

JOHN GEIB: BEYOND THE FOOTNOTE

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ABSTRACT

John Lawrence Geib has remained an often-cited but poorly known builder of keyboard instruments since the eighteenth century. Although historians have noted his patent for an escapement mechanism used on early English square pianos after 1787, little has been written about him, and much of that has now proven to be incomplete or untrue. A letter written by Geib to Benjamin Franklin has recently been made public. It outlines his early years in London and provides the foundation for further research into the remaining records and extant instruments. This information allows one to draw a more complete and historically correct picture of Geib and to place him in perspective with the other builders operating at the time. This article gives new details about his principal invention – the escapement mechanism – and the nature of his business during his early years in London. A full reproduction of the patent is included as an appendix.

Nearly every history of the early pianoforte includes a short mention of John Geib (1744–1819), duly acknowledging his contribution to the development of the square piano action with his ‘grasshopper’ or hammer escapement device.¹ It was to remain a fixture in square piano design into the nineteenth century. Little more is usually said of him. Perhaps the time has come to put a face to this man who was so active in keyboard development at a critical phase in the acceptance of pianofortes into Western culture. This article represents the first attempt to sketch a biography of John Geib’s early life in London (c.1775–1797) before his departure for the United States and should furnish basic material for historians who wish to integrate Geib into a complete picture of instrument builders in the Georgian period.

One can overestimate neither the importance of the development of the square piano in England nor the subsequent improvement to its touch by use of an escapement for the hammer. The basic design of the square piano, clearly derived from the layout of the clavichord, was introduced in 1766 by Johannes Zumpe,² whose close friend Johann Christian Bach was Queen Charlotte’s music master.³ The Queen’s interest in all things musical had taken hold of the imagination of the aristocracy and ensured early adoption of whichever musical instruments were then in vogue at court.⁴

The authors would like to thank Michael Cole, David Hackett, Carl Strange and Lance Whitehead for their assistance in preparing this paper. David Hunt, Melvyn Rees and John Watson provided excellent working copies for reproducing the patent, as well as photographs of several Geib square pianos for examination.

- 1 This date of Geib’s death is often given as 1818. However, according to Gildersleeve the inscription on Geib’s tomb reads: ‘Sacred to the memory of John Geib, who departed this life Oct. 30, 1819 in the 75th year of his age. A native of Staudernheim, Germany, and for many years a respectable inhabitant of this city.’ Alger C. Gildersleeve, *John Geib and His Seven Children* (Far Rockaway: no publisher, 1945; reprinted Salem, MA: Higginson Genealogical Books, 1987), 9. The inscription was reportedly lost in the attack on the World Trade Center in 2001.
- 2 Richard Maunder, ‘The Earliest English Square Piano?’, *The Galpin Society Journal* 62 (1989), 77–84.
- 3 Michael Cole, *The Pianoforte in the Classical Era* (Oxford: Clarendon, 1998), 61.
- 4 In an advertisement announcing his move from Hanover Square to Cavendish Square, Zumpe described himself as ‘Inventor of the small Piano Forte, and Maker to her Majesty and the Royal Family’. *The Gazetteer and New Daily Advertiser* (London) 15711 (Monday, 21 June 1779), 3. The British Library Newspaper Collections, available through Gale Digital Collections, British Newspapers 1600–1900 <<http://www.gale.cengage.com/DigitalCollections/>> (5 August 2009). Hereafter Gale.



The action of these first pianos is now called the English single action. It consists of a wooden button covered with a single layer of buff leather, secured on the top end of a stiff brass wire which is screwed into the upper surface of the tail of each key. As the key is depressed the button travels upward until it connects with the flat bottom of the hammer shank near the hinge point, and the mechanical advantage results in the hammer's being thrown up at the string. With the key fully depressed the hammer requires enough room to fall back from the string without 'blocking' or pressing against the string and damping the note. With single action there is a surprising amount of 'lost motion' (distance travelled by the key before the hammer is set in motion). In a typical English single action, the lost motion may be approximately fifty per cent of the total distance the key travels. Even with this disadvantage the instrument is not difficult to play, and sales of early square pianos kept builders busy.⁵ However, for the performer to produce a complete range of dynamic shading on a single-action piano is challenging and requires development of techniques that may be specific to the square piano the artist is playing at the time. If the jack is made to activate the hammer immediately when the key is depressed but then to move out of the way to prevent blocking, the responsiveness of the action improves dramatically.

John Geib's contribution to the piano juggernaut was the invention and introduction of a spring-activated jack hinged at the key lever and acting on an intermediate lever under the hammer. When set in motion the end of the jack 'hops' off the lever butt with the key depressed, allowing the lever and the hammer to return to the rest point and thus preventing blocking. A piano so equipped is playable with controlled dynamics by even the most inexperienced student, and the rapid and finally universal adoption of the escapement, or English double action, is a testament to its usefulness. The pre-eminence of the piano was solidly established, and the harpsichord was quickly marginalized and then abandoned by the end of the century. There are few examples of such a rapid general adoption of a musical instrument. As the piano was priced in reach of even an average middle-class family, it led the explosive wave of domestic music-making across England and Europe in the late eighteenth century.

Attempts to part the curtain of obscurity surrounding Geib are thwarted by the loss of key evidence. The bankruptcy of Longman & Broderip in May 1795, a devastating fire in 1807 at the Tottenham Court Road premises under their successor Clementi & Company and subsequent fires in 1851, when the business was known as Collard and Collard, and in 1964, when it operated under the name Chappell, have wiped clean almost all records of the principal firm for which Geib built most of his instruments. As a hard-working expatriate craftsman in London, Geib had little need to document his work extensively, and we are left with only a few tantalizing scraps from which to reconstruct his early life. However, recent examinations of extant instruments and those documents that survive serve to shine enough light on Geib's life and work that we can hope to summon him from the footnotes and establish him as a builder of consequence in his own right.

Johann Lorenz Geib was born 27 February 1744 in Staudernheim, a municipality in what is now Bad Kreuznach in the state of Rhineland-Palatinate.⁶ He was the youngest of sixteen children (ten boys and six girls) born to Johann Adam Geib, whose second wife, Sophia Emmerich, was John's mother. His father was Schultheiss, the head of the municipality, responsible for tax collection and local government services. The Geibs were part of an extended clan of farmers and merchants in and around Staudernheim, and at least one other branch of the family would form an established firm of bell casters trading over the continent.⁷

Johann Lorenz and his next older brother, Johann Georg Geib, both went into the organ building trade, probably hoping to elevate themselves above the agrarian lifestyle of the village. Johann Georg remained in the Rhineland-Palatinate.⁸ Although he was associated early in his career with the prominent Stumm family

5 Cole, *Pianoforte in the Classical Era*, 52, 69.

6 Gildersleeve, *John Geib*, 7, 9.

7 Johann Christian Dressler, 'Das Geschlecht der Staudernheimer Geib in Bukowina', in *Bukowina: Heimat von Gestern*, ed. Erwin Massier, Josef Talsky and B. C. Grigorowicz, second edition (Karlsruhe: Arbeitskreis Bukowina Heimatbuch, 1956), no page number.

8 For an image of an organ by Johann Georg Geib see the image at Partenheim evangelische Kirche <http://lenz-musik.de/Orgeln_im_Dekanat_Ingelheim/Orgel_Partenheim/orgel_partenheim.html> (10 August 2009).



Figure 1 John Geib by John Wesley Jarvis, oil on canvas (76.2 × 63.5 cm), no date. Collection of The New York Historical Society, Acc. no. 1967.33. Used by permission

of builders, he appears to have operated independently as well. Several organs built by Johann Georg under his own name are still extant in France and Germany.⁹

9 John Nisbet and Jürgen Rodeland, 'An Introduction to the Organbuilding Tradition of the Middle Rhine', Organfocus.com <http://organfocus.com/members/oberlinger/middle_rhine.php3> (10 August 2009).



Johann Lorenz apparently spent his twenties in the Rhineland-Palatinate building organs and probably clavichords – organ builders often listed both items under their names. The date of his departure for London has until now been unknown, but an extraordinary letter that Geib wrote on 25 March 1783 to Benjamin Franklin casts useful light on Geib's early years. Geib sought a letter of introduction that he might use in emigrating to America. In this letter, he refers to his past just enough to allow some speculation about his training and his immigration to London. The letter below is offered unedited: spelling and grammar are Geib's own.

To The Right Honourable / F Frankling / Ambassador of America / at / Paris
London march 25th 1783.
Honourable Sir

I hope your honour will Excuss my Lieberty of Sending the Folowing. Ten years ago, I left my Nativ Country the Palatinate of the Reihn, in Germany, with indent to go to America, but while on a Eight years Trable in Germany and France, I heard of the great Arts in London, So I resolved to Stay a few years, for to improve if possible in my arts, but while in that time the ware Brock out, also Oblidge to postbon my Journey, and now all thoss Calamiteis at a end, and that in Favour of America, Wich Gives me the more encouragment, for to wish to be a member of Soch a happy Country, but while men in Genral are a frait to throst a stranger with a Capital work, Therefor I take the Lieberty, to Beg your honours Protection, and Recommatation, while I ame able to Shew and prouve any Gentelman your honour Should pleass to Send for inquiring, wat I have performt in this part of the world, wich I look opon but little, but enough to give Satisfaction to every body. I found out Sence in London, that it takes op a long while before a man is Knowing in a Strange Country, without Recommendation, and happens often, that the best Artist are lost for vand of it, therefore I ame most a frait to unter take Soch a journey with out it.

I take the lieberty to inform your honour, that ame acquindet with mainy a genius peopel in Germany, wich by the first Notice would folow me for my part, I have been Broad op a Orgon-builder; Harpsicord; grand and little Pianoforte maker, and made the Same Sence in London. Pedal Harps I made on my own account, Sence hier with Great Satisfaction, Eightteen Month ago I invendet a Flute with Sixty pipes, with a Stopd in treble with therty pipes, unter a little Pianoforte, with great Satisfaction, and cane harly been Seen, without a person Knows Some thing of it. I do not account on this as eny thing worth while, but only wish for a opportunety to Shew my Selves by eny thin of more Consequince. I cane prouve in the mean while Some Capitel houses in London, wich hade Severele time order for to Sent me to St. Petersburg, and I refews it on account of my former unter taking, I Should be very happy to hear that them few Lines mat with a Favorable Reception. Sir I have the Honour to be your most humble Servant

J. Geib

No. 23. upper mary Le bone Street the Corner of gorge Street¹⁰

Importantly, the letter establishes a date around 1773 for his departure from Staudernheim. As this letter is intended to impress Franklin sufficiently to obtain his recommendation and introduction to parties in America, some of its details of Geib's life at this time are probably exaggerated. However, his comments concerning the importance of recommendation and a good reputation later proved to be true. In a lengthy advertisement placed in *The Evening Post* in 1805, Geib discussed the damage that sneering and insinuation can do to a maker's career. He defended his skills and status by describing himself as the 'inventor of the first patent pianofortes in England . . . sold in the name of Longman and Broderip' and

10 This is a slightly revised version of the letter which is transcribed in full at The Franklin Papers at Yale <<http://franklinpapers.org/franklin/framedVolumes.jsp?tocvol=39>>, ed. Ellen R. Cohn and others (3 August 2009), after careful scrutiny of the original. We thank Ellen Cohn of Yale University for providing a copy of this letter, courtesy of the American Philosophical Society, and for discussions on its interpretation.



includes a letter of recommendation from Abbé Vogler, then the Director of the Royal Academy of Music in Stockholm.¹¹

By stating that he had travelled for eight years in Germany and France, Geib probably wanted to present himself as an independent gentleman. It is far more likely that he came to London by way of France and the journey was relatively short. A square piano bearing Geib's name on the name board and dated 1777 London establishes him as living in the city by that date, and probably at least a year earlier if he were to have set up some form of shop. Whether or not he actually intended to travel to America, he states that he was in London and had delayed his plans when war broke out in 1775/76. Thus he was in London as a resident by the mid-1770s. His description of being 'brought up an organ builder' is consistent with his opportunities as a young man and may suggest some family connection to such a business, though this is not established.

The letter is in a neat hand with relatively well formed words, as might be expected from a young man of means educated in Germany. His mastery of the English language was as mature as it would ever become, as later letters written in America are similar. Benjamin Franklin was the best-known American in Europe at the time, so writing to him in Paris would have seemed natural. That the letter is addressed to 'F Frankling' shows that Geib had only a vague idea of who Franklin was. The papers of the day would have carried the name spelled correctly and with the correct first initial. Franklin is not known to have responded to the letter.

Other information about the state of the pianoforte industry at the time of Geib's early career can be learned from this letter. The reference to St Petersburg implies that builders were being actively sought to promote a pianoforte industry in Russia. Eight European artisans ultimately established themselves there between 1800 and 1810, and the industry there would grow substantially in the nineteenth century.¹²

Geib's description of the piano and organ combination, the 'organized piano', was of an instrument in vogue with both builders and the moneyed classes. Prices ran from two to two and a half times those of a simple pianoforte.¹³ There are no known extant harpsichords or grand pianofortes by Geib, but an advertisement in *The World* of 1794 lists three organized pianofortes, four grand pianofortes, two portable grand pianos and ten square pianos of various kinds, indicating that at least some grand pianos were produced.¹⁴ On his establishment in London, Geib anglicized his name to John Lawrence Geib, the form that he would use for the rest of his life. On his letter of denization of 11 February 1792 he recorded his name as Johannes Geib, giving no middle name.¹⁵

Several myths that have evolved about Geib's start in London are worth addressing. Warwick Cole has successfully dismissed the notion of 'Twelve Apostles', a supposed group of builders who arrived together from Germany to teach the British the art of pianoforte building.¹⁶ The tale apparently originated in Edward Rimbault's history of the piano, written in 1860. As Rimbault wrote: 'At length, about the year 1760, many ingenious German mechanics left their country and came to England in search of employment as pianoforte-makers; this gave the instrument its first impetus. A party of twelve travelled hither in one company, and obtained, from this circumstance, the appellation of the "twelve apostles".'¹⁷

11 *The Evening Post* 1103 (New York, 7 June 1805), 2. The authors are grateful to Michael Kassler for bringing this advertisement to their attention.

12 Anne Swartz, 'Technological Muses: Piano Builders in Russia, 1810–1881', *Cahiers du monde russe* 43/1 (2002), 119–138.

13 Darcy Kuronen, 'Where is the Princess's Piano?' *Newsletter of the American Musical Instrument Society* 35/1 (2006), 10, 11.

14 *The World* (London) 2341 (Saturday, 28 June 1794), 4. Accessed through The British Library newspaper collections, available through Gale (April 2009).

15 The catalogue record for this item can be viewed at The National Archives online, UK, c97/1 <<http://nationalarchives.gov.uk/catalogue/displaycataloguedetails.asp?CATLN=7&CATID=-541604>> (May 2008–August 2009). Denization was a process by which foreigners received certain rights of English citizens, including the right to hold land. It preceded processes of naturalization.

16 Warwick H. Cole, 'The Early Piano in Britain Reconsidered', *Early Music* 14/4 (1986), 563–566.

17 Edward F. Rimbault, *The Pianoforte, Its Origin, Progress, and Construction* (London: Robert Cocks, 1860), 131.



Rimbault advanced many other theories and conjectures that would later be reprinted repeatedly as fact. Curiously, he does not immediately list Geib among the twelve apostles and in fact names no one specifically. Later historians in the nineteenth and early twentieth centuries would seize on populating this list with possible candidates, including Geib, as either members or apprentices. The reality is that only Zumppe somewhat fits the timeline, and the other builders arrived over the following fourteen years.¹⁸ In any case, Geib arrived on the scene after the square pianoforte was well established, and extant early examples by him bear few innovations until 1786.

Another myth is that Geib went to work for Burkat Shudi. Michael Cole has uncovered enough of the inner workings of the Broadwood–Shudi firm to dispel this notion as well.¹⁹ Donald Boalch was the first to mention such a connection,²⁰ but on careful examination his references fail to link Geib to Shudi in any way. Broadwood never mentions Geib in any correspondence, and the 1777 piano establishes Geib as an early independent maker well before Broadwood made his first pianoforte. All evidence points to Geib's arrival in London with means enough to be self-sufficient, beginning as an independent builder and selling into such markets and firms as presented themselves.

Although John Geib did not come from a family of instrument makers per se, he did instil the tradition into his own family. He married Rebecca Shrimpton on 20 August 1779.²¹ Gildersleeve states that John and Rebecca would go on to have ten children, all born in London, of which seven would survive to adulthood. The twin boys John Jr and Adam were born in 1780, George in 1782, Elizabeth in 1787, Mary Ann in 1790, William in 1793 and Sophia in 1794. The four boys all played a role in the keyboard instrument business in America following their emigration in 1797. It is also possible that Geib's daughters contributed to the business in some way. Although there is at present no evidence with respect to Geib, the wives and daughters of other instrument builders in London at this time are known to have assisted with the household economy in one way or another. Their roles included keeping accounts, making the delicate parts of organs and adding the overwinding to piano strings.²²

A miniature of Rebecca made in 1787 with the infant Elizabeth is useful in establishing Geib's social standing at the time. Rebecca's portrait is done by a sophisticated but formally untrained artist and is an example of good-quality primitive art. Rebecca is dressed in the cap and gown of a solid middle-class lady and the chair is reportedly London-made.²³ Such a miniature would have cost about £3 at the time, a luxury that a respectable merchant might have had made for his lady. It suggests that at this point Geib had reached a middling level of income but was by no means rich. It may have coincided with a significant improvement in the family finances thanks to the patent of 1786, to be discussed below.

At some point in the late 1770s or early 1780s Geib began his long and lucrative association with Longman & Broderip, the firm that emerged from Longman, Lukey & Broderip after Lukey died in July 1776 at the relatively young age of thirty-six.²⁴ The emergence of the firm as a distributor of instruments made under

18 A more detailed discussion of the biographies of those whose names have been included among the mythical twelve apostles can be found in Michael Cole, 'The Twelve Apostles? An Inquiry into the Origins of the English Pianoforte', *Early Keyboard Journal* 18 (2000), 9–52.

19 Michael Cole, *Broadwood Square Pianos: Their Historical Context and Technical Development* (Cheltenham: Tatchley, 2005), 14–15.

20 Donald Boalch, *Makers of the Harpsichord and Clavichord, 1440–1840* (London: George Donald, 1956), 34.

21 Gildersleeve, *John Geib*, 7.

22 For an examination of the surviving evidence concerning women's roles in firms making musical instruments see Jenny Nex, 'Women in the Musical Instrument Trade in London, 1750–1810', in *Instrumental Music and the Industrial Revolution: International Conference Proceedings, Cremona, 1–3 July 2006*, ed. Roberto Illiano and Luca Sala (Bologna: Ut Orpheus, 2009).

23 Julie Aronson and Marjorie Weiseman, *Perfect Likeness: European and American Portrait Miniatures from the Cincinnati Art Museum* (New Haven and London: Yale University Press, 2006), 164.

24 Will of Charles Lukey, The National Archives (TNA): Public Records Office (PRO) PROB 10/2721, J–P, signed in February 1774 with a codicil dated 17 October 1775 and proven on 2 May 1777. Lukey's christening took place in Cornwall in 1740, and, assuming he was christened soon after his birth, he would have been thirty-six at the time of his



Figure 2 Rebecca Geib, anonymous watercolour on ivory (painted area, 10.2 × 7.9 cm), 1787. Cincinnati Art Museum, Acc. no. 1990.1853. Used by permission

their name gave builders like Geib a clear set of options. One could build under one's own name or use the superior marketing and distributing power of a firm like Longman & Broderip to sell instruments across the continent. While the firm of Longman & Broderip owed its prosperity in part to the twenty to thirty per cent margin that it collected on the selling price,²⁵ a builder would have offset this loss through greater sales and lower cost of materials, thanks to the firm's superior connections and bulk buying power. A builder might have enjoyed nearly equal profits whether he built under his own name or that of Longman & Broderip.

In the 'putting-out system', a cover firm bought the raw materials and supplied them to independent builders, who would then be paid for their labour on the finished instrument.²⁶ Christopher Ganer, another

death. International Genealogical Index, Cornwall, consulted at the Guildhall Library, London: 'Lukey, Charles of Charles Lukey & Grace christened 5 Nov 1740 Falmouth'.

25 The figures assume that the discount given to high-volume distributors was the equivalent of that given by Broadwood. Cole, *Broadwood Square Pianos*, 56.

26 Jenny Nex and Lance Whitehead, 'Musical Instrument Making in Georgian London, 1753–1809: Evidence from the Proceedings of the Old Bailey and the Middlesex Sessions of the Peace', *Eighteenth-Century Music* 2/2 (2005), 257. For further information about the 'putting-out system' see J. A. Sharpe, *Early Modern England: A Social History 1550–1760* (London: Edward Arnold, 1987), 144.



prominent builder in the late 1770s, is well known to have built both under his own name and for Longman & Broderip, given a number of extant instruments with his signature and a Longman & Broderip inscription.²⁷ Although no business relationship has been detected between Ganer and Geib, they were both German, lived within blocks of each other at times, obtained letters of denization together on the same day and were undoubtedly acquainted and possibly friends. In any case, Geib would have had knowledge of opportunities as they came up.

As a transcript from the records of the Old Bailey in London makes clear, Geib attained semi-independence through the 'putting-out system'.²⁸ In 1785, one Edward Johnson was tried for stealing silk from Geib. The transcript provides a window on Geib's view of his craft and his relationship to Longman. An excerpt is given below:

335. EDWARD JOHNSON was indicted for feloniously stealing, on the 28th of April last, fifty nine yards and a half of green silk, called Persian, value 50 s. the property of John Geib, privately in his shop.

JOHN GEIB sworn.

I am a mathematical instrument maker, I use green silk in my business, in the inside of my instruments, for my Piano fortes.

Do you keep an open shop? – No, I work for Mr. Longman and Co. Cheapside.

Then you do not sell green silk? – No, Sir.

Then you never sell green silk in your shop, or any thing of that sort? – I sell none at all.

How did you lose it? – I do not know, it was stole away privately from me, on the 29th of April, I had fifty-nine yards and a half.

And later in the trial:

CHARLES DRAKE sworn.

We serve Longman and Broderip with this silk that the prosecutor owns, it is the last piece we sold them, it was No. 29,999, this is a piece on the same stick that we served Longman and Broderip with; I have every reason to suppose it to be the same silk, but I cannot say.

Court to Geib. Did you receive that silk from Longman and Broderip? – Yes.

Do they furnish you with materials for making instruments? – Yes.

Then you are paid only for the workmanship? – Yes.

They sent in this piece of silk? – Yes.

As can be seen, John Geib was obtaining his materials directly from Longman & Broderip for the specific purpose of making instruments for them.

While his employment with Longman & Broderip might seem to imply that he was a simple journeyman labourer, this does not appear to be the case. His self-description as a mathematical instrument maker, not a musical instrument maker, suggests that he felt a certain need to emphasize his station. The term was not common among builders. Moreover, he consistently listed 'organ builder' as his trade on other official documents. Although at least one church organ was known to have been commissioned and built during

²⁷ The authors wish to thank Graham Gadd for providing information concerning these instruments (personal correspondence).

²⁸ Proceedings of the Old Bailey <<http://www.oldbaileyonline.org/>> (June to October 2008), reference number t17850511-14.



Geib's London period,²⁹ such activities would not have competed with the gross revenue from the grand and square pianofortes he was making. An article appearing in *The World* in 1794 and listing musical instruments made by Geib also lists a reflecting telescope.³⁰ Geib may have been reluctant simply to list himself among the ranks of those who cobbled away at 'tinker's kettles', as Voltaire described the square pianoforte at the time,³¹ though his claim to be a mathematical instrument maker is probably justified. He had good reason to think well of his achievements, for he approached his craft imaginatively. In 1786 Geib obtained patent number 1571 for

An Intire New Improvement upon the Musical Instruments called the Pianoforte and Harpsichord, by which the same will become Perfect and Compleat Instruments of their Kind, which hath never before been Discovered, and by which the same can be more Easily Tuned and Played upon, and which Improvement extends to each of such Instruments Equally alike.

This remarkable patent actually covers three ideas: the introduction of a dentil-mould³² buff stop to mute one of two strings in the treble and upper tenor sections, the escapement mechanism for which Geib would become known and, finally, the introduction of a harpsichord register into the grand piano, complete with plucking jacks.

The buff stop was already known and being used for some years prior to this patent, which does *not* cover a buff stop, as is often stated, but modifications to such a stop. Geib gave the buff a toothed profile that allowed it, once engaged, to mute partially or nearly completely one of the two strings assigned to each note, to facilitate tuning and to create a new timbre by allowing one string to sound while the partially muted string provided only overtones. The relatively few examples of this found on surviving instruments today would indicate that, while Geib was optimistic, others found it less helpful or not to their liking. The harpsichord addition was intended to make the pianoforte more flexible, yet no surviving English grand pianos have this feature.

However, the escapement was an important development, and, following some simplification, it remained in use until English square pianos were no longer produced. Drawings and a description are given in Appendix 1. It is important to note that Cristofori's action, developed some eighty years earlier, worked according to a similar principle, but it is probable that neither Geib nor the several cabinet heads who reviewed the patent had any knowledge of the earlier work.³³ In any case, it was easily seen as a significant advance in the touch of the square piano, and, when brought to the attention of James Longman, the rights were quickly bought up and improvements quickly made to the high-quality pianos sold exclusively through Longman & Broderip's distribution network.³⁴

The patent application came at a time in which Geib's career and connections seem to have been growing. In November 1786 Geib took on an apprentice, Thomas Bates, for a term of seven years at a fee of £5.³⁵ As the usual rate for an apprentice to a well-established keyboard builder was between £25 and £50, this would

29 John Ogasapian, *Organ Building in New York City: 1700–1900* (Braintree: The Organ Literature Foundation, 1977), 28–32.

30 *The World* (London) 2341 (Saturday, 28 June 1794), 4. Accessed through Gale (April 2009).

31 Voltaire reportedly remarked, 'Compared to the magnificent harpsichord, the piano forte is but a tinker's kettle, an iron monger's instrument'. Edwin M. Good, *Giraffes, Black Dragons, and Other Pianos*, second edition (Stanford: Stanford University Press, 2001), 65.

32 A dentil is one of a series of closely spaced rectangular blocks that form a moulding.

33 According to Martha Novak Clinkscale, Maffei first reported Cristofori's invention, the *gravicembalo col piano e forte*, in 1711. The earliest surviving example dates from 1720 and is now in the Metropolitan Museum of Art, New York. Clinkscale, *Makers of the Piano 1700–1820* (Oxford: Oxford University Press, 1993), 80.

34 Cole, *Pianoforte in the Classical Era*, 101–104.

35 Paul Banks, Lance Whitehead and Jenny Nex, Royal College of Music, Centre for Performance History, London Music Trades 1750–1800 Person Records database <<http://lmt.rcm.ac.uk/search/Apprentice.aspx>> (6 August 2009), TNA: PRO IR 1/33 folio 65.



Figure 3 Name board, John Geib square piano, 1777. Richard Reason, Piano Auctions Ltd. Used by permission

represent a generous offer to young Bates. Probably the lad was known to the Geib family and this was as much a social as a business contract. Several surviving instruments by Bates or 'Bayes', as is sometimes seen, indicate his successful transition to independent builder.

REVIEW OF INSTRUMENTS FROM THE LONDON PERIOD

A review of extant instruments around the world shows five square pianofortes built by Geib during his London period, nicely spanning most of his time in the city. The earliest is from 1777, a square pianoforte on a trestle stand.³⁶ The dimensions of this pianoforte and the style of build are nearly identical to those of the later square pianos of Zumpe and Buntbart then in vogue. Christopher Ganer was building square pianos at this time as well, and, again, there is little difference among them. Even the cosmetic design varies little. If Geib was already building for Longman & Broderip, drawings and actual instruments to copy would have been readily available. Outside firms were used for lettering and decorating the name boards, with the builders supplying name and other information as desired.³⁷ Geib notably fails to list his address (6 Portland Street), though Zumpe had begun to do this with his first instruments and other builders had followed suit.³⁸ It was quite common for builders to use their dwellings or to build small spaces connected or adjacent to

36 This piano appeared in a Piano Auctions Ltd (London) auction in September 2005, but did not sell, and to our knowledge it remains in private hands.

37 This practice is widely acknowledged to have been common among makers, but it has been difficult to find references in the historical record that would prove this beyond a doubt.

38 Geib's address appears in an advertisement in *The Morning Post and Daily Advertiser* (London) 1658 (Thursday, 12 February 1778), 4. Accessed through Gale (April 2009).



Figure 4 John Geib's signature, pencil inscription. Piano owned by Thomas Strange

them into workshops, but possibly Geib had no permanent workshop of his own and used the workshops of others early on. This situation would change in his later years in London.

An instrument built for Longman & Broderip surfaced in early 2008, signed by Geib and dated 1785. It is now in my possession (Thomas Strange). As the signature is under the sound board, it is possible that other early Longman & Broderips that have not been thoroughly examined may be by Geib as well. A composite photograph of the signature can be found in Figure 4.³⁹ The words 'John Geib Fecit London 1785' are written in a large and flowing hand, with capitals exceeding five centimetres in height. Although Geib had been in London for about ten years, he still started to sign his first name as Johann, but rounds off the 'a' and leaves 'John' with an 'a' leading into the 'n'. The word *Fecit* is misspelled, with an 'a' added. As this signature can be seen only when an electric light is inserted into the space, we must assume that the act of signing an instrument was a matter of some pride.

The 1785 square piano is built along the lines of a standard-issue Longman & Broderip of the time, with the English single action similar to the improved Zumppe type, bichord throughout, five octaves from F¹ to f³. Restoration revealed only a few anomalous departures from the usual construction. The hammer hinges are numbered in Geib's hand, as are the usual wrest pin notes. The bridge, however, is also marked using the system of tonic sol-fa in the key of B major (B is denoted by a capital D for doh), from the lowest bass to the top of the treble. While this marking appears to be Geib's own and is in an ink very similar to that of the wrest pin marks, Geib does not appear to have marked later instruments in a similar fashion.

A later instrument made for Longman & Broderip and documented by John Watson has a scalloped edged stamp with 'J Geib / Londini' in small letters on the wrest plank at the top of the treble pins.⁴⁰ This stamp can easily be seen. The probable date of this instrument, around 1796, coincides with the time that Longman and Broderip spent in Fleet Prison for bankruptcy. Although many primary and secondary sources incorrectly date the Longman & Broderip bankruptcy to 1798 or 1800, Jenny Nex and Lance

39 The collage resulted from the need to insert a micro-camera into the mouse hole at close quarters, and then to assemble the resulting images to form a whole.

40 This piano is owned by the National Parks Service, Manhattan Sites, New York, catalogue number 1413.



Figure 5 Longman & Broderip square piano by John Geib, 1785. Easley, South Carolina



Figure 6 Square piano by John Geib, c1796. Private collection, UK

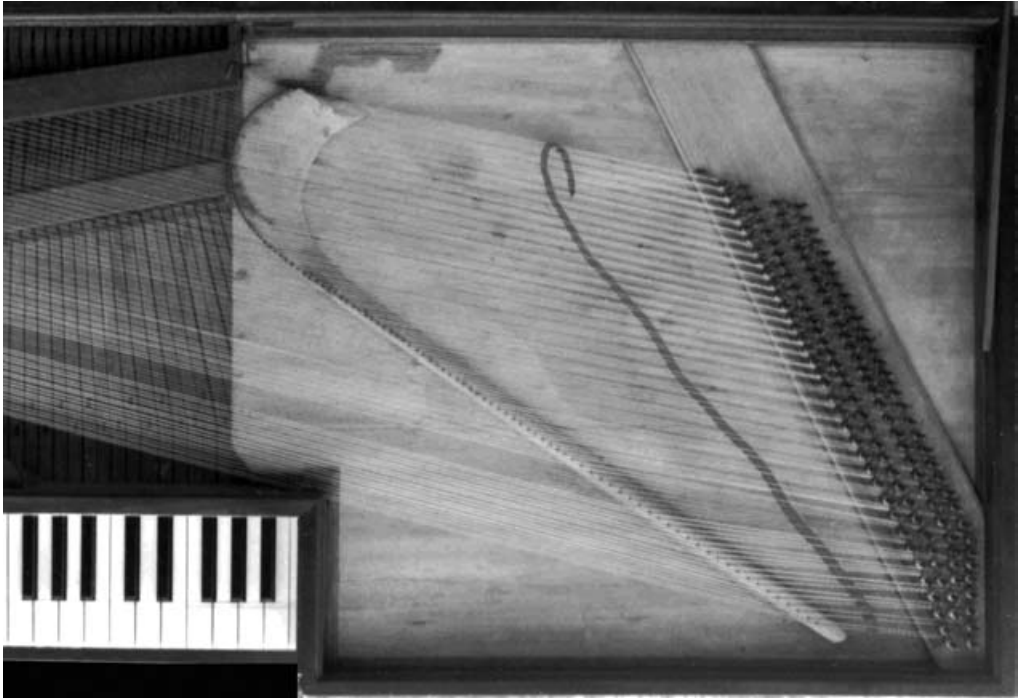


Figure 7 Bridge detail of square piano by John Geib, c1796

Whitehead have shown that proceedings started as early as 23 May 1795. By November of that same year both partners were in prison, under whose jurisdiction they would remain for the better part of a year while the affairs of their rather vast business were sorted out.⁴¹

The two known surviving instruments built under Geib's name from the 1790s both have the double action, with the extra half octave in the treble, and a characteristic wide cantilever to the treble bridge to allow room for the top treble hammers to miss the soundboard while keeping the strings short.

In 1792 Geib brought out his second and last patent in London, number 1866, for a combination clavichord and pianoforte which comprised two keyboards, the lower devoted to the piano action and the upper to a clavichord. This hybrid did not capture much attention, however. Not only was the clavichord never very popular among British keyboard enthusiasts, but such a combination has little use in the repertoire from any period. It is presumed that the ability to create an ultra pianissimo was the aim of this invention, but unlike the popular double action, this was a solution looking for a problem that did not exist.

AN ESTIMATE OF THE SIZE OF GEIB'S BUSINESS

The size of Geib's business can be estimated from a few data points, such as surviving instruments, advertisements and public notices he printed, probable shop size based on the Sun Insurance Company records and, finally, the apparent state of his finances on his arrival in the United States. In a newspaper notice appearing in *The Spectator* (New York) on 19 March 1800 Geib declares his having manufactured 4,910 pianos, 400 organized pianos and 'church and chamber organs in proportion' while in London.⁴² The claim

41 Nex and Whitehead, 'Musical Instrument Making in Georgian London', 251–271.

42 John Geib, *The Spectator* (New York), 19 March 1800. As quoted and discussed in Ogasapian, *Organ Building in New York City*, 24.



seems on first reading to be highly exaggerated, for the number of pianos alone approximates Longman & Broderip's total output of the instruments. His intention was to convince potential buyers of organs that he was equipped and experienced enough to handle a large workload.

Thomas Culliford and Company has already been shown to have been a large builder for Longman & Broderip in London during this period.⁴³ Culliford was working on the premises of Longman & Broderip from at least 1779, and, through a series of moves and changes in partnership, he had expanded the operation so as to become one of the principal instrument builders in London by 1786. In attempting to estimate the size and capacity of a particular builder, it is sometimes useful to examine the amount for which the builder insured his property and stock-in-trade. While not all builders took out fire insurance policies, enough did so that comparing the amount of the policy to the number of extant instruments gives a reasonable proportional relationship.⁴⁴

Ongoing research into the records of the Sun Fire Office reveals insurance policies issued to Geib and Goldsworth (then a partner in the firm) from 1791 for £3,000 covering their collective stock and goods in trust as well as Geib's personal holdings (see Table 1).⁴⁵

Geib insured his essential business holdings for £3,000, his household goods for £500, his house and four other residences for £2,500 and, finally, the coach houses for an additional £500. This combines for a total insured value of £6,500. By contrast, John Broadwood, the most prominent individual competitor, insured his holdings for £5,000 total. Even Culliford and Company's policy of 1786 totals only £2,600 among the four partners. This level of insurance would not have been bought without good reason and signals that by the early 1790s Geib's level of business had eclipsed even that of Culliford.

How many pianos did Geib produce in London then? From his arrival in London until the early 1780s Geib probably operated as a master builder with a journeyman joiner or two providing assistance for a fee. By 1787, however, he was in partnership with John Goldsworth, and the association lasted until 1793, when an announcement appeared in *The London Gazette* stating that from 30 March the business based in Tottenham Court Road would be run by John Geib on his own.⁴⁶ Goldsworth had been in partnership with Thomas Culliford, William Rolfe and Thomas Bradford, and Culliford is reported to have bought Goldsworth out in 1787 for slightly over £1,100.⁴⁷ As Culliford and company had just signed a contract in 1786 with Longman & Broderip to build instruments for a guaranteed rate of £5,000 per year (an equivalent of some 300 square pianofortes per year), partnership with Geib must have held enough attraction for him to make the switch. It is possible that Goldsworth concluded the value of this partnership was at a peak and decided to sell in favour of continued profitability with Geib. In any case, surviving instruments, together with documentary evidence found in a legal disagreement between Longman & Broderip and Culliford & Co., indicate that Geib and Goldsworth continued to sell through Longman & Broderip, and, considering the size of the insurance policy, we are left to conclude that they were producing several hundred pianos per annum at the height of their business.⁴⁸ Given these estimates, it is possible to assume that Geib's figure of over 5,000 pianos made during his time in London, while possibly exaggerated, is not out of the realm of possibility. It should be pointed out that Geib opened his own 'large Warehouse' at 27 London Street, off Tottenham Court Road, in 1793, from where he sold various types of piano and organ. Interestingly, his advertisement in *The Times* notes that 'Attendance [is] given at the Warehouse, from 11 to 3 o'Clock in the

43 Jenny Nex, 'Culliford and Company: Keyboard Instrument Makers in Georgian London', *Early Keyboard Journal* 22 (2004), 7–48.

44 Lance Whitehead and Jenny Nex, 'Keyboard Instrument Building in London and the Sun Insurance Records, 1775–87', *Early Music* 30/1 (2002), 5–25.

45 The authors are grateful to Lance Whitehead for this information.

46 *The London Gazette* 13516 (2 April 1793), 5 <www.gazettes-online.co.uk> (18 August 2009).

47 Nex, 'Culliford and Company', 7–48.

48 TNA: PRO E112/1771/5631, Longman, Broderip & their assignees vs Culliford, Rolfe & Barrow, filed 5th November 1795. Culliford & Co claimed that Geib & Goldsworth imitated any improvements they made to their pianos and sold the instruments on to Longman & Broderip.

**Table 1** Insurance policies issued to Geib and Goldsworth in 1791

Insurance Policy No 579036, GL Ms 11936/373, pages unnumbered [8 Jan ^y 1791]		
579036 £3.15. Xmas 1791 Griffin	John Geib at N ^o 6 in Southampton Place New Road \ & John Goldsworth Musical Instrument makers On their \ Utensils Stock & Goods in Trust in their Workshops & Warehouses \ in Longmans Timber Yard opposite the Chapel in Tottenham \ Court Road Brick not exceeding three thousand pounds — \ H Watts N Pearse C Bewicke	£3000 <u>Duty</u> £2.5.
Insurance Policy No 579037, GL Ms 11936/373, pages unnumbered [8 Jan ^y 1791]		
579037 10/ Xmas 1791 Griffin	John Geib at N ^o 6 in Southampton Place New Road \ Musical Instrument Maker – On his household goods in his \ now dwelling House Brick situated as aforesaid not exceeding \ three hundred pounds — \ Wearing Apparel therein only not exceeding Two hundred pounds \ N Pearse R Darrell W Hamilton {see Somers Town}	300 <u>200</u> £500 <u>Duty</u> <u>7/6</u>
Insurance Policy No 580005, GL Ms 11936/373, pages unnumbered [5th Feb ^r 1791]		
580005 £3- Lday 1792 £3.8.9 Griffin	John Geib at N ^o 6 Southampton Place near the Turnpike \ in the New Road Islington Musical Instrument Maker On his \ dwelling House & Four Houses adjoining Brick N ^o 2, 3, 4, 5 & 6 Private not \ exceeding Five hundred pounds on each — \ On his five Coach Houses behind each House, in equal proportion not \ exceeding Five hundred pounds — \ J H Langston W T Astell H Watts {see Somers Town}	2500 <u>500</u> £3000 <u>Duty</u> £2.5. <u>£2.11.6</u>

afternoon', giving us a rare glimpse into the working day of Geib's business.⁴⁹ Geib also posted notices in the London newspaper *The Morning Chronicle* in 1794 to inform the reader that he had 'Manufactured within these ten years three thousand piano fortes, about one hundred grand piano fortes, two hundred and upwards organized ditto, and sundry church and chamber organs, amongst which is that celebrated Stafford Organ, on which the celebrated Abbé Vogler, performed three years past, three days to a numerous audience'.⁵⁰

Unlike Culliford, Geib is not known to have been under contractual agreement to sell only to Longman & Broderip and could have sold to the public as opportunities permitted. Some square pianofortes were fitted with the organ addition (for which Geib's firm would have earned more for extra labour), and at least one church organ and other chamber organs were built, though all appear lost at this time.

49 *The Times* (London) 2839 (Friday, 22 November 1793), 1, accessed through Gale (August 2009).

50 *The Morning Chronicle* (London), Wednesday, 29 January 1794, issue 7695, 4. Accessed through Gale (April 2009).



It is also possible to estimate John Geib's income. One must remember that Geib entered into a further partnership with Ludwig Leukfeld, which lasted until February 1796, when Longman & Broderip were in the midst of their bankruptcy proceedings. The effects of this bankruptcy, coupled with the general recession and economic uncertainty resulting from the war with France, were keenly felt among instrument builders by 1796.⁵¹ Indeed, a preliminary search of *The London Gazette*, where all businesses were required to announce insolvencies, bankruptcies or changes in their formal management arrangements, has shown that between 1751 and 1770 four musical instrument makers were declared bankrupt or imprisoned for debt. For the two decades between 1771 and 1790 this rose to fourteen and the figure more than doubled, to thirty, between 1791 and 1810.⁵² Although Leukfeld is listed in the London city directory from 1790 to 1797 and an article in *The Morning Chronicle* describes him as 'well known as one of the most eminent pianoforte-makers', no instruments with his name are recorded.⁵³ However, this may be because he was supplying instruments to other firms and dealers who placed their names conspicuously on his pianos.⁵⁴

To calculate the possible income from a square piano, one can use Rosamond Harding's breakdown of the cost of a Broadwood cottage grand piano as a point of departure (see Appendix 2).⁵⁵ If one calculates the approximate quantities of material needed for a small square piano, and if one assumes equivalent prices, it is possible to estimate the cost of material for a square piano at about £6. An invoice from Longman & Broderip dated 1792 places a value for a standard five-octave square piano without additional keys at £21, with a five per cent discount, leaving the cost at £20. Assuming that Longman & Broderip marked the cost of the instrument up about twenty-five per cent for profit, this would leave £10 for the builder.⁵⁶

This same conclusion can be reached by approaching the figure published by Harding from a different perspective. Harding shows that in 1828 the total cost to Broadwood for making a six-and-a-half-octave upright grand piano with columns was £70 3s 5d, while the sale price of such an instrument in the same year was ninety guineas (£94 10s). These figures include both materials and labour. The result is a thirty-five per cent profit at the point of sale. This is equivalent to Longman & Broderip's paying £5 for materials, £10 for labour and adding thirty-five per cent, making a sale price of between £20 and £21.⁵⁷ Given an output of 150–200 pianos per year at the height of operation, the shop might be expected to have brought in over £2,000 per annum.⁵⁸ While much of this income was needed to pay workers, the business was bringing in

51 Banks, Whitehead and Nex, London Music Trades 1750–1800 Person Records database <<http://lmt.rcm.ac.uk/search/Apprentice.aspx>> (6 August 2009).

52 *The London Gazette* 9020–17664 (Tuesday, 1 January 1751, to Saturday, 30 December 1820) <www.gazettes-online.co.uk> (May 2007 – August 2009).

53 *The Morning Chronicle* (London) 13007 (Wednesday, 16 January 1811), 4. Accessed through Gale (April 2009).

54 Indeed, as reported by Bozarth and Debenham, Leukfeld signed a seven-year agreement with Broderip & Wilkinson in 1801 to supply them exclusively with pianos at the rate of three per week. Leukfeld was not to make pianos for anyone else without their written agreement; they, in turn, would purchase these instruments from no other maker. The surviving evidence for this arrangement is found in a court case between the two parties which indicates that neither Leukfeld nor Broderip & Wilkinson was able to fulfil their obligations. The lawsuit and presumably the agreement closed with no further demands on either side. Interestingly, Leukfeld lists the sales he made of pianos to individuals and firms other than Broderip & Wilkinson, which amounted to thirty-three in 1802, fifty-one in 1803, ninety-eight in 1804 and one hundred and thirty-seven in 1805. Banks, Whitehead and Nex, London Music Trades 1750–1800 Person Records database, TNA: PRO C13/2415/7, 1806. See George S. Bozarth and Margaret Debenham, 'Piano Wars: The Legal Machinations of London Pianoforte Makers, 1795–1806', *Royal Musical Association Research Chronicle* 42 (2009), 75–79 and Appendix 6.

55 Rosamond E. M. Harding, *The Piano-Forte, Its History Traced to the Great Exhibition of 1851*, revised edition (London: Heckscher, 1978), 394–396.

56 This figure is suggested by Michael Cole based on the mark-up on square pianos by Broadwood. Cole, *Broadwood Square Pianos*, 56.

57 Harding, *The Piano-Forte*, 395–396.

58 The estimation: 150 pianos per year at £10 each paid by Longman & Broderip would have yielded Geib £1,500. An additional fifty pianos per year sold to other shops or under Geib's name would have added no less than £500 to his



several hundred pounds for each partner annually. By way of comparison, at the beginning of their partnership Broderip earned about £136 per year while Longman, with a three-quarter share in the business, drew over £409 each year.⁵⁹ This compares favourably with regular tradesmen, who earned about £40; army officers, up to about £100; and lawyers, who earned about £200. The more successful manufacturers and tradesmen in London are reported to have earned between £200 and £600 per year.⁶⁰

The Sun Fire Insurance policy for Geib's home given in Table 1 lists four additional adjacent houses, making up the block of houses from No. 2 to No. 6 Southampton Place. As these were full houses with individual carriage houses in the rear, they were almost certainly rental properties whose income would have augmented that of the principal business.

In addition, James Longman paid Geib for the patent of the double action shortly after it was issued.⁶¹ It was a seminal moment for Longman & Broderip. While pianoforte sales were beginning to boom in any case, the advantage of touch on the Longman & Broderip instruments elevated them beyond the commonplace. No records of this transaction between Geib and Longman remain, so the amount paid to Geib is hard to judge. It is likely that Longman bought the rights up front (as opposed to paying out a royalty per piano, as Southwell appears to have done), and we are left to speculate on an amount, but it was probably in excess of £200, given what we now can surmise of the size of Geib's business. Indeed, when Longman made a similar arrangement with William Southwell in 1794, Southwell was contracted to receive £100 in a lump sum with subsequent payments of half a guinea (10s 6d) for each instrument sold that included the patented features.⁶²

There are other indications of Geib's relative wealth. In his brief genealogy, Alger Gildersleeve states that the youngest daughter Sophia recalled a great pile of golden guineas on the table in London, and he goes on to suggest that \$25,000 (around £5,000 at the exchange rate of the time) was invested in land between Vesey and Canal Streets in Manhattan in the years following Geib's establishment in New York. The tax record for ward five of Manhattan described by Gildersleeve shows a property in Geib's name that exactly fits this description at Leonard and Gardner Streets: a house and shop plus two lots, with a total taxable value of \$2,700.⁶³ Family lore may have inflated the \$2,500 to \$25,000, but it is more likely that, for evidence of the remaining investment, we must look for additional land hinted at by Gildersleeve that has not to date been found. It is clear from the earliest records of his business that he was established on North Street (now the easternmost end of Houston Street) in the Bowery from 1798 until 1805, when the entire family moved to Leonard Street, with no tax records in the Geib name for other land in the lower Manhattan area.⁶⁴

As to instruments built under his own mark or name, another incident recorded at the Old Bailey appears to shed some light. On 19 February 1796 one John Bates removed a used but almost new square piano from Longman's warehouse and proceeded to sell it to a Mr Turner. David Davis was superintendent of the warehouse and had reported the loss of a square pianoforte which was subsequently discovered at Turner's

income. At least two organs were known to have been built in London, and these were sold for about £300 each, of which about a half or two thirds was profit. Averaged over the twelve years between 1785 and 1797, these calculations yield £25–£30 per year. Pedal harps and sheet music were obviously sold as well.

59 Banks, Whitehead and Nex, London Music Trades 1750–1800 Person Records database, TNA: PRO C12/178/48, Smith v Longman, 1791.

60 Liza Picard, *Dr Johnson's London* (London: Phoenix, 2000), 55. These figures are based on Joseph Massie's statistics of average family incomes, compiled in 1759.

61 Cole, *Pianoforte in the Classical Era*, 101–104.

62 Banks, Whitehead and Nex, London Music Trades 1750–1800 Person Records database, TNA: PRO C13/29/34, 1802. This transaction is discussed in detail in Bozarth and Debenham, 'Piano Wars', 59.

63 New York City Department of Records, Municipal Archives, Assessed Valuation Record, Ward 5, New York, 1808, 49. We thank Kenneth Cobb of the Municipal Archives, New York, for conducting the tax search and providing a copy of the record.

64 Mabel Almy Howe, 'Music Publishers in New York City before 1850', *Bulletin of the New York Public Library* 21/9 (1917), 10.



house in Bond Street. Davis was questioned as to whether it could have been sold from the warehouse, to which he responded 'I don't recollect selling one for these three months; it is what we call a short two stop; a shorter instrument than we generally make, and one stop less; we only make them for orders.' When Mr Gurney asked of Davis 'Is that piano forte of the make of Longman and Broderip?', he replied 'It is; there was originally a number upon it; there is part of it now remaining; it appears to me to be a seven', and when asked to 'Look at that piano-forte, and see if it is made by Gib. [*sic*]', Davis confirmed 'Yes, it is.'⁶⁵ John Watson described a similar instrument: the name of Longman & Broderip is still on the nameboard and Geib's stamp is visible on the wrest plank. After the collapse of Longman & Broderip, Geib would have been free to continue making and selling instruments under his own name, as he was well established and had no other competing obligations.

FINAL MONTHS IN LONDON

Geib was an above average, enterprising and entrepreneurial craftsman in late eighteenth-century London offering a well defined product and taking advantage of such opportunities as might arise. After the collapse of Longman & Broderip, business conditions in London would have seemed less favourable, and the allure of America must have been irresistible. Geib sailed for the United States in July 1797, with plans to establish an organ-building enterprise in the New World. He was never to return to London. Unlike the London period, this part of his life is well represented by extant instruments and written communications, which should form the basis of additional research.

APPENDIX 1

The drawings for Geib's patent number 1571 were redone by Malby and Sons and printed in 1856 during the modernization of the patent office, and only these reproductions exist. It is reported that copperplates of original patents exist in collections and archives, but patent 1571 has not surfaced to date. The prints of 1856 are in generally poor condition, and attempts to reduce them to a size suitable for publication results in unreadable lettering in places. For clarity they have been redrawn here with computer assistance into a scaled drawing. Pains have been taken to reproduce the original as far as possible, but details such as the style of shading of course differ from the 1856 version. It is not known how many liberties were taken when the drawings were remade, but comparisons of existing copperplates to their redrawn counterparts by the author would suggest some degree of variability between draughtsmen. The reader should note that the drawing of the escapement at the top of Figure 8 represents the jack and intermediate lever only. As in the original illustration, the hammer is not shown.

The written description of the patent reads as follows:

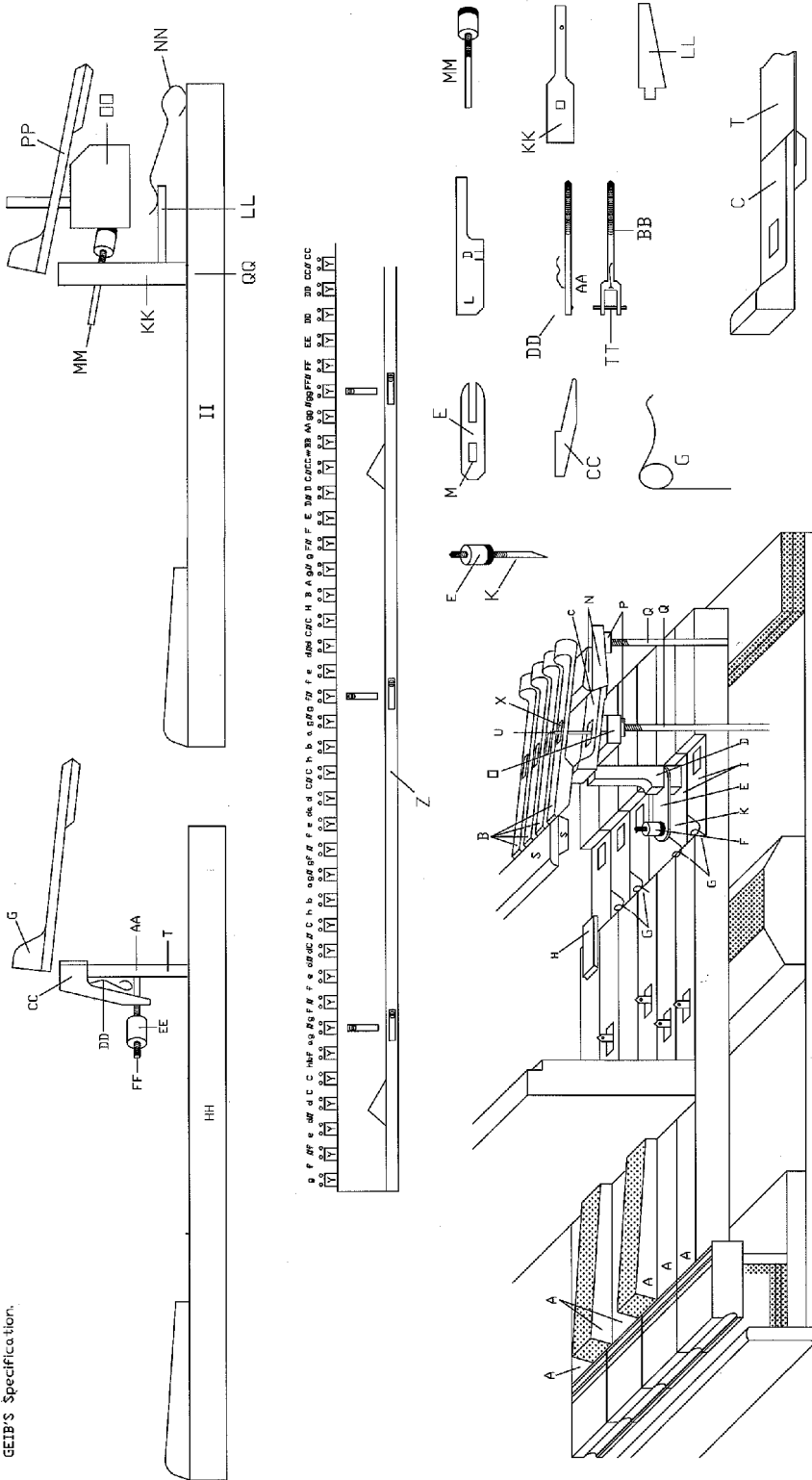
In this Plan [Figure 8] there are only six keys each of which are respectively mark'd **A**. But in the Instrument itself there may be sixty one keys and which may be increased or decreased at pleasure and the new improvement will be serviceable in all such keys.

B. B. B. B. & B. are Hammers which are usually made in these kinds of Instruments. **C. D. E. F. G. G. G. H. I. I. I. I. I. I. K. L. M. N. N. O. P. P. Q. Q.** and **X.** are different parts of the new Improvement. **C.** is a little lever which lies under each Hammer, the shape whereof is shewn in the Plan. **U.** is a Brass Pin which goes through the hole marked **X.** in the Hammers and through the hole in the aforesaid Lever. **O.** is a little Bar where such Lever rests upon and goes across the keys from the treble to the bass, the whereof is shewn in the Plan. **N. & N.** are two small Bars which also go across the keys

65 Proceedings of the Old Bailey <<http://www.oldbaileyonline.org/>> (June to October 2008), reference number t17960406-85.



A.D. 1786, Nov 9 No. 1571
GEIB'S Specification.



A Plan of the new Improvement upon the Piano Forte

Figure 8 Plan 1 of Geib patent no. 1571



from the treble to the bass and where the Hammers rest upon the shape whereof is also shewn in the plan. **Q. & Q.** are brass or Iron Pillars cut with a screw on each end, the bottoms whereof are screwed into the Key frame and the tops whereof are screwed into the aforesaid Bars mark'd **O. N. & N.** for the purpose of regulating them in a proper Line with the Brass nuts marked **P.** and **P.**

D. and **E.** is the Jack which is fastened with a bit of Iron wire to the size marked **L.** in the holes of the Keys and which are respectively mark'd **I.**

G. G. G. & G. are Springs made of wire to move the Jack backwards and forwards in its motions. **F.** is a round little button made of Sole Leather with a Brass pin through the middle of it (the shape of which pin is marked **K.**) and it is screwed on the top and knocked through a little hole mark'd **M.** into the keys for the purpose of regulating the Jack. In turning this Leather it regulates the Jack. **H.** is a little cap the shape whereof is also shewn in the plan and it is glued upon the keys over the aforesaid Springs for the purpose of preserving them from injury.

T. is the little bit of Skin one end whereof is glued into one end of the aforesaid Lever, and the other end thereof is glued upon one end of the aforesaid Bars marked **N.** and **N.** and such Skin is cover'd with the other of such last mentioned Bars and it is screwed down in different parts thereof.

R. is another part of the new Improvement and is a buff stop screwed to the end of the Belly board across under the Strings in the treble – Each of the places mark'd **Y.** is a square little bit of Buff Leather glued on the top of such Buff stop under each two strings. **Z.** is a part of the said Buff Stop and in moving such part towards the front it lifts up such Buff Stop and brings the Leathers mark'd **Y.** close to the Strings which stop the sound of one string in each note for the more easy Tuning and playing upon the instrument.

H. H. is a key which presents itself with a Jack upon a different principle and **A. A. C. C. D. D. E. E. F. F.** and **G. G.** represent such principle. **A. A.** is a piece of Wood or Brass which is cut with a screw on the bottom and screws in all the keys. **C. C.** is a small bit of Wood the shape whereof is shewn in the Plan and it may be called a Tongue it is fixed on the top of **A. A.** with a little pin the Shape whereof is also shewn in the plan.

D. D. is a little spring which moves **C. C.** backwards and forwards in its actions. **E. E.** is a round little Button made of Sole Leather – **F. F.** is a Brass or Iron wire which goes through the middle of **E. E.** and also through one end of **C. C.** into **A. A.** where it is fastened in order to turn the button **E. E.** backwards and forwards and which regulates **C. C.** to its proper place. **G. G.** Is a lever of the same shape as that of **C.** before mentioned.

A. A. C. C. D. D. E. E. F. F. and **G. G.** represent the side view only of the aforesaid principle and **A. A. B. B.** and **D. D.** represent the front view thereof. **A. A.** shews how the Spring mark'd **D. D.** is fastened and how it is cut with the screw and **T. T.** shews the thickness of **C. C.**

I. I. is another Key which also presents itself with another Jack upon different principles and **K. K. L. L. M. M. N. N. O. O. P. P.** and **Q. Q.** represent such last mentioned principle and the said last mentioned principle shews itself by side and front views. **K. K.** is an upright Jack and is made of wood, brass or iron. **L. L.** is a little bit of wood and is tenant to the back of **K. K.** for the Spring mark'd **N. N.** to rest upon.

N. N. the Spring is made of Brass or Iron Wire and acts upon **L. L.** as before mentioned in order to Bring **K. K.** backwards and forwards in its motions. **M. M.** is a piece of round wire and goes across **K. K.** on the end of which is also a round little button made of Sole Leather which rests against a bar mark'd **O. O.** and such Bar goes across the keys from the treble to the bass and in turning **M. M.**

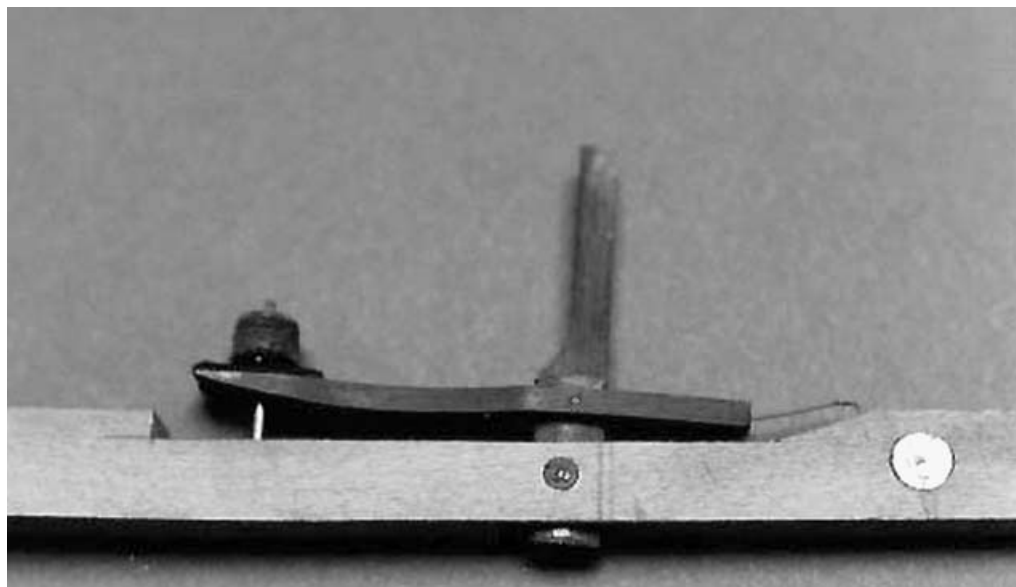


Figure 10 Photograph of jack manufactured to Geib's original design for an escapement. Longman & Broderip square piano, 1787

was this modified action that would become nearly universal. No mortise is needed in the key lever body, the two wire hinges are reduced to a single vellum strip and, no longer needing a relief cut, the escapement is simply glued to the solid top of the key lever.

APPENDIX 2

	£	s	d
9 feet of 1 inch mahogany at 1s, 3d per foot (case)		11	3
5 feet of 1.5 inch oak at 5d per foot (case spine)		2	1
12 feet of ½ inch mahogany at 9d per foot (lid)		9	0
3 feet of 1.5 inch mahogany at 1s, 9d per foot (stand)		5	3
6 feet of 1.25 inch mahogany at 1s, 6d per foot (stand)		9	0
24 feet of 1.5 inch pine at 4d per foot (base)		8	0
5 feet of 2 inch pine at 5d per foot (brace and sides)		2	1
3 feet of 1.5 inch deal at 3 1/2 d per foot (core)		0	11
3 feet of 2 inch beech at 8d per foot		2	0
3 leaves of belly wood at 1s, 4d per leaf		4	0
12 feet of mahogany veneer at 8d per foot		8	0
3 feet of lime wood veneer at 7d per foot		1	9
Bed screws			4
Ivory for piano keys		16	0
Set of sharps and cloth		3	0
Leather and cloth for hammers		16	0
Hammer frames		3	0
Key frame		3	3

