An online search of the catalogue currently (October 2022) revealed just 28 out of about 900 attributed to the POL.

Hewish’s 1988 report cited above was another fortuitous discovery by Steven Campion in May 2022 and the extract on the next page is from the scanned copy sent to me by Steven. One of the references by Hewish to Richard’s role in the 1854 Small Arms debate is misleading but his comments including that “He [Richard] deserves to be better known” are further evidence of his regard for Richard.

More than a score of other donors are mentioned, among them the patent offices of Washington and Turin, the Franklin Institute, University of New York, the governments of Prussia, Austria, Bavaria and Brazil; among English official bodies, the Record Commissioners, Admiralty, India and War Offices and the Registrar General. There were several private donors, including Lady Bentham, wife of Sir Samuel, who had been head of the naval dockyards. The Delegates of the Cambridge University Press gave 18 works, all of them theological. It would be interesting to know if there had been a general appeal for the new library, to provide such a prompt response. As will be seen, before the end of the century the library was glad to shed some of these contributions, but of the CUPs sacred books one notes that eight were still held in 1881.

The most substantial, and probably the most valuable, in both the scientific and market senses, of these contributions was Richard Prosser's. He deserves to be better known, his connection with the Patent Office amounting to more than a loan of books. Prosser (1800-1854) was a prolific Birmingham inventor and patentee. At the time of his relatively early death he was a member of the official Small Arms Committee and was compiling a compendium of gun patents to be published by the Patent Office. (Only the drawings were published).

More than two hundred of his collection of 704 items were what would now be called rare or antiquarian, ranging in date from the sixteenth to the eighteenth century. (His interest in the history of science and technology was shared by his son Richard Bissell Prosser who joined the Patent Office staff in the 1850s. As a protege and lifelong friend of Bennet Woodcroft, R B Prosser preserved and documented many items now in the SRIS Special Collections. His papers, assembled for a never-published history of invention are now in the BL Department of MSS, his memorial being contributions to DNB, many articles on Birmingham inventors and inventions and an obituary of Woodcroft).

Woodcroft's smaller collection was mainly from his own century, and reflected his interests in steam navigation and the textile industry, inter alia. It did, however, include a 1st edition of the great French encyclopaedia, which remained in the library reserve until it was included in disposals before the creation of NRSI. One puzzling element in Atkinson's 1857/8 catalogue entries is the frequent addition of "Tr. Vol." with a number. Evidently Woodcroft's books included at least 23 volumes of minor items in tract form. These, or the retained portion of them, were probably rebound during the full subject arrangement of the library which was completed c. the Great War period, as no such tract volumes exist now.

Both the Woodcroft and Prosser collections were purchased for the library, the former - not including the patent indexes which were bought separately - for £270; no figure for Prosser's more valuable books is reported.

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The Patent Office Museum

Woodcroft's interview with Prince Albert in December 1852 had also touched on another project, probably, even dearer to Woodcroft's heart than that of the POL. A project which Richard had already advocated in his "Prosser's Pamphlets" circulated to the members of the Society of Arts patent reform committee around the beginning of December 1850.

The Prince had asked Woodcroft for his opinion on the merit of a suggestion made by the Commissioners of the 1851 Great Exhibition that a place should be found where specimens or models of new inventions could be displayed and preserved (to include those that had been donated to the Commission by exhibitors at the Exhibition). Needless to say, Woodcroft enthusiastically supported the idea. Following the interview he lost no time in persuading at least one of the Commissioners of Patents, Romilly (now the Master of the Rolls), to lend his support too, which Woodcroft communicated to the Prince in early January 1853 - together with a suggestion that his own collection of models would be a "good commencement". The Prince subsequently invited Woodcroft to ascertain whether the proposal would be welcomed more generally within industrial circles.

The, no doubt, much flattered Woodcroft was in fact due to attend a meeting of mechanical engineers in Birmingham later in January and extended his visit north by about a week to take in Manchester and Sheffield.

Hewish (*The Indefatigable Mr. Woodcroft*) having recounted the above then described how the impulsive Woodcroft overstepped his brief and incurred royal displeasure. Woodcroft had not been authorised to disclose the Prince's interest in the initiative other than to two named exceptions (as explained hereinafter). However, when Woodcroft was in Manchester the local enthusiasm for the project was such that it was proposed to put an announcement in the *Manchester Guardian* - which resulted in immediate censure for Woodcroft from Windsor when the draft of its content was received.

Not only had the draft announcement used the Prince's name without permission, it had indicated that the proposed museum would be located at the Office of the Commissioners of Patents. The latter suggestion could only have emanated from Woodcroft but was not what the Prince had in mind.

Woodcroft would have been fully aware that plans were already afoot, backed by the Prince, for the acquisition of land in Brompton, Kensington on which to construct a new institution there to "harness Science and Art to raise 'the Industry of all nations'" and to house (inter alia) the collection of the museum that had been opened in May 1852 at Marlborough House, the

temporary home of the Government's School of Design in London. Henry Cole had been put in charge of the School earlier that year and Prince Albert had offered him the use of Marlborough House as its base. The Prince and Cole, who was a member of the revived board of Commissioners of the Great Exhibition (to whose 'museum' committee Woodcroft had been seconded as a new member), had been collaborating on the Brompton scheme, which was to be financed out of the profits of the 1851 Exhibition. Building works were commenced in 1855 on what was to be named the South Kensington Museum (SKM) when it opened in June 1857 but in 1899 was renamed the Victoria and Albert Museum. The SKM, with the School of Design now located within it, was to remain under Cole's management until his retirement in 1873.

In early 1853 Woodcroft would not have welcomed the suggestion that "his" museum might end up within Cole's fiefdom. The two would have become well acquainted through their membership of the Society of Arts and its patent reform committee. As previously described in Chapter 22 their respective personalities would not have made for an easy relationship. In 1850 Cole had put a stop to Woodcroft's attempt to get the Society of Arts to pay for publication of his book on the history of steam navigation. Hewish cited Woodcroft's admitted dislike of Cole. Cole, on his part, was later to be somewhat dismissive of Woodcroft, the much junior civil servant.

The swift response from Windsor to the proposed announcement in the *Manchester Guardian* resulted in an immediate apologetic response and some 'tinkering' to its wording by Woodcroft according to Hewish. The reference to the proposed museum of inventions being located "adjoining the Patent Office" was deleted. However, Woodcroft suggested to Windsor that the museum should still be described as "in connection with the Patent Office" as it would "expedite the object" Prince Albert was seeking to achieve.

The *BNA's* coverage of the *Manchester Guardian* was very limited in 2021 but I found a full transcript of the announcement in two unexpected local newspapers (for Inverness and Brechin) both dated 8th February.

In fact, the announcement was more about the Prince's support for the creation of the POL than for a museum of inventions. The need for such a library was explained and also specific reference was made to the Prince's supposed suggestion that chronological indices of patents should be made available (Woodcroft, no doubt, had his own in mind). The proposed creation of a museum was inserted as a brief addendum. The approval of both initiatives by the Commissioners of Patents was confirmed before the announcement concluded with reference to another endorsement received

at the annual meeting of “mechanical engineers at Birmingham” when a newly convened committee had prepared a formal request to the Commissioners to make available premises adjoining the Patent Office for the “books, machines and models”.

Whether the retention of the concluding wording in the announcement was an oversight or deliberate on Woodcroft’s part is unknown but it cannot have pleased Windsor. His subsequent continued attempts to interfere with the Prince’s (and Cole’s) plans suggest the retention was deliberate. (Image *Inverness Advertiser* © The British Library Board all rights reserved).

PROPOSED NATIONAL LIBRARY OF MECHANICAL AND SCIENTIFIC WORKS.—His Royal Highness Prince Albert has just given another manifestation of his unabated interest in, and desire to promote, the spread of scientific knowledge amongst the people; and especially of bringing within the reach of inventors a knowledge of all that has hitherto been done, so that their inventive talent may no longer be consumed for months or years to no practical purpose, because of some prior invention secured by patent, which not only anticipates, but altogether renders useless, the invention they have spent so much labour and money and time in bringing to completion. With this view, his Royal Highness has proposed the establishment, in connection with the Patent Office, Southampton Buildings, of a national library of all mechanical and scientific works, showing the inventions of all civilized countries from the earliest times. Accompanying this library his Royal Highness suggests that there should be indices, chronologically arranged, of each class of inventions; and also a museum of exhibition of machines, models, diagrams, drawings, &c. We believe we may add that the proposal has received the cordial support of the Commissioners of Patents; and that it has been received with the most lively satisfaction and interest at the annual meeting of mechanical engineers at Birmingham, who formed themselves into a committee and memorialised the Patents Commissioners to assign for these purposes suitable apartments adjoining the Patent Office for the reception and examination of these books, machines, and models.—*Manchester Guardian*.

The Birmingham engineers’ request (a so called “memorial”) to the Commissioners had survived within the POL collection held by the BL according to Hewish (*ibid*) but could not be located on a search made in April 2022. It was supposedly drawn up by the committee convened at the meeting held on 26th January 1853 at which Woodcroft was present. It was signed by Robert Stephenson, Benjamin Fothergill, Joseph Whitworth and other eminent engineers. Whether Richard was a signatory remains unknown.

Birmingham’s was not the only such ‘memorial’ sent to the Commissioners - both Manchester and Sheffield followed suit.

However, the Manchester ‘memorial’ had actually been proposed much earlier in January 1853. Woodcroft had been made aware of it by Fothergill and Whitworth when he had met with them in London. He asked the Manchester engineers to postpone their submission pending completion of the review he had been asked to implement by the Prince, who he did inform of Fothergill and Whitworth’s news.

Hewish cited this intervention by Woodcroft as an example of the “avidity for credit”, which he was to display throughout his career. Woodcroft probably was keen to promote himself as an influential player in the enterprise supported by the Prince, but in the circumstances it was not unreasonable of him to ask the Manchester engineers to bide their time in deference to his royal patron’s interest in the initiative .

Despite all his subsequent manoeuvres Woodcroft failed in his attempts to have the museum located in Chancery Lane. Up against “King” Cole, the Prince’s lead adviser, he had no prospect of achieving this objective. Woodcroft did, however, manage to retain control over the superintendence of the Museum of Patents which was eventually located within a new iron framed structure, soon nicknamed the “Brompton Boilers”, constructed as the first building to form part of the magnificent Museum now known as the V&A.

Wheatley in his 1891 directory was to describe the “Brompton Boilers” as “corrugated iron sheds”. Woodcroft did at least secure a separate entrance to the part of the Boilers occupied by ‘his’ museum following arguments with Cole over Woodcroft’s insistence that admission to it should be free and as to its opening hours. In about 1864 it was to be renamed the Patent Office Museum (POM) in recognition of the fact that not all of its exhibits had been patented. In about 1867/68 the building was dismantled and its iron frame was used to construct a new museum at Bethnal Green where it survives as the V&A’s Museum of Childhood.



Image South End of the Iron Museum (the 'Brompton Boilers'), South Kensington, A. Lanchenick, about 1860. Museum no. 2816 CIS. © Victoria and Albert Museum, London

Following Woodcroft's retirement in 1876 the POM was only to remain as a separate entity located within the SKM until 1883. In that year its collection was formally transferred to the SKM, which had by then acquired a significant science and engineering collection of its own. In 1909 the science and engineering collections within the Museum (by then renamed the V&A) were to be hived off from its art collections and formally named the Science Museum. The transfer of these collections to a newly constructed Science Museum in Exhibition Road, South Kensington was not completed until 1928 where some of the POM's exhibits can still be found. (Source: [A Brief History of the Science Museum](#))

Those objects of the founding collections housed within the V&A in 1909 which survive within the Science Museum today, therefore appear to have emanated from more than one source. In addition to those the V&A/SKM had acquired they included donations from exhibitors to the Great Exhibition, the Marlborough House museum and some of Woodcroft's own collection displayed within the, then named, Museum of Patents.

Woodcroft's own collection was alleged to be large, over 900 items according to Hewish, acquired in some instances in possibly questionable circumstances. Many of his subsequent acquisitions on the part of the POM were very significant and include some of the Science Museum's most historically important exhibits. (See pp. 17/18).

The current (October 2022) *Wikipedia* entry for the Science Museum inaccurately records that it was founded in 1857 "under Bennet Woodcroft"; an assertion which is not repeated on [Woodcroft's](#) own page on the website, which does, however, accurately conclude: "Without Woodcroft it is doubtful that some of the most important artefacts of the first industrial revolution would have ever been preserved."

In 1864 Cole had intimated that others had hoped for greater things than were encompassed by Woodcroft's somewhat blinkered approach to 'his' collection in the POM. In that year a Parliamentary Select Committee was appointed "to inquire as to the most suitable arrangements to be made respecting the Patent Office Library and Museum". The enquiry principally concerned the perceived need for more suitable accommodation for the prestigious Patent Office and its Library than the existing cramped conditions in Chancery Lane. The subject of the proper function of a Museum of inventions was also discussed and it was on this subject that Cole was called upon to give evidence in his capacity as the Superintendent of the SKM.

On 1st July, in his testimony to the Committee, Cole first recounted the enthusiasm for such a museum following the 1851 Exhibition; he referred to the memorials received from great towns, citing Birmingham's in particular. He related how the Committee constituted by the Commissioners of the Exhibition had supported the concept of a museum which "should not be confined to a mere collection of machines and models, but should embrace as complete a library as possible of all scientific and other works relating to inventions" and that its collection of inventions should be international and constantly expanding.

Cole, then, continued by quoting from the proposals for such a museum put forward by "a patentee of considerable eminence, now dead, Mr. Prosser", namely those in the papers Richard had submitted in late 1850 to the Society Of Arts patent reform committee - "Prosser's Pamphlets" pp. 69-71). Cole (inter alia) cited the following section from Richard's "Suggestions for an Act":

That a building shall be provided...for exhibiting specimens of the scientific, mechanical, and agricultural productions of Great Britain and her colonies, and the plantations abroad, and also of all other countries.

In 1864 Cole then continued:

I mention these facts to show that the idea which existed about that time, from 1851 to 1856, was for a Museum of Scientific Discoveries and Inventions. Mr Bennett Woodcroft happened to have a few models...

This rather dismissive reference to Woodcroft was no doubt influenced by the difficulties that Cole was still encountering with Woodcroft over the management of the POM. Woodcroft was, also, still angling for "his" collection to be located within the Patent Office. Much of the remainder of Cole's testimony concerned these and related issues including as to the actual ownership of the POM's collection (Cole did not know - the "whole matter" was "hazy").

In contrast, when asked as to Richard's credentials Cole confirmed he regarded him as "a high authority" and made the statement quoted on the home page of our website prossertheengineer.com: "he invented more things, I believe, than almost any man of his day".

Cole appeared to be intimating that the museum envisioned by the Great Exhibition Commissioners (and Richard) was a far more ambitious project than that being created by Woodcroft at the POM. To what extent, if any, the Committee convened by the Commissioners were influenced by Richard's proposals (if referred to them by Cole) is mere speculation.

Nor would Richard have been the only advocate of such a project. On 30th May 1851 the eminent physicist Sir David Brewster gave evidence to the Parliamentary Select Committee on patent reform immediately after Richard had testified. In his evidence Sir David had recommended the creation of a museum for the deposit of copies of patent specifications and models/copies of inventions old and new.

No doubt there were other such advocates.

In 1859 a third edition of a Catalogue of the then 315 exhibits in the POM was published, of which only one was attributed to Richard: examples of the unsuccessful “anti-weld” tubes, which, unsurprisingly, do not appear to have survived in the Science Museum’s collections. The Catalogue included three entries attributed to Sir Samuel Bentham, all donated by his widow, Lady Bentham, of which one was the model of one of Bentham’s woodworking machines made by Richard and given to her before his death, which we viewed in the Museum’s store in 2018. (*The Bentham Affair* pp. 40-57)

The Lithographic Venture

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.

The above is an extract from Aitken’s obituary for Richard in *Aris’s Birmingham Gazette* dated 27th May 1854. The “headquarters” referred to were the Office of the Commissioners of Patents and, in particular, the department supervised by Woodcroft which included “special responsibility for specifications”.

It is to Woodcroft’s credit, and evidence of his energy and administrative skills, that following his appointment the printing and publication of every new patent’s specification was achieved remarkably quickly after its filing - as directed by the 1852 Act. By the end of 1853 all patent specifications were being printed and published (at cost) within three weeks of deposit and a start had been made on the printing and publication of the pre-1852 patents with those relating to reaping machines and firearms said to have been completed (*Report of the Commissioners of Patents for 1853* - presented to Parliament 7th August 1854).

The firm of Eyre and Spottiswoode, ‘Printers to the Queen’, had been appointed to fulfil the work. The Queen’s Printers were well able to print the

text, but the printing of the technical drawings was another matter or at least their production at an acceptable cost. Lithography, printing from a stone, was a comparatively new process:

Lithography was invented around 1796 in Germany by an otherwise unknown Bavarian playwright, Alois Senefelder, who accidentally discovered that he could duplicate his scripts by writing them in greasy crayon on slabs of limestone and then printing them with rolled-on ink. Because the local limestone retained so relentlessly any crayon marks applied to its surface, even after repeated inking and printing, lithographs (so called from the Latin for stone, litho, and mark, graph) could be printed in almost unlimited quantities. (Colta Ives: Department of Drawings and Prints, The Metropolitan Museum of Art October 2004)

In researching for his later (2000) book on the history of the Patent Office post 1852, *Rooms Near Chancery Lane*, Hewish had found that the drawings accompanying “many of the earliest” of the specifications to be printed were “subscribed “R. Prosser, Lith” and continued “He (Richard) has been described as contractor for the lithography rather than the artist” (presumably citing Aitken). Hewish then explained that this:

*...arrangement incensed William Day, “Lithographer to the Queen” who complained that he had been excluded from tendering and denied work despite lower costs, also that Prosser had failed to do work which he, Day, could have done in London. After this the Office invited tenders in a printed notice. Much of the later lithography was done by the firm of Malby and Son. (Citation: William Day Lithographer Times 25 March 1855 - untraced the date cited was a Sunday on which *The Times* was not published)*

The drawings accompanying the 1853 print of Richard’s specification for his final (calico printing) patent deposited on 4th August that year were indeed subscribed “Malby and Son, Lith.”. It would therefore appear that Woodcroft’s “arrangement” with Richard may have been short lived and certainly not exclusive. The discrepancy, between Aitken’s assertion in his obituary for Richard and Day’s complaint as cited by Hewish, as to lithography costs was not addressed by Hewish and must remain so.

Aitken did, however, suggest that Richard continued to entertain hopes for further commissions from the Patent Office as the quote above from his obituary continued with the following statement: “At the period of his death Mr. Prosser was actively engaged in increasing his facilities for the production of these illustrations.”

The setting up of these “facilities” must have been commenced in early 1853, or possibly even the end of 1852 following Woodcroft’s appointment in November of that year. The costs incurred would have been significant.

On 20th December 1854, seven months after his death, the auctioneers Chesshire and Gibson conducted the sixth and final day of the sale of the machinery and effects of Richard’s business at the Tube Works in Cambridge Street. The first 148 lots sold that day fell under three headings: “Lithographic Drawing and Typographical Printing Department”, “Type” and “Lithographic Printing Department”. They included: a quantity of drawing frames, drawing boards, two mahogany folding tracing frames, T squares, rulers and other lithography devices; printing materials including a large quantity of type and paper, a printing press, a numbering machine, steam warming apparatus (with 380 feet of iron piping) and sundry office effects; three lithographic printing presses (one made by Richard Robert’s firm in Manchester, the others by an Edinburgh maker), several lithographic printing rollers, two copying machines, 26 imperial and three half imperial lithographic stones and sundry associated lithographic materials.

In addition to that of his 1853 patent, just three of Richard’s pre-1852 patent specifications were printed before his death, all in 1853.

In the case of two of these, his 1840 dust-pressed process and lap-welded tube machine patents, all of the associated drawings were attributed, not to Richard, but to a “J. R Jobbins” as the lithographer. John Richard Jobbins (-1866) was based in London and was the lithographer for the illustrations in the *Journal of the British Archeological Society* (obituary in its 1867 issue p.305). Curiously, four of the drawings of the 1840 lap-welded tube machine on the photocopy of the 1853 print supplied to me by the Intellectual Property Office were actually signed by Richard, suggesting that he may, somehow, have been involved in their production. (Images available on Patents page of prossertheengineer.com)

All the drawings accompanying the prints of Richard’s other pre-1852 patents were attributed to Malby and Sons - including those of the Chunk stove also printed in 1853.

Woodcroft had completed the printing of over 14,000 pre-1852 patents’ specifications by 1858 - a remarkable achievement bearing in mind that about 11,000 new patents’ specifications had also been printed since the coming into force of the 1852 Act in October of that year. As directed by the Act, copies of the specifications were provided free to libraries and museums in industrial towns, an initiative which in some instances actually promoted the creation of a town’s first free library. In 1857 Woodcroft had also

commenced the publication of a series of cheap abridgements of patents in various classes. His own indices, which had been acquired by the Commissioners in 1853, had been published in 1854. The Office had commenced publication of its twice weekly Journal by 1854.

The huge volume of printed material issuing from the new Patent Office was probably anticipated by Richard, which would give some credence to Aitken's comments as to the expansion of the printing facilities at the Cambridge Street Tube Works. Richard's death on 21st May 1854 removed one of the competitors for the Commissioners' custom.

1853 - What Else?

As mentioned earlier the *Report of the Commissioners of Patents for 1853* had asserted that two classes of pre-1852 specifications had already been printed and published during the year. Those for reaping machines were all, also, available in one volume which included an appendix compiled by "Mr. Woodcroft from a great variety of authorities" on such machines from "earliest times". The other class of pre-1852 specifications allegedly printed in 1853 related to "firearms, cannon, shot, shell, cartridges, weapons, accoutrements, and the machinery for their manufacture" for which the *Report* stated that a similar appendix was being prepared for publication "shortly".

The *Report*, which was published in August 1854, did not explain that the publication of the firearms appendix had been delayed due to the unexpected death earlier that year of the Birmingham engineer who had been commissioned by Woodcroft to write it. The choice by Woodcroft of his great friend Richard would have been justifiable on its merits: Birmingham's Gun Quarter and the adjoining Black Country was responsible for the manufacture of the majority of the UK's firearms; Birmingham had its own proof house for testing firearms; and Richard was an expert on modern methods of the manufacture of one of a firearm's key components - the barrel, a type of tube.

Richard's researches probably predominantly took place in the first five months of 1854 and further discussion on this topic will be included in the Fifth Story.

Searches in the *BNA* for 1853 revealed a few more snippets of information in the Birmingham press.

In June Richard's name appeared in lists of donors to Queen's College and towards the restoration of St. Martin's in the Bullring - his donation to the

College a modest £5 but that to the church a significant £50 (2021 purchasing power (RPI) £5380/ relative average earnings £42,800 - measuringworth.com).

In October the long list of Burgesses of the Ladywood Ward supporting the re-election of Charles Sturge (1801-1888) to the Birmingham Town Council included Richard's and other names that have appeared in the Stories of Richard's life: his friend and neighbour in Kings Norton - Alderman James Baldwin; one of his opponents in the tube litigation - Henry Van Wart; the philanthropist and anti-slavery campaigner - Joseph Sturge (the brother of Charles); the chartist - T.Clutton Salt. Baldwin, Joseph Sturge and Salt were all members of the Birmingham Patent Law Reform Association.

On December 12th the Liverpool based Milner Safe Company demonstrated the fire resistance qualities of two of its safes in Berkeley Street located off Broad Street and close to the Tube Works. Richard attended together with several hundred others including the Mayor, Alderman Baldwin and several town councillors. Van Wart, Ledsam, Sturges, Martineau, Ufill were well known Birmingham surnames amongst the other attendees named in the Birmingham and Liverpool press reports. Allegedly a £100 note was amongst the papers and valuables which survived undamaged in each of the safes, which had been subjected to intense heat for several hours.

Aris's Birmingham Gazette dated 27th June had carried an interesting announcement - that of the marriage on 1st June "in the city of Brooklyn, America,...of Mr. Thomas Prosser, jnr., to Elizabeth, the second daughter of Mr. Thomas Woodward". Richard's nephew was 24 when he married 21 year old Elizabeth. The announcement is perhaps some further evidence of the rehabilitation of the younger Thomas's father, Richard's older brother, who had left Birmingham in disgrace in 1838.

My searches on the *Ancestry* website (assisted by family trees put on it by descendants of Thomas jnr. and Elizabeth) have confirmed that Thomas jnr's new in-laws were probably of good standing in the then growing and independent city of Brooklyn. Elizabeth's parents were both born in England: her maternal grandfather had been a merchant in Liverpool (a corn dealer) who had emigrated to the U.S. with some of his large family in about 1820; Thomas Woodward, her father, was from a Quaker farming family in Wootton Green (a hamlet since consumed within Solihull) about 13 miles southeast of Birmingham and his mother was actually buried in 1804 in the town's Quaker cemetery near Bull Street. In 1818 Thomas Woodward had arrived in Philadelphia to be followed in 1819 by his father, stepmother and two of his brothers. He became a successful silversmith in New York and subsequently a patentee and maker of gold and silver propelling pencils in partnership with

his brothers; later he and his brother George had a successful import business - source [leadheadpencils](#) blog.

The Prosser and Woodward families, both with connections to Birmingham, resided in Brooklyn by 1853. The import agency founded by Thomas Prosser snr. located in neighbouring New York city was prospering. Not only was it the agent for Richard's tubes, adverts in trade magazines indicate it had also been acting as an agent for the London engineering firm of Maudslay, Sons and Field for some years; most importantly it had recently been appointed the sole agent in the U.S. for Fried. Krupp, the German firm of steel, engineering and arms manufacturers, following Thomas snr's introduction to Alfred Krupp at the Great Exhibition.

In Birmingham the future of Richard's and his family's fortune was looking less optimistic by the end of 1853. Hardly any insights into their personal lives have come to light. The eldest son, Richard Bissell, (15 that year) had been registered as a pupil at University College School in London during 1851 to 1853 - suggesting he was withdrawn before the next year's schooling commenced. The second son, George Rippon aged 13, was attending the Birmingham & Edgbaston Proprietary School on the Hagley Road in Edgbaston (in 1915 Richard Bissell was to donate his long deceased younger brother's school reports to the Birmingham Library).

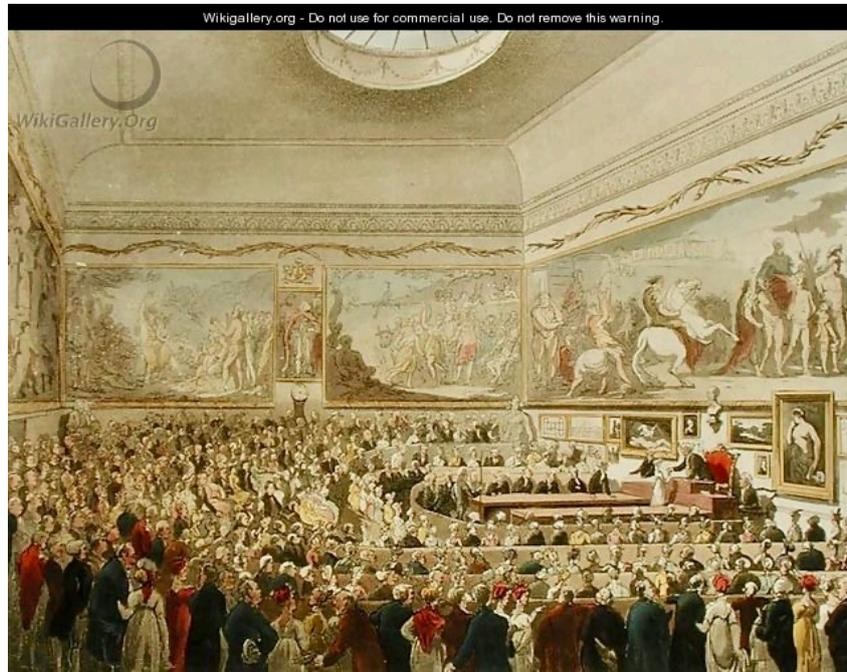


Birmingham & Edgbaston Proprietary School 19th Century print

Richard's other children (his daughters, Eleanor Jane and Marianne aged 16 and 11, and two younger sons, William Henry and Robert Walter aged 10 and 8) were probably receiving their schooling at their home, High House, in Kings Norton.

Chapter 38

1854 Jan/Feb - The Patent Debate Continues



*"Society for the Encouragement of Arts, from Ackermanns Microcosm of London, engraved by John Bluck fl.1791-1831, 1809" oil on Canvas.
Interior of the Great Room during a meeting.*

In January and February 1854 Richard attended at least three of the weekly evening meetings held every Wednesday at the Society of Arts in John Adam Street London.

These meetings, after Society membership and other news announcements were concluded, usually continued with the reading of a paper on some topical matter followed by discussion between the members present. On 25th January the members listened to a paper "On Laws Relating to Property in Design and Inventions and the Effect of such Laws on Arts and Manufacture".

The author of the paper was the barrister and draftsman of the 1852 Act Thomas Webster, whose recently published 62 page pamphlet "On Property in Designs and Inventions in the Arts and Manufactures" had been the subject of an article in the issue of the Society's Journal dated 30th December 1853. The article, in fact, consisted of long quotes from the

commencement of the pamphlet in which Webster had outlined the jurisprudential principles of intellectual property rights. The article then continued with a brief remark on the contents of the remainder of the pamphlet and concluded: "...combating the opinion of Earl Granville, and others, who maintain that no right of property in inventions should be admitted."

In the pamphlet itself Webster had continued with evidence of support for the grant of patents for time limited protection of such rights in inventions. He cited: "eminent jurists and political economists" including John Stuart Mill, Adam Smith and Jeremy Bentham; the radical stance evinced by the "eminent philosopher" and "man of great science and practical experience" Sir David Brewster to the 1851 Select Committee, whose evidence he quoted at length. Brewster was not the only 1851 witness whose evidence was quoted by Webster in support of patents as incentives to inventors and in the public interest - Roberts, M.D. Hill (the barrister), Fairbairn, Mercer and Woodcroft were all cited.

The views of Earl Granville, Romilly, Ricardo and Brunel jnr., all opponents of patents, were discounted by Webster, largely on the ground that their opposition was based on prejudice resulting from the defects of the old system.

Webster then turned to the "opinions of persons of great practical experience in the actual working, and well qualified to judge of the operation, of patents, [which] are peculiarly deserving of attention". He cited four more of the 1851 witnesses: Hodge, May, Fothergill and, finally, Richard - all concurring that patents incentivised inventors.

Richard was also cited for his statement that patents provided a much needed record of invention (successes and failures - the latter as important as the former) and for his support for the retention of the right to patent imported inventions. In his evidence to the Select Committee Richard had referred to the medieval origins of this latter right which was an exception to the law in many other jurisdictions - "our exceptional law is a good law - it was that which brought us all our trades". Having quoted Richard on this point Webster continued his pamphlet with an analysis of the approaches adopted in the U.S. and some European countries and concluded that, in fact, the growing "tendency in all countries is to approximate to the English system".

It seems likely that the meeting of the Society of Arts on the evening of 25th January 1854 was well attended from the extent of the discussions that took place after Webster had read his paper - discussions which extended into

the following two Wednesday meetings and which, together with Webster's paper, were fully reported in the Society's *Journal*.

Webster had been a leading member of the Society and its revival in the 1840s has been attributed to his then Chairmanship. The Society's own role in the patent reform campaign had been led by Webster's usurper, Cole, who had been critical of Webster's more conservative approach.

In addressing his audience Webster was fully aware that it included members who opposed patents in principle as, indeed, the Society had done until Webster himself had engineered the abolition in 1842 of its rule that patented inventions could not qualify for any of its awards or even for discussion at its meetings.

Webster must have spoken for well over an hour in his justification for the existence of property rights in the results of intellectual labour. At the outset he recognised the difficulty of legislating for the protection of such rights and admitted that the new system under the 1852 Act was not "all that could be desired" and that its application would not necessarily be for "unmitigated good". He described the old system that it had supplanted "a disgrace to any civilised community", which understandably had led to the opinions of those who "deprecate any systems of patent laws". He, however, reasserted his own belief that "the recognition and protection to property in intellectual labour" was not only an "act of natural justice", but was in the best interests of "the State" and the furtherance of "progress of knowledge in the highest departments of science" as well as the "arts and manufactures of the country".

Perhaps in deference to the Society's support of both the "Arts and Manufactures" Webster had commenced his long discourse with observations on the subject of copyright in authorship and design (largely ignored in his pamphlet) before turning to patenting of inventions. On the latter topic he again cited Brewster at some length as well as extracts from papers previously delivered by other well regarded members of the Society; he also briefly mentioned the views of Richard (and Hill and the patent agent Newton) in favour of patent protection for imported inventions as deserving of "the greatest consideration".

Webster brought his talk to a close with (inter alia) remarks as to the improved position of the "educated artisan" under the reformed (and cheaper) patent system. This individual would no longer be dependent on "the liberality" of his employer (or be threatened with being held hostage by a speculator capitalist) so as to gain any reward for some improved

mechanism or process he had invented - an invention which might otherwise be kept secret to the detriment of society.

The meeting was chaired by the then Chairman of the Society, Harry Chester (1806-1868) a senior civil servant within the Privy Council Office, who called for a response to the paper from one of the opponents of patents in the audience identifying, in particular, a “Mr. Denison” and asked for his views upon the subject notwithstanding, as Chester inferred, that “the gentleman” in question appeared to be avoiding his eye.

In 1854 the later Sir Edmund Beckett, first Baron Grimthorpe (1816-1905) was a barrister practising under the name Edmund Beckett Denison; he was made a QC that year and was described as a “lawyer, mechanic and controversialist” in his entry in the 1912 supplement to the *DNB*. The entry was not altogether flattering:

Advancing rapidly in his profession, Beckett Denison had by 1860 become recognised as the leader of the parliamentary bar, though his powers of sarcasm and assertive manner stood him in better stead with committees and rival counsel than his knowledge of law.

It might be that his many other interests had impacted on Denison’s application to his legal studies, including his interest in mechanical invention - he was an authority on clock making and the design of the clock in the tower of the Houses of Parliament was attributed to him (as was the specification of its famous bell, “Big Ben”).

Denison was, indeed, an outspoken opponent of patents. He had already debated the subject at length in the letters columns of the Society’s *Journal* in the latter half of 1853; Cole and others had briefly entered this debate but Denison’s principal adversary was “Cosmos”, an anonymous correspondent. Denison had earlier in 1853 featured regularly in the *Journal* in discussions concerning clock mechanisms and, also, an ingenious lock that he had recently invented. He had been congratulated by fellow anti-patent members for refusing to patent the lock, notwithstanding that, as he had asserted, he was confident he could have profited from it if he had - in fact it proved too elaborate to be a commercial success (*DNB*).

Denison’s response to Webster’s paper lasted some 50 minutes according to another speaker at the meeting the following Wednesday. Having confirmed that he had indeed deliberately “averted his head” as the Chairman had suggested, Denison agreed to “make a few observations” on the subject notwithstanding that he had already made his views known in the Society’s *Journal* and “it was always unpleasant to be singing the same song”

There was, indeed, a considerable amount of bombast and sarcasm in Denison's "few observations" - commencing with his dismissal of Webster's approach to intellectual property rights which was too "philosophical and metaphysical" for him to follow and of no application to practical matters. The remainder of his discourse largely disregarded legal principles and was more a recitation of examples that exposed the defects and limitations of the pre-1852 patent system and of the opinions of other well known individuals who shared his views as to patents. Denison's diatribe was interrupted by corrections from the audience on at least three occasions: the *Journal's* report mentioned ones by "Mr Prosser" and "Mr. Webster" and one later by an unidentified "Voice".

The report does not say whether Richard was invited to speak after Denison had finished but he did then address the meeting describing himself as one who had a "a great deal to do with patentees", was one of their number and was a supporter of the patent laws. He continued:

The gentleman who spoke last appeared not to have read up the literature of patents, and was ignorant of everything connected with it.

It may be that Richard was particularly incensed by Denison's views on the part that workmen (Webster's "educated artisan") played in the development of mechanical improvements - Richard being a self-educated artisan himself. Denison appeared to be of the opinion that such innovations were not deserving of patent protection being "more like dodges than invention" (but he contradicted himself when he continued: "though it was very necessary that the workmen should be encouraged in producing them"). He had earlier pointed out that some of the "eminent" groundbreaking inventors had derived little benefit from patents or had even eschewed them and had noted that the annual number of patents granted had increased little between the years 1829 to 1851 (from 180 to 500 per annum) - the point of the latter statement is unclear.

Richard having clarified his correction of Denison during his speech (it concerned an invention of Michael Faraday) proceeded by referring the "ignorant" Denison to a "great and important educational work" he held in his hand, which had recently been published. This must have been one of Woodcroft's indices as he referred to its contents - a list of all 14,359 specifications of patents granted between 1617 and 1851. Richard then pointed out that, thanks to the vast reduction in cost, in the first year under the new patent system more than 3,000 patents had been granted to "no doubt grossly ignorant" people and that, nevertheless, the majority of inventors were in favour of patents provided protection could be "cheaply obtained". He conceded, as he had done before on many occasions, his belief that only one in 100 inventions was actually "good for anything" before

embarking on a repetition of his story of the “Yankee” reaping machine exhibited at the Great Exhibition, which he had proved was not a new invention. When he started to explain that “one Pliny” had described an even better machine ‘thirty years before Christ” the Chairman called for an adjournment of the discussions until the following Wednesday evening.

Before reopening the discussions on 1st February Chester announced that it had been resolved to restrict each speaker to 15 minutes to enable as many present who wished to do so to speak on the “important subject”. He then continued that, although as a general rule an attendee could only speak once on a subject:

...he would first call upon Mr. Prosser as the few words addressed to them by that gentleman at the close of the proceedings at the last meeting could scarcely be considered a speech.

However:

Mr. Prosser felt that it was impossible to do justice to the subject, either in fifteen minutes or an hour, and he would, therefore, respectfully decline to offer any further observations.

There was no shortage of eager participants in the subsequent lively debate.

A Mr. Wordsworth (another lawyer it would appear from a later speaker’s comment - possibly C.F.F. Wordsworth), after praising Webster’s speech, took up the attack on “his friend” Denison who was “...known to be a man of talent, and therefore if he made a speech full of fallacies it was the duty of everyone to endeavour to expose them...”. Wordsworth probably used up the whole of his allotted 15 minutes (it was he who had referred to Denison being allowed 50) in his polite denigration of Denison and in support of patents subject to his caveat that the patent (and copyright) laws still required improvement (at the outset he had regretted that Webster had not alluded more to this - which, in the case of patent laws “nobody understood better than Mr. Webster”).

The next speaker, identified as “Mr. Winkworth”, having announced that he feared his views were held by only a small minority in the audience, spoke articulately, but unconvincingly, against patents and enumerated eight supposed “evils” resulting from the recognition of such property rights.

A Thomas Winkworth was a senior member of the Society and had also been one of the Treasurers appointed in connection with the administration of the Great Exhibition. He, presuming he was the last speaker, was responded to by the “Great Exhibitor” himself. Cole spoke energetically and quoted

Jeremy Bentham and his own longtime friend John Stuart Mill in his support of property rights in inventions.

Cole was followed by an unidentified “Mr. Steer”, who appeared to oppose any form of monopoly. A “Mr. Nesbit” then spoke well in support of patents; he described Denison’s arguments as “a tissue of fallacies”. It would not be surprising to discover that the speaker was the scientist John Collis Nesbit, the headmaster of the London boarding school previously attended by Richard Bissell Prosser, who had been one of the pupils taken on the *Tour of the North* by Nesbit in 1849.

The Chairman then called upon a “Mr, Hasler” who in 1853 had accompanied the Manchester mechanical engineer Joseph Whitworth (1803-1884) on his visit to the U.S.; Whitworth had been appointed a Commissioner to report on the New York International Exhibition. Hasler’s remarks suggest he may have been another lawyer, and/or possibly a patent agent. He was decidedly in favour of patents and praised the American patent system, notwithstanding that it had its faults.

A pro-patents American, a “Mr. Stansbury”, then remarked he had hoped to speak at more length on the U.S. system and, in particular, its procedure for preliminary examination of patent applications already mentioned by Hasler, but the “lateness of the hour” prevented it. The thwarted “Mr. Stansbury” must have been the Charles Frederick Stansbury, whose name appeared elsewhere in the Society’s *Journal*; he was mentioned in a report on the Great Exhibition for the Governor of New York as being a representative of the U.S. Government at the Exhibition.

An adjournment until the following Wednesday was then suggested by the Chairman. This was moved by the patent agent Campin (another 1851 Select Committee witness), who hoped future discussion could be confined to the further improvements still much needed to the patent laws.

A Dr. Camplin interposed a reference to the detailed scrutiny of all patent applications required by the Belgian system before Webster responded to the discussion of his paper.

Webster concurred with the view of Campin as to the subject of any future discussion. He then referred to the three speakers who had opposed patents:

without meaning any disrespect to those gentlemen, he must say a greater mass of fallacy or ignorance upon any subject had never been propounded by men of science

Denison's views, in particular, were subjected to a damning examination by Webster. In describing opponents of patents as either "perverts or converts" he identified Winkworth as one of the latter; Winkworth having, allegedly, previously supported the Society's reform campaign. Webster urged continued calls for further reform - whilst cost had been reduced many other defects still existed which required remedying.

In his closing address the Chairman, Chester, maintained his position was impartial but, nevertheless, considered that the opponents had been "somewhat harshly dealt with" by the accusations made of ignorance and fallacies. He in turn accused the "pros" of fallacies picking out one of Cole's more arresting "illustrations", in particular. Chester concluded with a reference to Richard's comment that only one in 100 inventions "paid the inventor" as evidence that "patent laws did not always prove of advantage".

The meeting having responded to his call for a vote of thanks to Webster for "his very able paper", Chester announced that at the next meeting on 8th February a discussion would be invited "On the Defects in the Administration of the present Patent Law".

The cause of Richard's refusal to contribute to the discussion on 1st February could be ascribed to just pique at being confined to speaking for only 15 minutes; or perhaps it was recognition by himself and other "pros" within the Society that a more measured and less intemperate response to Denison was required than Richard was capable of delivering. Was the lawyer Wordsworth put forward as a replacement for Richard to represent the "pros"?

At the meeting on 8th February Chester announced that the object of the discussion would be to identify improvements needed to the existing, reformed, patent law and to its administration. He then continued that, "so as to render discussion practical", it was proposed to confine it to just four aspects of the existing patent laws: "Cost"; "Preliminary Examination"; "the Nature of the Tribunal"; and "Length of Term and Renewal".

Chester called upon Webster to open the debate but Denison was already on his feet objecting to these subtle changes to the subject matter from that declared at the previous meeting, which he had come prepared to debate with "a long list of what he considered defects in the existing system".

Webster remarked, none too subtly, that "anyone having a knowledge of the subject" would agree that the Council's proposal was a "convenient mode of dealing" with it. Cole made a comment intended to placate Denison by

inferring that perceived defects relevant to the four topics could still be debated.

Denison agreed to withdraw his objection, but declared his intention to object again if he was stopped from speaking about any defects on the ground of irrelevance to the limitations imposed by the Council.

Webster quickly opened the debate on the first head, that of “Cost”. In his opinion the stage payments for a patent (starting at just £5 for six months initial protection) under the new system were “unobjectionable”. When asked by Chester, he did not consider the cost should be reduced further and declared that if, as some advocated, patents were made very cheap it would only benefit the lawyers.

Cole disagreed stating his view that the cost should be limited to recovery of the administration expenses incurred; that even the fees of £25 charged for three years protection was excessive (never mind the total fees of £175 for a 14 year patent) and was “indefensible” as they equated to a tax on invention.

Stansbury, the American, agreed with Cole. He pointed out that in the U.S. it cost only £6 to register a patent for 14 years, which paid for the upkeep of a large establishment including the team of examiners (who rejected three quarters of the applications for want of novelty) and that, nevertheless, there had accrued a substantial surplus of \$200,000.

Cornelius Varley (1781-1873) and an unidentified Alexander Campbell also concurred with Cole, the latter pointing out that it was not unusual for an, eventually successful, invention to remain unrecognised and unprofitable for more than three years, when the renewal fee would be £50.

Denison took his opportunity to speak. Surprisingly, he agreed that if patents were to exist then the fees should be “reduced to the lowest possible point”. However, most of his relatively short contribution on the issue amounted to a denouncement of patents for associated costs. He cited Richard: “Mr. Prosser had said that every successful patent underwent a lawsuit, and was not worth anything until it had.” He cited Richard three more times on the issue of patent litigation costs, including his assertion that “witnesses and lawyers” were the main expense, which, Denison pointed, would not be avoided even if patent cases could be heard in County Courts as Richard had advocated in the past. His fourth and final reference to Richard is intriguing: he alleged Richard had claimed that patent lawsuits “could be made collusive”. Denison gave as an illustration a supposed lawsuit by himself, as a patentee, against Cole for piracy, which he and Cole agreed secretly to settle on terms whereby Cole dropped his claim in return for

some monetary or other benefit with the result that the patent was “established as a good patent all over the kingdom”. Might Denison have been aware of the background to the settlement of Richard’s suit against the owners of the esteemed Royal Worcester Porcelain works in 1845? (See *The Dust Pressed Process* pp. 56-72 and its *An Early Addendum* pp.1-18.) The dust-pressed patent had allegedly become a cause of some embarrassment to Richard; the significance of Denison’s illustration would have been apparent to Richard and, perhaps, others at the meeting. Denison concluded his remarks shortly afterwards.

A short exchange then took place between between the patent agent Campin and Stansbury. Campin commented that the fees charged by the U.S. Patent Office to foreign applicants (\$500 to British and \$200 to other nationalities) must have contributed to the large surplus mentioned by Stansbury. The American responded that, in fact, this was not the case to any great extent as less than 200 of such patents had been granted since 1790. He alleged that the U.S. legislature’s intention was that the fees charged to foreigners should equate to those charged in their country, although, in fact, Britain’s fees were actually more expensive.

A “Mr. Curtis”, who owned forests in Barbados, spoke at some length on the difficulties he had encountered obtaining a patent for the colonies for some “primitive railway” he had devised for extracting timber. He followed his background preamble on this “defect” in the new patent laws with a recitation of the responses he had received to his enquiry from 50 different colonial offices. That Curtis was allowed to depart from the ‘script’ to this extent must have irritated some, if not the majority, of the audience.

Webster, nevertheless, politely acknowledged the importance of Curtis’s contribution and the difficulties of the “colonial question”, which had led to the Government deciding not to grant any patents for any of the colonies “for the present”. As to the issue of “Cost”, after pointing out that Denison had “mixed up” this with litigation costs, he confirmed he believed the £25 payable for three years protection would not exceed what “was necessary” and that “very few successful inventions...would not be taken up by some capitalist in that time”.

The Chairman, Chester, announced the commencement of the discussion on the second head: “Preliminary Examination”.

Stansbury spoke first and disclosed that his previous employment with the U.S. Government had included five years within its Patent Office. He had “no doubt” as to the expediency of preliminary examination but the difficulty was deciding on “a practical system”. He described the problems encountered in

the U.S. Office: delays in considering applications (as encountered by Richard's brother Thomas) notwithstanding that the "scientific" examiners had been increased from just two to six; the added expense of employing these supposed experts; and the difficulty of the examiners' legislated tasks. The last were to verify both the utility and the novelty of the invention. According to Stansbury the "utility" aspect was ignored in practice as the requisite test was "so loose" that unless it was "absolutely noxious" any invention could be found useful to some degree. Verification of the "novelty" aspect was made extraordinarily difficult as U.S. patent law (as reformed by the Patent Act passed in 1836) required that the invention be "new to the whole world" not just the U.S.; no patenting of imported foreign inventions, whether patented abroad or not, was permitted. The examiners had found cause to reject three quarters of the 4,000 applications received in 1852 and Stansbury alluded to a sense of power and a competitive culture that had developed within the team which contributed to this high number of rejections (and delays while all possible sources were scoured). He also alluded to rumours of corruption - examiners being tempted by "improper influences". Nonetheless Stansbury considered the U.S. system "operated tolerably well". (Some of these aspects of the American patent system were discussed in *The Dust-Pressed Process* (pp.27-34) in the description of the passage of Thomas Prosser's U.S. dust-pressed patent application, which was eventually accepted (for buttons only), perhaps, induced by some "improper influence".)

A patentee Frenchman [Pierre Armand] "The Count de Fontaine Moreau" was against any preliminary examination and observed that the "most anxious deliberations" in France and Belgium had found "insuperable objections" to such a process.

Cole concurred with the Count's helpful observations. He was against any compulsory examination as even supposed experts made mistakes. He considered that any investigation (as to novelty) was best left to the inventor, who could always seek an expert's opinion or must accept the risk of not doing so. Cole referred to the "great step" that had been taken in the publication of all specifications that enabled "every man to become his own preliminary examiner".

The patent agent Campin pointed out that lists of patents in their various classes were to be published as an aid to inventors. He added that the "novelty" of an invention should be the only issue - "The best judges of utility were the public."

Webster addressed the issue of what was actually meant by the term "preliminary examination". He believed the U.S. legislation had "attempted a

great deal too much". He did consider, however, that it was "the duty of the state" to offer some form of guidance to deter deluded individuals from wasting time and money pursuing fanciful ideas - their "wildest hallucinations". He was not in favour of compulsory adjudication, but believed that "in merely attending to suggestions in the first instance, many would not proceed beyond the first £5."

Richard then decided to join in the debate and did so at some length. (He had remained silent on the issue of "Cost" - his views as to minimising the fees, probably already well known to many in attendance, were more radical than those expressed by the majority entering that debate.) He had, also, previously made his own views on "Preliminary Examination" well known - he was against it in any format whether as to novelty or utility, other than by the inventor himself. He commenced by aligning invention with authorship; authors being entitled to copyright without investigation. His colourful address continued with illustrations of inventors and others whose ideas had been initially discredited by "experts" - including the discouragement of Watt by his fellow engineer John Smeaton (1724-1792) "one of the greatest men of his age". Richard then had a bit of fun at Denison's expense:

Now if Smeaton had been an examiner, what would have become of Watt's patent. If they had his friend Mr Denison for an examiner upon clocking, no doubt he would make a very good one, and although he had put him (Mr. Prosser) in the County Court, he had no doubt he would become a patentee himself one day.

It would appear that Denison remained true to his convictions and never became a patentee.

The remainder of Richard's contribution to this section of the debate, condemning the concept of examination by "experts" and criticising the U.S. system, is transcribed in full below:

As a patentee, he (Mr Prosser) objected to preliminary examination, because it implied that the person examining was the cleverer fellow of the two; whereas it was always otherwise. When installed as an examiner, a man was very scientific, very anxious, and very uneasy; but as he sat in his chair of Utrecht velvet, furnished at the expense of the country, with a salary corresponding with the chair, he got dozy - and your scientific being, put into an office where there was nothing to do, but much to think of, became a lump of adipose matter, only fit to be sent to the tallow chandlers to be rendered down. He agreed that there should be a preliminary examination, but that every man should be his own examiner. He held in his hand nine and a half pence worth of specifications. He had been a patent reformer for 25 years, but he never thought it would come to that. If a man thought he had made an invention, he would very soon be able to get every specification on the

subject, and then read them for himself. England was the only country where the specifications were published. Much had been said about America. What did they publish? He would give any man £1000 for the Commissioners Report for 1853; and £500 if you got it in June 1854. It would be about 1855. Then, as to the remarks of the examiners, it was not an uncommon thing for inventors to wait nine months before they knew whether they had got a patent or not. In England they paid the money and got it at once; and if there was any infringement of that patent, it was settled by law: it could not be done by conclaves of persons, because where there was no law, there could be no justice.

Curtis interposed some remarks exposing his limited knowledge (which can be ignored) before Denison rose again. Denison concurred with most of the previous speakers' condemnation of preliminary examination for the reasons stated. He reminded the meeting that it had not discussed the defects in the patent system generally, "a vast number" of which would not be "cured" by preliminary examination. He could not see that the state could be expected to provide guidance, as suggested by Webster, if (as he was in agreement with) patents were to be granted "for nothing" - that (guidance) was what patent agents were for and was, also, facilitated by the availability of copious, well arranged indices of specifications.

Winkworth, Denison's fellow opponent of patents, remarked that the next subject the "Nature of the Tribunal" was irrelevant if there was to be no examination. Cole disagreed - one would be required for deciding on patent disputes. Webster pointed out that these were matters for the courts, preferably decided by a judge assisted by competent advisers rather than by a jury. Richard then made a remark in passing to the effect that an aggrieved patentee would not be satisfied whatever the tribunal. Stansbury referred to the right of appeal in the U.S. from an examiner's decision.

Winkworth then suggested to the meeting that, in the light of the previous discussions and the 100 plus defects his "friend Mr. Denison" had hoped to "lay before the Society", that the "friends of patent rights" should agree to a petition being submitted for the suspension of the existing law to enable another measure addressing all these defects to be agreed upon.

Cole quickly stepped in to quash any such proposal and protested that even Denison must agree that the new system, aided by the publication of specifications and "Mr. Woodcroft's" indices, was preferable to the old, even if improvements were still required: "He should be sorry that it should go forth that we [the Society] thought the present system so intolerable that we would throw it on one side altogether."

Chester as Chairman brought the debate to a close; he “spared” the meeting any summing up by himself of the “entertaining” discussions between the opposing debaters. He, perhaps, disclosed his own inclinations when he expressed his regret that it had been impossible during the three evenings allotted to discuss “more fully the numerous defects in the existing law”.

The Society’s Secretary then announced the speaker at the meeting the following Wednesday, 15th February: Richard’s friend, fellow patent reformer and, soon to be, obituarist W.C. Aitken, whose paper was to be on “Ancient and Modern Metal Working and Ornamentation; with some allusion to the newly discovered art of Nature Printing”.

The Society’s *Journal* published on 17th January contained long letters from both Denison and the anonymous “Cosmos”. Denison in his criticism of the Society’s conduct of the debate appeared to suspect that he (and his fellow ‘antis’) had been ‘set up’ by Cole and the other pro-patent members on its Council. He also seemed to suspect “Cosmos” of being part of the conspiracy. The letter from “Cosmos”, in summing up some of the contributions to the debate, congratulated Richard for his “clever and logical speech” showing why there should be no preliminary examination other than the inventor’s own; the abrasive Denison’s contributions were treated to a mocking but elegant analysis. Denison had added a postscript to his letter that he wanted no further discussion on the matter and that it had occupied more of the Society’s time than it should have. Others within the Society must have agreed as an editorial note was appended to his letter that it and that of “Cosmos” had “closed the discussion for the time being”.

Letters from “Cosmos” on other subjects continued to appear from time to time in the *Journal* for over a decade dispelling any speculation that he may have been Richard.

Patents continued to be controversial throughout most of the remainder of the 19th century. The ‘antis’ remained a formidable force and their influence deterred any attempt at any major reform until 1883 when The Patents, Designs, and Trade Marks Act was enacted.

In essence, the relevant provisions of the 1883 Act were concerned with simplifying the procedural aspects of the patent system; the substantive law of patents remained largely untouched. The definition of “invention” (supported by Richard) contained in the Statute of Monopolies was expressly affirmed; similarly the right to patent imported inventions (again advocated by Richard) was retained and was, in fact, enlarged in that the protection granted was no longer to be limited to the duration of any foreign patent. The Patent Office’s fees for obtaining a patent were made more affordable; the

total fees for 14 years protection were only slightly less, £150, but a more flexible instalment payment option was introduced and, at a cost of only £1, initial provisional protection could be obtained for nine months (instead of six).

The 1883 Act did introduce a form of “Preliminary Examination” but it was limited to examination of the application by a Patent Office “Examiner” to ensure it was in the prescribed format and fairly described the invention; any investigation as to its “novelty” remained the inventors responsibility and the grant of a patent was no guarantee that it was. An investigation into novelty by the the Patent Office was instituted under The Patents Act 1902, limited to investigation of specifications of British patents granted within the previous 50 years; in case of any doubt the patent granted included notice of the relevant prior specification. Notwithstanding the investigation, after 1902 the grant of a patent was no guarantee of an inventions novelty and this remains the case under the still subsisting Patents Act 1977, which did address matters relating to the substantive law of patents, including a new definition of “invention” to replace that in the Statute of Monopolies. “Novelty” is obviously still a requirement but is not confined to within the UK - global novelty is required.

The main headquarters of the Patent Office were relocated to Newport in Wales in 1991 and in 2007 it was renamed the Intellectual Property Office. The process of obtaining a UK patent, including examination for novelty, inventiveness and capability of “industrial application” (in effect utility), usually takes about five years and the online application fees total about £1000 according to the Government’s website (2022) - a comparative cost in 1852 would be about £7 (Bank of England Inflation Calculator). If an application is rejected an appeal can be made to the specialist courts within the High Court of Justice which deal exclusively with intellectual property disputes. The initial period of protection granted is five years and thereafter is renewable annually for up to 20 years on payment of annual fees escalating from £70 to £610.

The current application fees for a UK patent are, therefore, relatively inexpensive compared to those incurred throughout the 19th century; even if, as is usual, professional help is required the total cost incurred now (2022) is said to average about £4000 (value about £28 in 1852). Richard would, hopefully, be reasonably satisfied.

Argument against intellectual property rights (rights which are now legally recognised in most countries) is not extinguished and the debate over their justification continues. In particular, the advances made in AI (artificial

intelligence) have raised the question whether AI-devised inventions should be entitled to any form of protection.

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.