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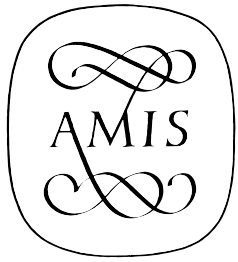


An Extraordinary Fine Instrument: The Grand Pianoforte of John Michael Berent

Thomas Strange and Alexandra Cade

Emergence and Acquisition

In the Spring of 2021, the Sigal Music Museum was offered several early pianos by Dr. Nicholas Giordano, dean of the School of Science and Mathematics at Auburn University. Among these instruments was an unusual grand piano bearing the name of the maker Johan Berent. A conglomerate of old and new construction, the instrument displays the critical stamp on a piece of veneer taken from the original pin-block, marked "IOHAN BERENT LONDON" (fig. 1).

Figure 1. Stamped name on remains of the pin-block veneer: IOHAN BERENT LONDON. Except as noted, all photographs are by the authors.

A Description

The curatorial team at Sigal approached this initial attribution with caution, for several reasons. The survival of such a grand piano from colonial America would be a rare event in itself. But perhaps more compelling, the instrument challenged the logical and widely accepted notion that any piano made by John Berent would be of the type known as a square piano, small and early, possibly with a German *Stossmechanik* action. The New Grove edition of *The Piano* states this categorically at the beginning of chapter seven[1] and it is repeated widely in other reference materials. A square piano now bearing the name of John Sellers has long been considered a possible piano by Berent, such that in 1975, the Piano Technicians Guild commissioned a copy of this piano as an example of the first piano made in America.

The result of this present discovery is that the suggested identification of one or more square pianos having been made by John Behrent is open to question, and now requires reconsideration. Following a trip to Dr. Giordano's Auburn home to inspect the offered pianos, the Sigal Music Museum accepted the donation and had the instruments transported to the museum's offsite study collection. There, the Berent piano was then able to receive a more thorough examination. What has emerged is a most fascinating instrument, subject to several unfortunate "restorations" throughout the twentieth century, but bearing enough original material to tease out much of the story. While not a square piano, part of its story involves an action of that type. Additionally, it exhibits curious similarities to the approach of Americus Backers, without any attempt to copy, adding to the wonder, since it is exactly contemporary with what Backers was doing in London.

Provenance

The Berent piano came with a fair amount of documentation assembled by the family that owned it since the early nineteenth century, placing it in southeastern Pennsylvania from at least 1849.[2] It was the property of

1. Derek Adlam, ed., *The New Grove: Piano* (New York: W.W. Norton & Co., 1988, 50.

2. Family history regarding the piano prepared by the Bernheisel family and edited by

the Lutheran evangelist John William Heim (1782–1849), near Lebanon, Pennsylvania, at the time of his death and likely for some time before that, though records do not exist for Heim's personal property. A well-respected pastor of several rural churches, Heim traveled for his profession constantly and thus might have hardly known the piano, which was at his home on Sherman's Creek, Pennsylvania, about two miles south of Loysville, on which he erected a large grist-mill.[3]

The piano was bought at the 1849–1850 estate sale of Heim by a descendent, Solomon Bernheisel of Green Park, Pennsylvania, reputedly for his daughters' use.[4] However, the daughters declined to play it and the instrument was moved to the attic, where it remained for roughly 110 years. In 1961, fellow Heim descendent John Fessler took the piano to Lafayette, Indiana, and it continued to sit silently. During the 110 years it was in storage, the instrument lost some historical integrity, as strings, dampers and hammers were removed as souvenirs.

In 1973, the Fesslers engaged Philip Ralph Belt, a restorer of historic pianos and maker of reproductions, to do a collaborative restoration of the piano, with the Fesslers refinishing the case and Belt addressing the action.[5] No notes or photos have emerged from this activity, but any original finish was lost at this time, while the original soundboard was removed, put in storage, and replaced with a new design, and a new action and keyboard were also made.

Historical research done on the piano in the 1970s followed a meandering path, with few pictures of early English grand pianos available for comparison. The strangeness of the instrument caused experts, such as Peter Redstone of Colonial Williamsburg, to conclude that the piano dated to before the middle of the eighteenth century. These early efforts may be excused as well-intentioned but fraught with difficulty, since no experts but Belt actually examined the physical piano, and information on early English grand pianos was still sketchy. The only surviving English grand piano by the inventor of that instrument, Americus Backers, that is

John Fessler, and provided to the museum with the provenance and residual materials.

3. Rev. D. H. Focht, *Churches Between the Mountains; A History of the Lutheran Congregations in Perry County, Pennsylvania* (Baltimore: T. Newton Kurtz, 1862), 348.

4. *Churches Between the Mountains*, 350, gives the date of John William Heim's death as December 27, 1849. Any sale of the estate would have likely occurred in early 1850 rather than 1849.

5. See Luis Sanchez, "Belt, Philip Ralph," *Grove Dictionary of Musical Instruments*, second edition, vol. 1: 309.

decidedly authentic, dates from 1772, and remained poorly known in the 1970s. Backers and his instrument are discussed below.

The provenance for the Berent piano that is reliably documented places the piano in southern Pennsylvania in the first half of the nineteenth century. With only five octaves, it would have been outdated by early nineteenth-century standards and is very much a product of its eighteenth-century design aesthetics. Further understanding has therefore come from a review of the life of Berent, and a thorough examination of the piano and its surviving materials that were removed during restoration campaigns.

John Michael Berent

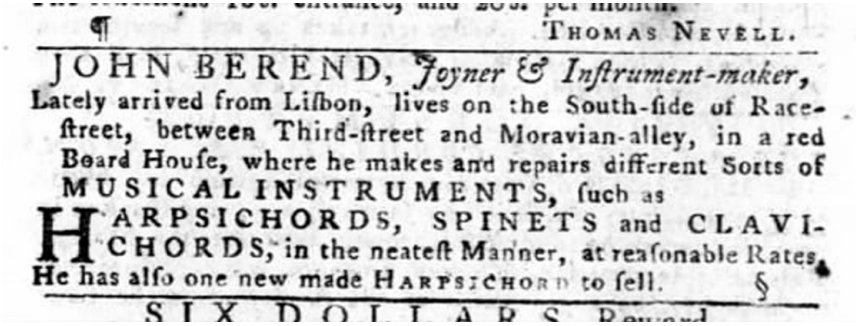
As a craftsman, John Michael Berent[6] presents more than the usual challenges, due to his small output as a builder, immigrant status, and relatively early death. After his birth in 1736 or 1737, Berent's life before his arrival in Philadelphia is largely undetermined.[7] His surname presents a genealogical challenge by appearing in different spellings nearly each time he is encountered, making it difficult to trace family lines. Though it is unknown where Berent resided before moving to America, a Dutch or Saxon birth would be consistent with the last name. While Berent's training as an instrument maker also remains a mystery, there is strong reason to think he was in London prior to his arrival in America, following the diaspora of many Germans in the eighteenth century. His first notice of arrival in America introduces its own set of questions:

> John Berend, Joyner & Instrument-maker, lately arrived from Lisbon, lives on the South-side of Race Street, between Third-street and Moravian-alley, in a red Board House, where he makes and repairs different Sorts of Musical Instruments, such as Harpsichords, Spinets and Clavichords, in the neatest manner, at reasonable rates. He also has one new made Harpsichord to sell.[8]

6. The authors have chosen to use the spelling of Berent's surname as it appears on the piano for this article. Multiple different spellings have been encountered, and by 1780 it seems that the family had largely, but not completely, settled on "Berendt." To avoid confusion, we will use the spelling Berent used when he signed the piano, circa 1775.

7. Berent died at the age of forty-three on September 9 or 10, 1780. See Philadelphia Deaths & Burials, Microfilm 1312257 (ancestry.com).

8. *The Pennsylvania Gazette*, Thursday, 20 September 1770 (Philadelphia), 3.


¶ THOMAS NEVELL.

JOHN BEREND, *Joyner & Inſtrument-maker*,
Lately arrived from Liſbon, lives on the South-ſide of Race-ſtreet, between Third-ſtreet and Moravian-alley, in a red Board Houſe, where he makes and repairs different Sorts of MUSICAL INSTRUMENTS, ſuch as HARPSICHORDS, SPINETS and CLAVICHORDS, in the neateſt Manner, at reaſonable Rates. He has alſo one new made HARPSICHORD to ſell. §

SIX DOLLARS Reward

FIGURE 2. Berent's first notice in Philadelphia, from *The Pennsylvania Gazette*, 20 September 1770.

Here we see that the first encountered spelling of his name is BEREND, Joyner [sic] & Instrument-maker, and that he has arrived from Lisbon. It would have been a somewhat unusual for anyone making musical instruments to have arrived from Lisbon into Philadelphia in 1770, although commerce between Philadelphia and Portugal was steadily increasing throughout the eighteenth century.[9] Though Lisbon sustained substantial damage from an earthquake and resulting tsunami in 1755, ships were regularly sailing to and from Philadelphia by 1770, even during recovery from the destruction.[10] Portuguese musical instrument making seems to have recuperated quickly, as shown by at least two surviving instruments: a harpsichord by Joachin José Antunes, 1758, and a grand piano by Henrique de Casteel, 1763, both made in Lisbon.[11] Yet given the often

9. Jeremy Land and Rodrigo da Costa Dominguez, "Illicit Affairs: Philadelphia's Trade with Lisbon before Independence, 1700–1775," in *Ler Historia* 75 (2019).

10. Berent may have arrived in Philadelphia by the late summer of 1770. The *Pennsylvania Gazette* records the entries of at least eight arrivals from Lisbon throughout August of that year.

11. The authors are grateful to John Koster for sharing his thoughts on this material, as well as observations regarding the lockboard bracket feature, iron gap spacers, and the left-shifting keyboard. Koster further noted: "In 1760, Manuel Antunes received a ten-year exclusive privilege for making pianos. (One wonders how Casteel got around this.) Henrique de Casteel, also known as Henri-Joseph Van Casteel, was born in Tournai and died in Brussels, but was in Lisbon by 1757, then back in Brussels by 1769. Another foreign-born maker in Lisbon, more successful than Van Casteel and active there for decades, was Matthias Bostem, born in Hosten, Germany, near the border with Luxembourg. Relations between England and Portugal were relatively strong in this period, so it's not entirely out of the question that Berent could have had some connections there. Perhaps, knowing that foreign makers could be successful in Lisbon, Berent, after learning the trade in London (from Backers?), tried his luck there before deciding to emigrate to America. On the way, he might have picked up some ideas from Portuguese pianos." Personal communication, January 16, 2022.

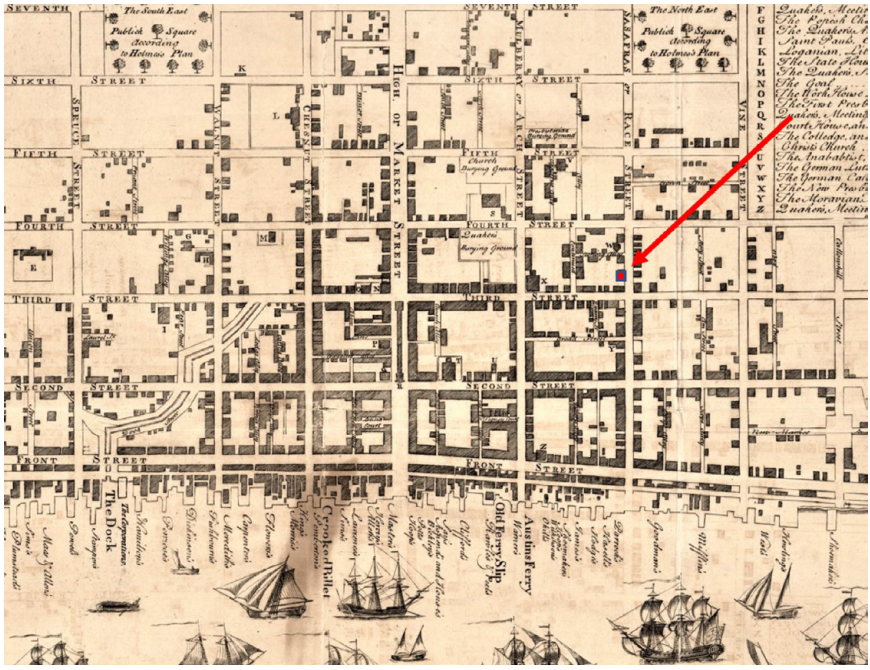


FIGURE 3. Map of Philadelphia. Engraved by Nicholas Scull, Philadelphia, 1762. Approximate location of first address of Berent is shown in red.

mixed messages between those attempting to advertise in eighteenth-century papers, it is possible that Berent meant London, as it appeared on the stamping of his pin block veneer. However, design elements of the surviving Berent piano are more compatible with Iberian pianos such as the 1767 grand piano by Manuel Antunes, than the early English grand piano, as discussed later in this article.[12] While we may never be able to conclusively determine if this was indeed a translation problem, Berent's German or English literacy is also unclear. His notices have been edited by the publishers, following the vernacular style of advertising, and editors offered to translate for clients who were unable to write in English or German at the time.

The notice in the *Gazette* also provides an insight into Berent's new American workshop, advertising large harpsichords, spinet harpsichords, and clavichords that he makes and also repairs. With a large harpsichord

12. National Music Museum 5055. Grand piano by Manuel Antunes, Lisbon, 1767. Range C–d3 (4+ octaves). Hand-operated *una corda*. Cristofori-type action. Ex coll.: Augusto Carvello Monteiro, Lisbon.

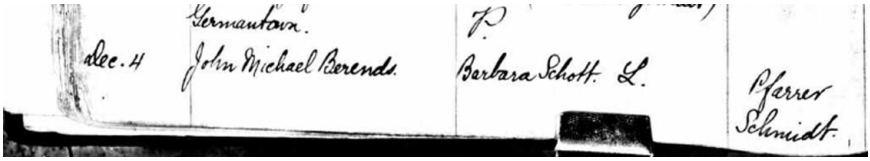


FIGURE 4. Marriage record of John Berend and Barbara Schott. Historic Pennsylvania Church and Town Records, St. Michael's Lutheran Church, Germantown, Pennsylvania.

already finished and for sale in the notice, he presumably finished the instrument before he arrived in Philadelphia. We can infer he has made this large harpsichord personally.

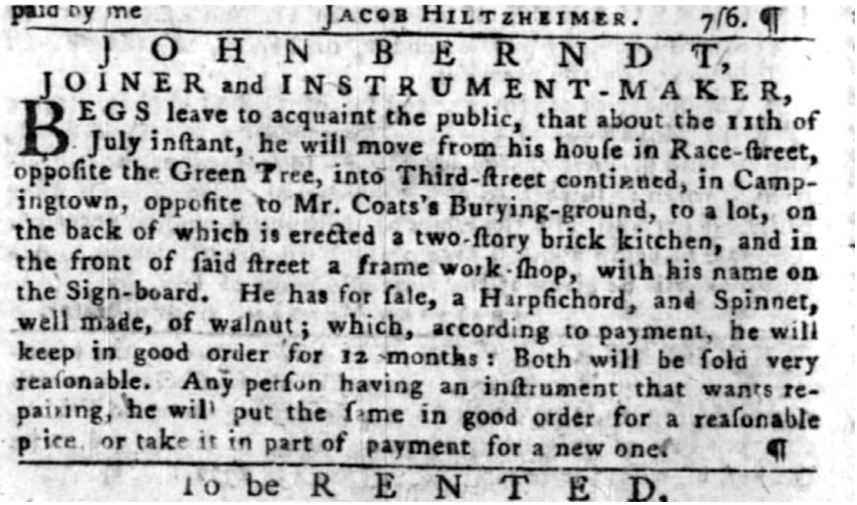
First settling on Race Street between Third Street and Moravian Alley (now Bread Street), Berent was immediately thrust into the midst of Philadelphia's bustling immigrant craftsman community (fig. 3). His initial location was especially notable, doors away from the city's original Moravian church. Built in 1741, the church acted as the urban outpost for Pennsylvania's significant Moravian population—a community especially committed to music. While not a Moravian himself, Berent shared a common language and interest in musical craft, making this close proximity speak to a possible association, professionally or personally, with the church.

While he came to the city as a single man, John Berent presumably met Barbara Reiser Schott (b. January 27, 1741; d. September 14, 1797) shortly after arriving in Philadelphia. The twenty-nine-year-old widow of Johann Schott, she was married on December 4, 1770 to "John Michael Berends" by Pastor John Frederick Schmidt at St. Michael's Lutheran Church in Germantown.

Berent's second notice appears in the summer of 1772, revealing a much-changed world for the instrument maker. John Berendt Jr. was born to the couple on April 21, 1772,[13] after which the family moved uptown.

> John Berndt, Joiner and Instrument-Maker, begs leave to acquaint the public, that about the 11th of July instant, he will move from his house in Race-street, opposite the Green Tree, into Third-street continued, in Campingtown, opposite to Mr. Coats's Burying-ground, to a lot, on the back of which is erected a two-story brick kitchen, and in the front of said street a frame work-shop, with his name on the Sign-board. He has for sale, a Harpsichord, and Spinnet, well made, of walnut; which, according to payment, he will keep in good order for

13. St. Michaels and Zion Church, "Johann Berendt," in Pennsylvania and New Jersey, U.S., Church and Town Records, 1669–2013 (ancestry.com).


paid by me JACOB HILTZHEIMER. 7/6. ¶

JOHN BERNDT,

JOINER and INSTRUMENT-MAKER,

BEGS leave to acquaint the public, that about the 11th of July inſtant, he will move from his houſe in Race-ſtreet, oppoſite the Green Tree, into Third-ſtreet continued, in Campingtown, oppoſite to Mr. Coats's Burying-ground, to a lot, on the back of which is erected a two-ſtory brick kitchen, and in the front of ſaid ſtreet a frame work-ſhop, with his name on the Sign-board. He has for ſale, a Harpſichord, and Spinnet, well made, of walnut; which, according to payment, he will keep in good order for 12 months: Both will be ſold very reaſonable. Any perſon having an inſtrument that wants repairing, he will put the ſame in good order for a reaſonable price, or take it in part of payment for a new one. ¶

To be RENTED.

FIGURE 5. Berent's second notice. *Pennsylvania Gazette*, 2 July 1772.

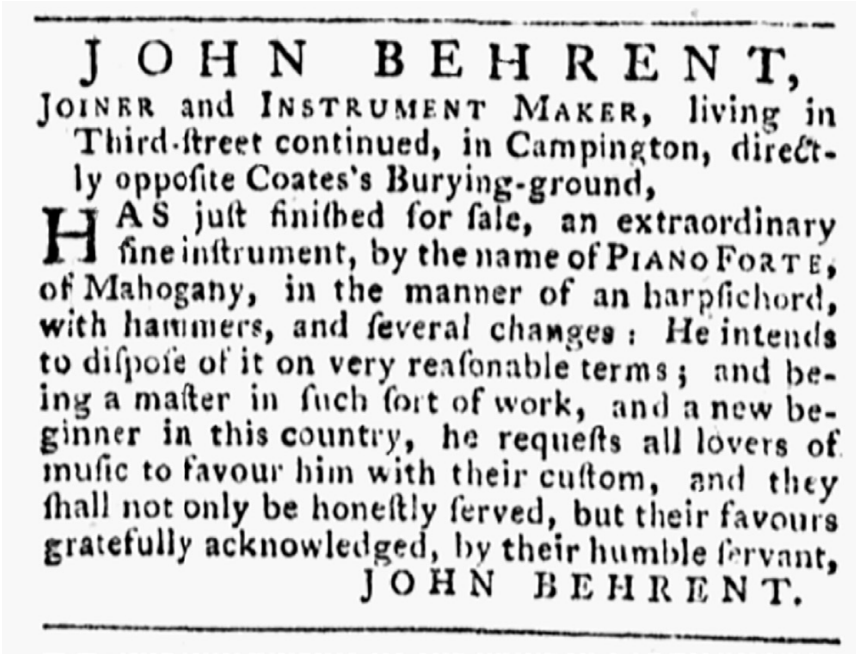
12 months; both will be sold very reasonable. Any person having an instrument that wants repairing, he will put the same in good order for a reasonable price or take it in part of payment for a new one.[14]

The Berent family's new dwelling was considerably larger, with a substantial two-story kitchen and a separate workshop. Prosperous enough to move, Berent was able to leave the cramped streets near the Delaware River and take advantage of the growing Campingtown area, also known as the Northern Liberties. This newly incorporated suburb of Philadelphia, passed by an Act of Assembly on March 9, 1771, was a burgeoning industrial center. Various forms of manufacturing flourished, as mills, breweries, leather tanneries, paints and chemical works, tool making factories, and iron and stove foundries came into being—including Berent's woodworking shop. It was a logical place to move, as his business opportunities and family were expanding. The property was in the form of a ground rent paid to Bowyer Brooke, a Philadelphia shipbuilder, and the tax for the year 1772 and 1774 for "John Brandt" or "John Bernt" was £3.00, similar to several other free-standing houses on Brooke's land grant.[15] An analysis puts this tax burden in the 47–63 percent bracket for 1772, solidly in the middle.[16]

14. *The Pennsylvania Gazette*, Thursday, 2 July 1772 (Philadelphia), 3.

15. "John Brandt" in Pennsylvania, U.S., Tax and Exoneration, 1768–1801 (ancestry.com).

16. Philadelphia City Archives, 1772.



JOHN BEHRENT,
JOINER and INSTRUMENT MAKER, living in Third-ſtreet continued, in Campington, directly oppoſite Coates's Burying-ground,
HAS juſt finiſhed for ſale, an extraordinary fine inſtrument, by the name of PIANO FORTE, of Mahogany, in the manner of an harpſichord, with hammers, and ſeveral changes: He intends to diſpoſe of it on very reaſonable terms; and being a maſter in ſuch ſort of work, and a new beginner in this country, he requeſts all lovers of muſic to favour him with their cuſtom, and they ſhall not only be honeſtly ſerved, but their favours gratefully acknowledged, by their humble ſervant,
JOHN BEHRENT.

FIGURE 6. Berent's third notice. *Pennsylvania Packet*, 13 March 1775.

Berent's final newspaper notice appeared February 28, 1775, in the German-language newspaper *Der Wochentliche Pennsylvanische Staatsbote*, published by Henry Miller. The same advertisement was also published in English, within the 13 March 1775 issue of Dunlap's *Pennsylvania Packet*.

> John Behrent, Joiner and Instrument Maker, living in Third Street continued, in Campington, directly opposite Coates's Burying ground, Has just finished for sale, an extraordinary fine instrument, by the name of Piano Forte, of Mahogany, in the manner of an Harpsichord, with hammers, and several changes: He intends to dispose of it on very reasonable terms; and being a master of such sort of work, and a new beginner in this country, he requests all lovers of music to favor him with their custom, and they shall not only be honestly served, but their favours gratefully acknowledged, by their humble servant, John Behrent.[17]

In this now-famous notice, Berent clearly describes the essence of the new instrument he has brought forward, carefully referring to it as a "Piano

17. *Dunlap's Pennsylvania Packet or, the General Advertiser*, 13 March 1775 (Philadelphia).

Forte." His language suggests that the term was unfamiliar to his local consumers, as he mindfully illustrates the object to his readers by describing that it was made in the manner (shape) of a harpsichord—what we now would call a grand (large) piano. It has "several changes," though he does not enumerate or describe them. Berent claims to be a master of such sort of work, which we will find to be largely true, though in fairness this would have been his first piano, so far as current research can show.

His claim to being a "new beginner in this country" has led several historians unfamiliar with his earlier notices to conclude he had just arrived in America. By 1775, Berent had in fact been in Philadelphia for over four years, growing his wealth and family. Possibly Berent used the assertion to direct attention to his workshop, and perhaps he still felt like a beginner—particularly when introducing this new piano. His notice would run through April 10, 1775, in the *Pennsylvania Packet*, and through March 28, 1775, in *Der Wochentliche Pennsylvanische Staatsbote*.

Berent's presence in Philadelphia papers goes silent after this final advertisement, and whether he had quick success selling this piano is a matter of speculation. Were local consumers familiar with the instrument Berent was trying to sell? Philadelphian Michael Hillegas, prominent music merchant and eventually first treasurer of the United States, was clearly cognizant of the new piano forte and its importance. In May of 1774, he had for sale at his music shop "also a variety of very elegant spinnets, forte piano's, guittars, violins with or without cases, German flutes, hautboys, clarinets, common flutes and fifes; a neat organ, with a very elegant mahogany case, fit either for a gentleman's chamber, or a small church."[18] Hillegas had made no mention of spinets or forte pianos in his May 21, 1772 notice, so these were relatively new articles for him.[19]

John Adams, in describing Hillegas in his diary for September 28, 1775, wrote:

> "I went in the Bull Dog, Captn. Alexander Commander. Mr. Hillegas, Mr. Owen Biddle, and Mr. Rittenhouse, and Capt. Faulkner [Falconer] were with me.
>
> Hillegas is one of our Continental Treasurers, is a great Musician—talks perpetually of the Forte and Piano, of Handell &c. and Songs and Tunes. He plays upon the Fiddle."[20]

18. *Pennsylvania Gazette*, 11 May 1774 (Philadelphia).

19. *Pennsylvania Gazette*, 21 May 1772 (Philadelphia).

20. "September 1775," *Founders Online*, National Archives, https://founders.archives.gov/documents/Adams/01-02-02-0005-0003. Original source: *The Adams Papers*, Diary

Unhappily for Berent, although the time was ripe for the piano to make its appearance to the musical world, the political environment in America was growing turbulent. With the battles of Lexington and Concord in April 1775, hostilities quickly escalated and hopes of a steady trade in music and musical instruments vanished. Between 1775 and 1780, only three notices appear in Philadelphia papers for the sale of a piano, all second-hand square pianos. Philadelphia itself fell in mid-September 1777 to the British, who then occupied the city until June of 1778. A record remains of John Berent (Berendt) in the Continental Army as a private, though no dates are recorded for his service.[21] A typical service would have been for six months or longer.

Tax records for 1779 appraised Berent's net worth at over £2,200, with a tax of £30.12, indicating that the craftsman had been moderately successful in his business endeavors. However, the Northern Liberties were severely impacted by Dengue fever in August of 1780, and it may have been this disease that prematurely took Berent's life. On August 31, 1780, Berent, now regularly spelled Berendt in legal documents, dictated his last will and testament, naming his wife Barbara as principal beneficiary and leaving his tools and trade to his eight-year-old son John Jr., for his use when he came of age. He directed that an inventory of his tools and work be carried out, which was done by the cabinet makers Leonard Kessler and Anthony Leckler.[22] The probate inventory is now lost, but carried in part a set of bedsteads left unsold, indicating that Berent was practicing standard joinery and woodworking at the time of his death.[23]

Berent was buried on September 10, 1780, and his will probated on October 15, 1780. Sadly, John Jr. did not have the chance to shape his own career with his father's tools, surviving just past his eighteenth birthday; he was buried May 16, 1790, at St. Michael's and Zion Church. However, Barbara Berent lived nearly two decades past her husband, remaining unmarried and retaining the most powerful position possible for a white

and Autobiography of John Adams, vol. 2, 1771–1781, ed. L. H. Butterfield. (Cambridge: Harvard University Press, 1961), 172–88.

21. "John Berendt," in Pennsylvania, U.S., Revolutionary War Battalions and Militia Index, 1775–1783 (ancestry.com).

22. Lisa Minardi, "Philadelphia, Furniture, and the Pennsylvania Germans: A Reevaluation," in John Bowman, *American Furniture* (Milwaukee, Wisconsin: Chipstone Foundation, 2013).

23. William MacPherson Horner, *Blue Book of Philadelphia Furniture* (Washington: Highland House Publishers, 1977), 165.

woman in the eighteenth century: a widow. As such, Barbara managed her own property and fortune until her own death in October 1797. A close look at her will and surviving probate inventory reveals a comfortable living for the widow of a craftsman, allowing Barbara to remain at her Northern Liberties home until she died. While there were no other Berent children, Barbara bestowed upon surviving siblings and nephews her remaining funds and assets. Perhaps Barbara had come to her second marriage, to Berent, with money. Or perhaps Berent had been successful enough through investments to sustain his wife for years after his death. While Barbara's probate did not retain her husband's lost tools or a rogue instrument, she curiously possessed "20 dozen instrument maker's wire," valued at a rather significant sum of 5£.[24] Why the widow Berent maintained such a large quantity of wire for years after John's death prompts many questions—perhaps she continued to sell it to her husband's clients, sustaining the consumer relationships decades on. It might have been a side business she conducted even during her husband's lifetime.

Until these discoveries, little has been known about the life of Berent beyond the newspaper notices. While there are still endless unknowns about his life, it is clear is that Berent came to Philadelphia in 1770 and remained until his death in 1780, apart from any movement he undertook as a private in the Continental army. His sustained residency will be important to remember as we try to make out how an instrument so unlikely as a grand piano might have appeared in Philadelphia in 1775.

Description of the Piano

Among the most astonishing aspects of this Berent grand piano is just how closely it follows the approach of Americus Backers (*fl* 1763–1768), who was in London, building grand pianos exclusively, when Berent began his efforts. Michael Cole has covered the known life and work of Backers thoroughly,[25] and Marie Kent filled in additional details in her work on the apprentice to Backers, William Frecker, who turned builder when Backers

24. Will of Barbara Berent, Philadelphia Will Book, vol. X, no. 634.

25. Michael Cole, *The Pianoforte in the Classical Era* (Oxford: Clarendon Press, 1998), 114–28.

died.[26] From this research and the surviving 1772 Backers piano, as well as a possibly fraudulent copy of Backers made later in the 1770s, and a Robert Stodart grand of 1784, we can get a sense of the construction of the early English grand piano. Comparing the early London-made grand pianos to that of Berent, we can note the similarities and differences.

As seen in figs. 7 and 8, the piano at first glance resembles other English grand pianos of the eighteenth century. But differences quickly come into focus. The case is mahogany veneered, but in an unfigured mahogany, without any crossbanding or stringing at all, even inside the key well and nameboard. It is starkly plain, in line with the esthetic that Thomas Jefferson would later espouse for his own harpsichord.[27] The front cheeks are reinforced with lock-board brackets (as seen in Portuguese pianos of the time), which holds the lockboard and ostensibly gives the cheek and spine strength when the instrument is moved. The tail is joined with exposed dovetails, and the spine is made of oak. Interior bracing appears to be southern yellow pine. The bracing scheme, as can be deduced from forged nails in the bottom boards and endoscopic views, is simple and straightforward, as seen in harpsichord making.

There are no iron gap spacers as introduced by Bakers and others in his earliest pianos,[28] and the bridge and nut, repurposed during the restoration, show no gaps to allow for spacers above the strings. There is

26. Marie Kent, "William Frecker: Piano Maker c. 1761–c. 1834," *The Galpin Society Journal* 65 (2012): 5–22.

27. In his letter to John Paradise of May 25, 1786, Jefferson wrote: "I have yet another favour to ask. which is to get Kirkman to make for me one of his best harpsichords with a double set of keys . . . . The case to be of mahogany, solid not vineered, without any inlaid work but deriving all it's [sic] beauty from the elegance of the wood." Kirkman replied through Charles Burney: "the Lid of the Case will be of solid Mahogany; but the sides cannot, if the wood is beautiful, as the knots and irregularities in the grain, by expanding and contracting different ways, will prevent the Instrument from ever remaining long in tune; but Kirkman will answer for securing the side from all effects of weather and climate, by making them of well-seasoned Oak, and veneering them with thick, fine, long Mahogany, in one Pannel." https://founders.archives.gov/documents/Jefferson/01-09-02-0473. On June 1, 1771, Jefferson wrote to Thomas Adams, his agent in London, to buy a square fortepiano, also in solid mahogany, not veneered, and likely intended for Martha Jefferson. John P. Boyd, ed., *The Papers of Thomas Jefferson* (Princeton: Princeton University Press, 1950), 61.

28. John Koster notes: "The Giovanni Ferrini harpsichord/piano of 1746, the Van Casteel piano of 1763, that of Mathias Bostem, Lisbon, 1777 (but not other Portuguese pianos), and Backers's of 1772 (like all later English grands) have arched iron gap spacers. The Portuguese and English use of gap spacers likely were derived independently from pianos by Ferrini imported to Portugal and England." Personal communication, January 16, 2022.

TABLE 1. Numerical comparison of four grand pianos: by Berent, Backers, "Backers," and Robert Stodart.

Dimensions (mm)	John Berent ca. 1775	Americus Backers 1772	"Americus Backers" late 1770s	Robert Stodart 1784
Length	2245	2248	2068	2215
Width	949	927	944	940
Case depth	268	279	287	291
Compass	FF/GG–f‴	FF/GG– f‴	FF – f‴	FF – f‴
3-octave measure	486	486	489	486
Scale (c″)	236	260	279	279
Natural head length	41	40	na	41
Accidental length	82.5	79	na	87
Strings per note	3	2		3

no surviving music desk, but the yoke and nameboard are recessed to have received one, and it would have been roughly the dimensions of the desks found on later Stodart grand pianos of the early to mid-1780s.

The nameboard has an inlaid oval of maple that may have once carried an inscription, but nothing is legible now, under near-infrared to far-ultraviolet illumination. The bottom of the removable nameboard has a molding strip attached, not a practice in English grand pianos. The key frame is constrained in motion as it slides from three strings to two, or perhaps one, by two mahogany end blocks, with one original surviving. The shifting hardware and linkage, along with the pedal, is now missing but it is possible to reconstruct how it worked. It is similar to Backers' pianos from the standpoint of a hollow left-front leg and pedal, attached at the lower end of the leg. Based on the relief cuts in the case bottom, and the obstruction created by the damper lift mechanism linkage, the keyboard shift linkage was designed to shift the keyboard from right-to-left,

FIGURE 7. The Berent piano with lid raised.

FIGURE 8. The Berent cheek with lock-board bracket.

FIGURE 9. The damper-raising mechanism.

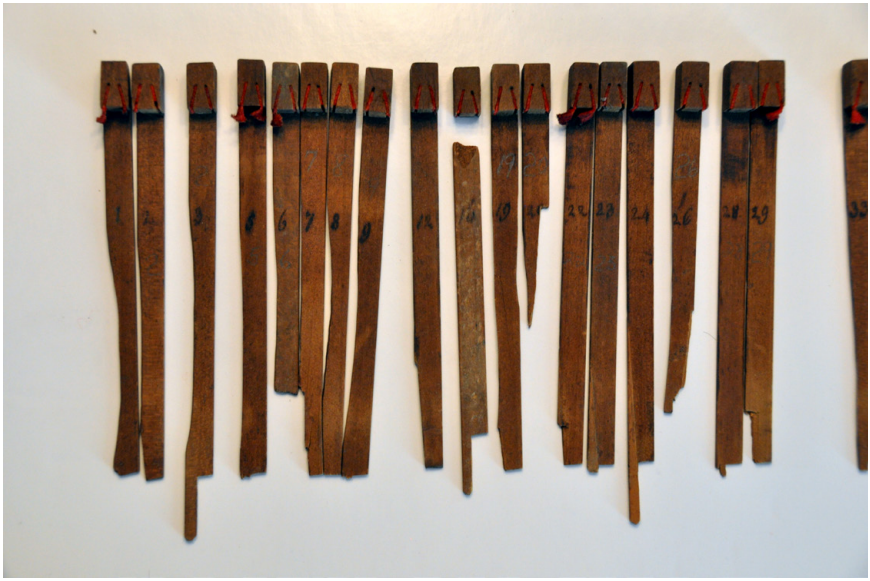


FIGURE 10. Surviving dampers.

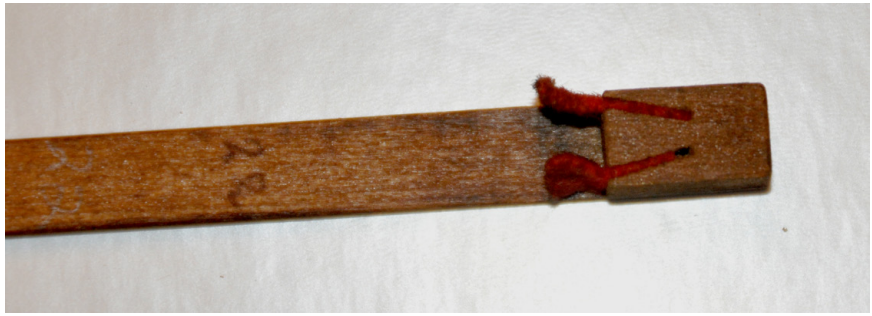


FIGURE 11. Detail of a damper head.

rather than the more familiar left-to-right of most grand pianos using such a shift mechanism.[29] While it does not really matter which direction the keyboard moves, it is curious that Berent made his to move in the opposite direction.

A damper lift was also created; the hardware mechanism has survived for this stop and has been returned to the piano. The pedal and mounting riser are missing but have been reconstructed to show how it worked. The pedal, a simple hinged device on a riser attached to the rear of the front-horizontal trestle stand brace, pulled on a cord or rod to activate the damper-raise mechanism.

The dampers are small, compared to later English grand piano dampers (2.3 mm thick by 9.3 mm wide, made of tulip poplar), but are made essentially along the same lines as other English grands. They feature a notch for the damper-raising flap, with thin tails extending to the rear ends of the key levers. The mounting of the damper cloth in the damper heads is unique to Berent, so far as the authors have seen. Two flags of single thickness cloth are inserted and glued into kerfs cut at an angle into the damper head block, and a few of these have survived intact. The heads are elongated poplar blocks glued to the side of the damper body.

The bottom boards are of tulip poplar and the construction is bottom-last, with a bottom tacked onto the framing. It is not possible to fully examine the interior bracing at this time, but endoscopic views reveal an unusual diagonal bottom brace made of southern yellow pine (or a close relative) that extends up to a heavy liner, on which the soundboard sits. There are two or perhaps three lateral braces extending from the rail, as

29. Koster notes that Portuguese pianos also shift right-to-left, but as a hand stop, not a pedal. Personal communication, January 16, 2022.

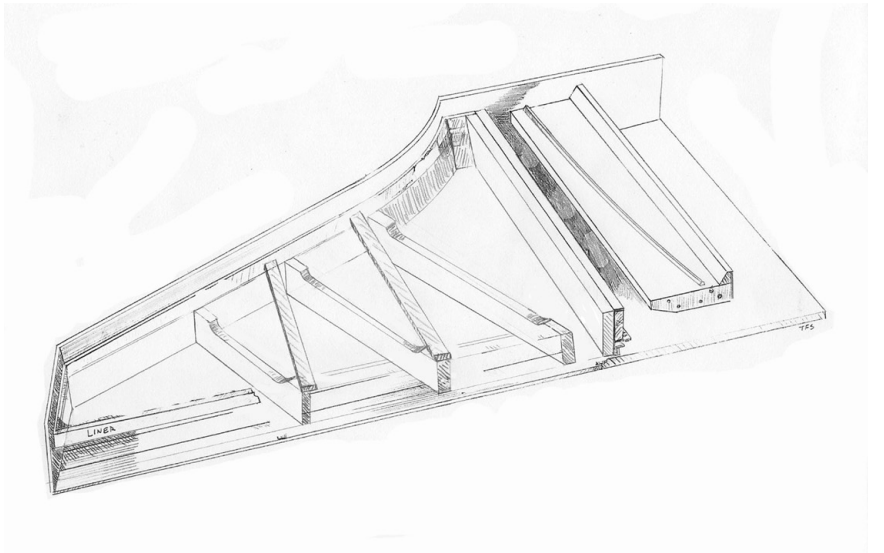


FIGURE 12. Diagram of the bracing in the Berent grand piano. Drawing by T. Strange.

shown in fig. 12. The bracing is cut away as shown.

The trestle stand is among the more conventional elements of this piano's design, but there are also departures from English grands. Typically, the English grand piano sits flat on the trestle stand top, perhaps with guide blocks that align the stand correctly, and wooden three-sided cuffs at either end of the front of the stand, to capture and hide the trap work from the pedals and ensure accurate alignment. The Berent, however, sits about 3/4" proud, on four thick dowels set into the stand stretcher, which allows the damper and keyboard-shift trap work to clear the stand and operate properly. Such posts have not been observed on other pianos, to our knowledge. There are depressions in the case to receive the dowels, but they do not capture the piano securely for a positive alignment.

The trestle stand is joined by large slotted bed bolts, rather than the more traditional square head meant to recess into the stand, and be hidden by a brass cover. The bolts used by Berent have a head one inch in diameter, which would preclude any cover, and no witness marks for a cover are found. Three of the four bolts survive; a fourth is a modern replacement.

The most striking departures from the Backers pianos, or spinets of the time, were Berent's orientation of the soundboard wood grain (we assume this is the first soundboard, as made by Berent), the nut and bridge back-pin design, and the scaling. The soundboard was oriented so that

FIGURE 13. Post at right front corner, showing clearance for damper trap work.

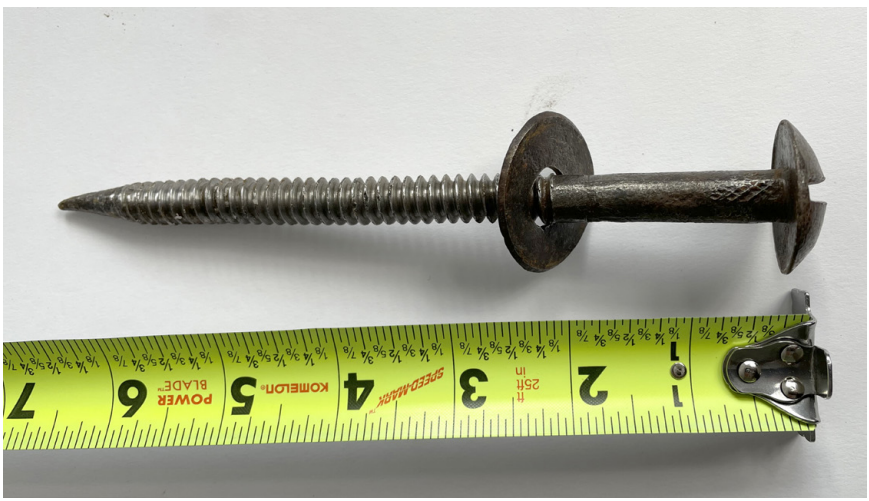


FIGURE 14. Bed bolt and washer for trestle stand.

the grain runs from side to side in the instrument, rather than down the length as traditional, or even slightly diagonal, as occasionally seen in later English grand pianos. While Broadwood & Sons would experiment with this same side-to-side orientation in the mid-nineteenth century, there is little precedent for its use this early.

More startling, Berent did not incorporate a cutoff bar or ribs in this soundboard; none are seen, nor is there a glue shadow to indicate they were ever present. The original soundboard is nearly complete, and something would have shown had it ever been present. While we cannot state for a fact that this retained soundboard is in fact the first one, circumstantial evidence is high that no one had worked on the piano in quite so invasive a manner as to replace out the soundboard. Surprisingly, the remains of the soundboard are rather flat and undamaged, showing little sign of warp or depression. The stiffness of the board, turned 90 degrees as described, may have suggested to Berent that no ribs were needed, and certainly running ribs the length of the instrument would have seemed strange. But when Broadwood took this up seventy years later, that is exactly what they did, along with a traditionally placed cut-off bar.

The nut is relatively conventional except for being back-pinned throughout, and Philip Belt removed the back pins during the 1970s restoration. They might have made tuning difficult to predict, as the wire would not run freely while tension is changed.

The bridge is flat, relatively wide for a piano this early, and sawn rather than bent. It was back-pinned all the way up to the treble top, also unusual, and double back-pinned in the lower half.[30] Again, Belt moved pins to a less acute angle, and disposed altogether of the second set of back-pins lower on the bridge. Could the greater lift given to the bridge have resulted in the soundboard surviving with so little warp or depression? As made, the piano would have had almost no down-bearing on the bridge at all.

Philip Belt replaced the old soundboard with a new one, grain oriented lengthwise, with traditionally placed cut-off bar and ribs. He replaced all or some of the pin block, and replaced the veneer on top, retaining the

30. English fortepiano expert David Hunt suggested to the authors that the extensive back-pinning to the bridge might have had the intended effect of coupling the bridge to the strings securely for maximum sound production, since the down-bearing is almost nonexistent. This would have given the flat and rib-less sound board at least some structure to work against, perhaps creating a form of lift to the entire bridge resulting in up-bearing. Personal communication, October 22, 2021.

(a)

(b)

FIGURES 15a–b. Top and bottom of Berent original soundboard.

FIGURE 16. The nut of the Berent piano, showing witness holes for former back-pins

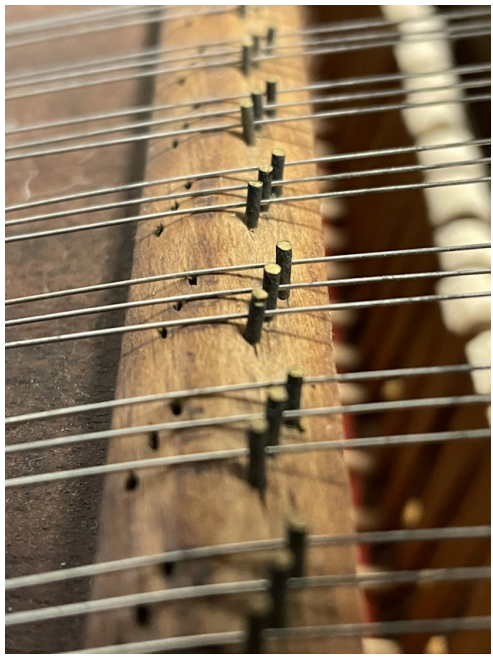


FIGURE 17. The nut in cross section.

FIGURE 18. Treble bridge section of the Berent piano, showing witness holes for former back-pins.

FIGURE 19. Bass end of bridge in cross section.

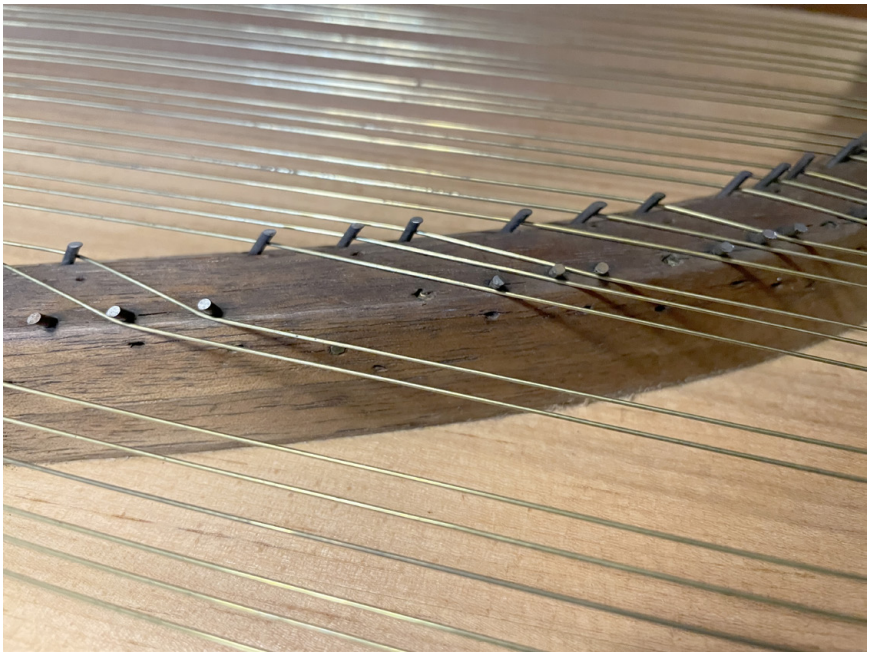
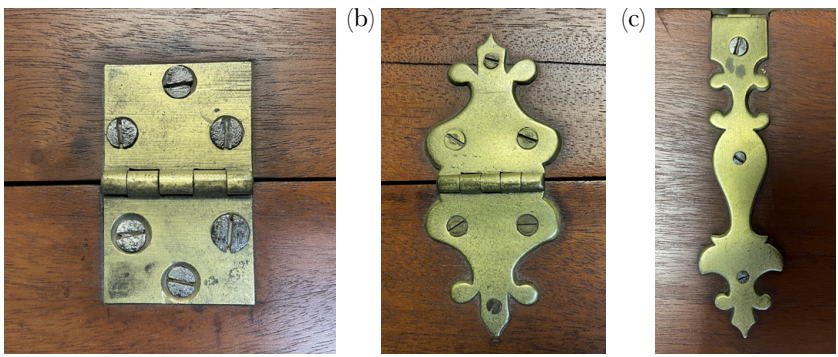


FIGURE 20. Bass end of the Berent piano bridge, showing moved back-pin witness hole, and witness holes for a double back-pinning.

(a) (b) (c)



FIGURES 21a–c. (a) Front lid-flap hinge; (b) middle lid-flap hinge; (c) main lid hinge.

critical stamped name piece in black walnut. The original veneer pieces indicate the piano as made was triple-strung. Belt removed and reused the nut and bridge, but remade the hitch pin rail.

While the choice of hinges rarely excites much interest in comparative piano study, we note that Berent made choices that seem driven by availability rather than need. The main lid is held with two strap hinges, small for the size of the lid; one has failed, and been repaired. The lid flaps use two different types of hinges, more suited to a much smaller spinet front flap than to this piano. Berent's choices seem to be for hinges found on spinet harpsichords of the time, possibly making use of what he had.

Keyboard and First Action

The keyboard has a compass of FF/GG to f‴, or five octaves minus one note, the lowest FF#. Harpsichords and pianos made before about 1778 frequently left off this FF#, little used in playing; without it, the keyboard when viewed head on takes on a symmetrical appearance. This lack of FF# is consistent with a date of 1775, but the date when keyboards made in the emerging United States acquired the pitch is unknown. The next-oldest dated keyboard instrument made in America is from 1789, when FF# had become common.

The piano now has a partially new keyboard, with new key levers and a new balance rail, while the rest of the keyframe is original. Nothing remains of the original English grand action except the mortises for the jacks in the key levers, the repurposed back check wires, and witness marks for the brass spring wire mount to return the jacks. Everything else was removed during a complete remake of the action early in its life.

The accidentals were harvested from the original key levers and put on the new keyboard. They are of stained fruitwood, fairly lightly stained, with slips of holly or maple inserted down the center, but not actually making a sandwich of the materials, like the "skunk tail sharps" used in spinets and harpsichords some thirty years earlier, made of two halves of ebony with an ivory center. All but two of the original key levers were retained, one of which was remade with new wood by Belt.

The key levers are made of tulip poplar, *Liriodendron tulipifera* (visual and microscopic determination), a common hardwood on the east coast of

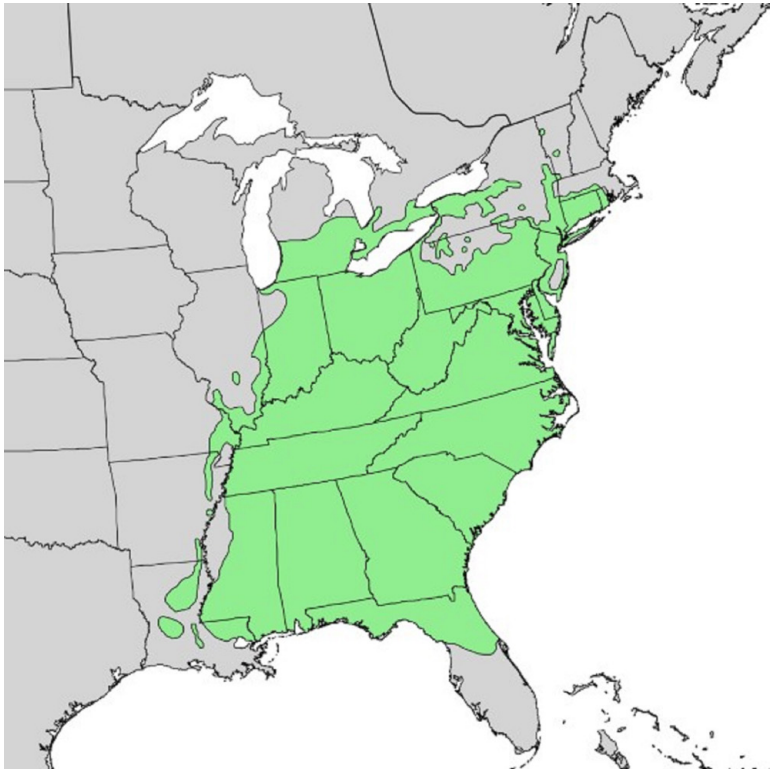
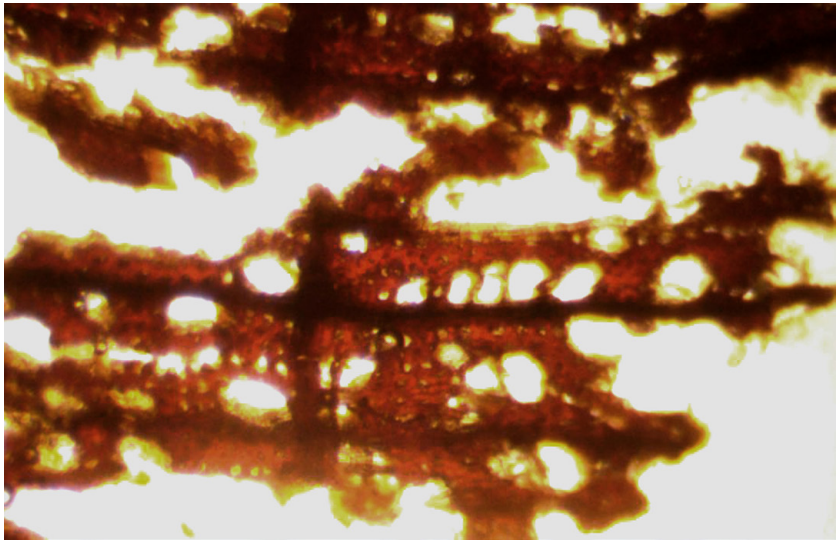


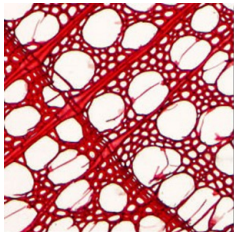
FIGURE 22. Range of *Liriodendron tulipifera*. Elbert L. Little, Jr., *Atlas of United States Trees*, vol. 1, *Conifers and Important Hardwoods*. U.S. Department of Agriculture Miscellaneous Publication 1146 (1971).

FIGURE 23. Berent piano original key levers.

(a)



(b)



FIGURES 24a–b. (a) Cross section of a Berent piano key lever, showing clear similarity (b) to standard cross section of tulip poplar. Standard image from https://micro.magnet.fsu.edu/trees/pages/tulippoplar.html

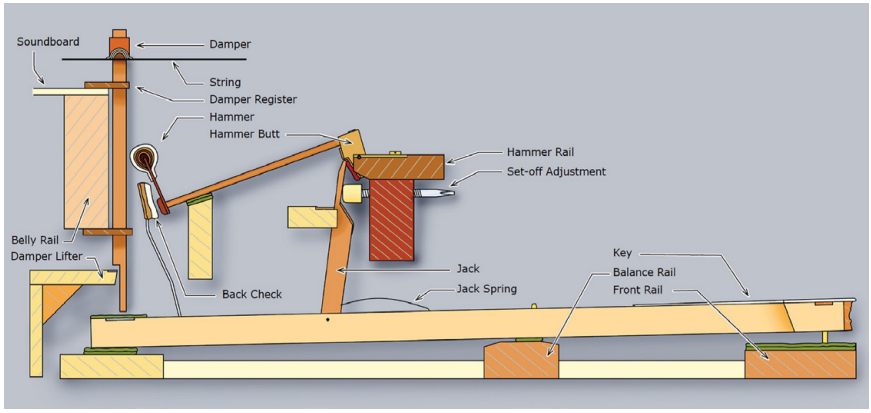


FIGURE 25. English grand action, similar to first Berent action. Drawing by John Watson, used by permission.

the United States, ranging from Georgia through Pennsylvania. It grows as tall straight trunks with close grain and is suitable as a secondary wood, where stability is important and visual appeal is not. The heart wood can be fairly dark and greenish, and it typically exhibits little shrinking or warping over time.

Tulip poplar is often found as a secondary wood in Pennsylvania and Virginia furniture, but was never used by London keyboard builders, who favored the native and inexpensive lime wood. Secondary woods are almost always locally sourced, and the tulip poplar dampers, key levers, and bottom boards are a clear indication that the Berent piano was made in America from its inception.

The key levers have all been mortised for a jack that would pivot on a brass axle, with staple marks to hold a brass spring wire to return the jack after actuating the hammer. Each key is equipped with a back check, and the pivot points are staggered between naturals and accidentals, as usual.

Although the original keys were removed from the instrument, the balance rail with most of the pivot pins remaining was also removed and retained, which allows us to measure the original compass, plus the particulars of the heads, tails, and accidentals. Berent made the keyboard with "narrow D-tails," meaning that the spacing differential over the compass is compensated differently than in the later manner typical in London (and in the Backers 1772 grand piano) of a wide D-tail. At the tails of any keyboard, we have five key tails to go into three units (C–E) and then seven key tails into four units (F–B). The ratio 3/5 is 0.6, but 4/7 is 0.57; therefore there is more space for the five keys, C–E. After 1780 or so, it is common to find London-made keyboards with all the extra width made up for in a wider D-tail, but in 1775, Berent's approach to the layout would have been common, particularly on the continent.

The Second Action

Early in its life, the Berent piano action went through a dramatic transformation. It had the elements of an English grand action removed, replaced by an English single action as used in square pianos. English single actions were commonly used in London until 1786, when John Geib introduced the English double action. English single actions continued to be used

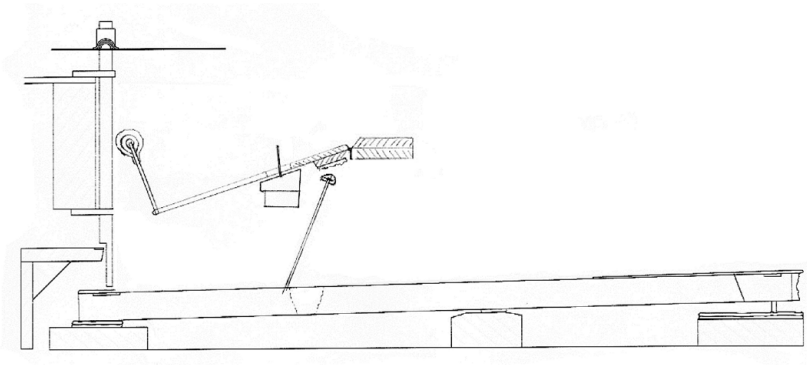


FIGURE 26. The Berent piano's second action, based on English single action piano. Drawing by T. Strange.

occasionally until the end of the first decade of the nineteenth century. Why the action of the Berent grand piano was changed is a subject to be taken up later in this article, and we will describe the change here briefly.

The frame for the English grand, including jack levers, hammers and shanks, pivot axle, and escapement regulation was removed. A new hammer rail was installed, supported by wooden risers at the ends of the action and two rods spaced into the key levers, with notches cut into the key levers to accommodate the rods. The lower hammer rail, on which the leather hammer hinges were glued, is of mahogany, but the top is poplar, an odd choice.

The hammers were each guided by a wire guide inserted into the wooden hammer rest, as in the earliest square piano design, made as a single unit and supported in a similar fashion as the hammer rail. The hammers themselves are made like elongated square-piano hammers, with the head notched into a square mortise in the hammer shank. Roughly half of the hammers from this second action have survived.

The backchecks from the first action were moved to just behind the mortise in the key levers, and served as the new wire jacks to activate the single action, recovered in leather to make them work. Philip Belt returned them to the new key levers when he remade the action, preserving one in the "second action" state on the original key levers.

It was a straightforward approach, and how well it worked is now a matter of speculation, but it is reasonable to suppose it would have been as effective as any other English single action. It would have had a heavier feel, and with so much mass, likely to suffer a restrike. Close observation

FIGURE 27. Hammers and shanks of the Berent piano's second action.

FIGURE 28. English grand action, made by Philip Belt for the Berent piano.

shows evidence of wear on the original key tops that indicate that the piano was played regularly in its early life. The hammer design is roughly consistent with early square pianos, with straight shanks and narrow leather hinges, making the wire guides a necessity. By the 1790s, square-piano hammer shanks had begun to widen at the point the leather hinge actuates, such that wire guides were not required. Had this second action effort been mounted as late as the mid-nineteenth century, no one would have thought to use so early a design.

The "Philip Belt," or Third Action

After being engaged by the Fesslers to help restore the piano in 1973–1977, Belt made several choices in an attempt to please the clients, who were obviously seeking a piano that would be old but look as nearly new as possible. Clearly, there was a discussion about reusing the original key levers—one was damaged and another apparently missing, and Belt remade the damaged one. But in the end, a new keyboard was commissioned, returning the piano to an English grand action, as Belt understood it. Belt used new ivory, which was a common practice fifty years ago, and had intended to remake the accidentals but was forced to harvest the old ones for the new keyboard when time and help were diminished.

The new keyboard works well enough, though the diameter of the shanks could have been another 1/16" greater and made more sense. Glue joints between hammer heads and shanks failed but have since been renewed. One hammer head was lost from the Belt restoration effort during a move at some point and has been replaced.

Scaling and Tension

We are at a serious disadvantage here, as the lot of strings preserved from the restoration were neither labeled, nor likely original. The hitch loops are irregular and inexpertly made, and the patina on the wire surface does not suggest centuries of exposure. As no restoration was known before the Fessler/Belt campaign, the origin of these strings and their current state

(a)

(b)

FIGURES 29a–b. (a) The stack as made by Belt. (b) Key levers made by Belt, with jacks in mortises.

TABLE 2. Scaling and tension for Berent piano.

Frequency @ A=425hz	Note	Left String	Middle String	Right String	Greatest Difference	% Difference in String Lengths	Proposed Diameter	Tension kgf	Note Number
1349	f‴	111	110	109	2	1.82	0.36	7.23	60
1274	e	114	113	112	2	1.77	0.36	6.80	59
1202	d♯	116	116	116	0	0.00	0.36	6.27	58
1135	d	121	121	119	2	1.66	0.4	7.51	57
1071	c♯	125	125	123	2	1.61	0.4	7.13	56
1011	c‴	129	129	128	1	0.78	0.4	6.77	55
954	b	134	134	134	0	0.00	0.4	6.51	54
900	a♯	139	139	139	0	0.00	0.4	6.23	53
850	a	147	148	148	1	0.68	0.4	6.21	52
802	g♯	156	156	157	1	0.64	0.4	6.23	51
757.3	g	163	163	164	1	0.61	0.4	6.07	50
714.8	f♯	170	171	172	1	0.58	0.44	7.11	49
674.6	f	179	181	181	1	0.55	0.44	7.02	48
636.8	e	191	191	192	1	0.52	0.44	7.13	47
601	d♯	201	202	203	2	0.99	0.44	7.03	46
567	d	209	211	213	4	1.90	0.44	7.76	45
535.5	c♯	222	223	224	2	1.69	0.44	6.18	44
505.4	c″	235	237	239	4	1.69	0.44	6.79	43
477	b	251	252	253	2	0.79	0.44	6.90	42
450.3	a♯	263	265	267	4	1.51	0.44	6.76	41
425	a	277	280	282	5	1.79	0.44	6.68	40
401	g♯	293	296	298	5	1.69	0.44	6.65	39
378.6	g	312	314	314	2	0.64	0.44	6.72	38
357.4	f♯	329	330	333	4	1.21	0.44	6.66	37
337.3	f	347	349	352	5	1.43	0.44	6.60	36
318.4	e	365	367	370	5	1.36	0.44	6.51	35
300.5	d♯	385	388	391	6	1.55	0.44	6.45	34
283.7	d	407	411	415	8	1.95	0.48	7.64	33
267.7	c♯	430	433	438	8	1.84	0.48	7.60	32
252.7	c′	454	458	463	9	1.96	0.48	7.54	31
238.5	b	483	488	493	10	2.05	0.48	7.61	30

TABLE 2, cont. Brass strings are indicated in yellow.

Frequency @ A=425hz	Note	Left String	Middle String	Right String	Greatest Difference	% Difference in String Lengths	Proposed Diameter	Tension kgf	Note Number
225.1	a♯	513	516	521	8	1.55	0.48	7.64	29
212.5	a	541	547	553	12	2.19	0.48	7.58	28
201	g♯	573	582	591	18	3.09	0.48	7.60	27
189	g	611	621	625	14	2.26	0.48	7.64	26
179	f♯	648	659	665	17	2.59	0.48	7.71	25
169	f	685	694	704	19	2.74	0.48	7.68	24
159	e	730	741	749	19	2.57	0.48	7.72	23
150	d♯	776	788	800	24	3.05	0.48	7.77	22
142	d	825	840	854	29	3.62	0.48	7.87	21
134	c♯	880	895	908	28	3.13	0.48	7.97	20
126	c	937	949	963	26	2.74	0.48	7.99	19
119	B	988	1002	1016	28	2.79	0.5	8.60	18
113	A♯	1044	1056	1070	26	2.46	0.5	8.66	17
106	A	1095	1107	1120	25	2.26	0.5	8.38	16
100	G♯	1147	1161	1174	27	2.33	0.5	8.99	15
94.7	G	1200	1214	1230	30	2.47	0.5	8.83	14
89	F♯	1256	1271	1282	26	2.05	0.5	8.54	13
84	F	1317	1325	1337	20	1.51	0.55	10.12	12
80	E	1364	1379	1392	28	2.03	0.55	9.85	11
75	D♯	1443	1447	1450	7	0.48	0.55	9.69	10
71	D	1473	1488	1502	29	1.95	0.63	11.87	9
67	C♯	1529	1543	1554	25	1.62	0.63	11.39	8
63	C	1586	1597	1603	17	1.07	0.63	10.82	7
59.6	BB	1623	1632	1641	18	1.10	0.66	11.14	6
56	AA♯	1654	1662	1668	14	0.84	0.66	10.22	5
53	AA	1678	1681	1684	6	0.36	0.66	9.42	4
50	GG♯	1695	1697	1698	3	0.18	0.7	9.62	3
47.2	GG	1711	1712	1713	2	0.12	0.7	8.77	2
44.7	FF	1722	1723	1725	3	0.17	0.7	7.94	1

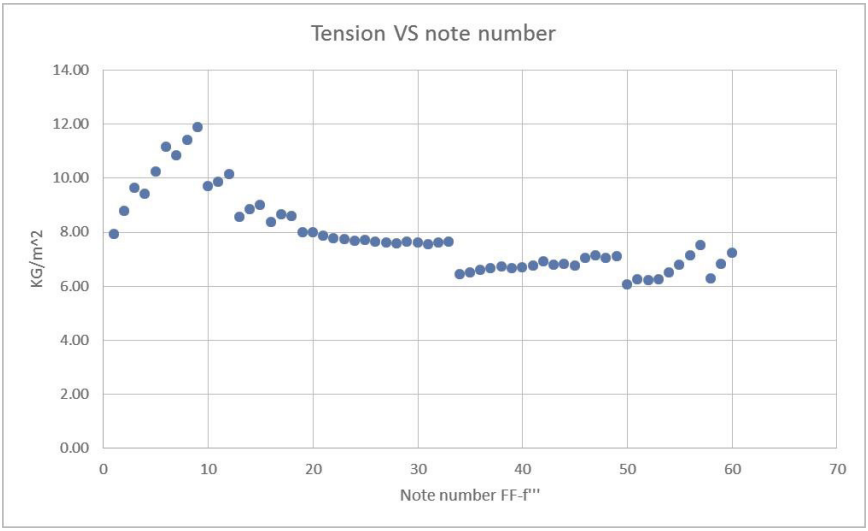


FIGURE 30. Tension graph for the Berent piano at A = 425 hz.

are unknown. From this lot of removed strings, the thickest brass string for the far bass measures 0.78 mm, two gauges heavier than early English grand pianos were likely to use.[31] The diameter of the holes in the original wrestplank veneer measure just under 5 mm, so the original pins had likely been retained, but Belt replaced all during the restoration.

Philip Belt took pains to locate the bridge on the new soundboard to match its location on the original soundboard, and likely did so with the nut as well, though too little remains to verify that. The piano has a short scale, as noted in Table 1, and in fact the entire piano could have been originally strung in brass and not have broken strings, though we doubt that was Berent's intent. If we use the scaling from other early grand pianos as a general guide, we might produce the results enumerated in Table 2.

This proposed scaling results in a graph of tension for the piano that is relatively flat and low. Berent was somewhat successful in producing equal string lengths for each note, indicating his intent to at least strive for this, as opposed to harpsichord theory, where string length differences are largely ignored, given that each rank was to have a distinct voice. This is a level of sophistication on the part of Berent that shows an awareness of producing an even speaking-length to create a desired evenness in the sound.

31. Malcolm Rose and David Law, *A Handbook of Historical Stringing Practice for Keyboard Instruments* (Lewes, UK: the authors, 1991), 25.

Discussion

Although the piano is much altered from its original state, enough reliable evidence survives to attribute the instrument to John Michael Berent of Philadelphia. A production time frame can therefore be established: from late 1774 to mid-1780, after which Berent had died and could no longer have been responsible. The overwhelming economic and social dislocation of the Revolutionary War in Colonial America strongly suggests that this was not one of several pianos made by Berent, but the one named in advertisements beginning in February 1775. Without a date on the piano, this cannot be an irrefutable conclusion, but it is nevertheless strongly suggested by circumstances.

How then did Berent come to make so extraordinary a thing as an English grand piano in America in 1775? The musical sensibilities of the times had begun to call out for the piano, but Berent brought forth a piano with a footprint that matches that of Americus Backers by a margin not far off from measuring error. The possibilities for this might be:

1. Berent worked with Backers or knew him well before coming to Philadelphia, possibly staying in contact after immigrating.
2. Berent was made privy to detailed information about Backers's piano efforts in London.
3. A Backers piano arrived in Philadelphia by 1774 and Berent had it as an example to copy.
4. Berent had traveled back to London where he came upon Backers's work, and returned to Philadelphia with a nearly completed piano in 1775.
5. The piano is from much later than thought, and/or the Berent stamp is a fraud to capitalize on the name in the famous advertisement.

The fifth possibility is quickly dismissed; there is a solid chain of custody of the piano from 1849 forward, long before anyone would have cared in the least about an old piano, and even if this were not so, the stamp would have at least followed the notice in spelling, and used Philadelphia rather than the confusing London.

The fourth possibility is a stretch for the imagination—Berent was in no position to go back to London and leave his family behind; he paid his taxes in Philadelphia in 1774. His address remains consistent, and travel was so difficult and expensive that it was undertaken only for the most

important reasons, and Berent apparently had none.

The third possibility, that Berent copied a Backers piano in Philadelphia, is possible, if fraught with inconsistency. It supposes that a wealthy private owner has brought over or bought in such a large instrument from London, and that in some way Berent knew or came to know that owner well enough to be allowed access to the piano. If so, why not copy it as-made, rather than straying from the model, to make a piano that is clearly *not* a copy of a Backers? Hillegas did not advertise such a piano, so his buying one in for sale is unlikely. Berent introduced his piano in his 1775 notice with a careful calling-out of the piano's name, a sign that it was poorly known to Philadelphia, in Berent's opinion.

That leaves the first two possibilities, and the first one is intriguing. Backers and Berent may have come from the same country or even town, or have been of the same religion, and they had the same profession. Although Berent is not mentioned in anything left behind by Backers at his death, he would have been in America at least eight years since such a hypothetical connection with Backers, so that the lack of mention is unremarkable. Had Berent been a journeyman for Backers, he might nevertheless have left no record in London (though an attempt to find one is ongoing). Backers made harpsichords and likely spinets, as reported in Boalch,[32] before entering into making grand pianos exclusively, so he was a likely person for Berent to have worked for. It cannot be concluded that Berent and Backers were not connected before Berent came to Philadelphia.

We do wonder if, by early- to mid-1770, Backers had enough of the aspects of his grand piano worked out for Berent to have taken some knowledge away. It is likely that he did. The surviving example of a Backers grand piano dates from 1772, and is numbered 21. Even accounting for his use of serial numbers for all his instruments (John Hitchcock spinet 1212 is inscribed "Backus No. 8," and attributed to Backers), Backers was likely making pianos as early as 1769. However, early Backers pianos may well have been only bichord, with a very different damper system, as seen in the 1772 surviving Backers example.[33] Berent made his piano as

32. Donald Boalch, *The Harpsichord and Clavichord 1440–1840*, third ed. by Charles Mould (Oxford: Oxford University Press, 1995), 9.

33. There is no evidence to date whether Backers made both bichord and trichord pianos from the beginning. With only one survivor, and a later notice for trichord pianos by Backers, the assumption has been that Backers progressed from bichord to trichord as he developed his piano. This is still debatable.

a trichord, with dampers that work with such a system but still following Backers. He would have also been deviating broadly with his choice of sustain pedal location, soundboard design/orientation, and case design. If they had known each other in London, did they maintain a correspondence? Such a correspondence would fill in a great many gaps in the story, but without evidence, this is only speculative.

The 1772 Backers has no recess provision for a music desk, but the Berent piano does, meaning that Berent had updated this feature as well. We will leave this first possibility active. It would certainly have been possible for Berent to have worked with Backers early on, thus acquiring the knowledge for much of what we see in this piano then (or perhaps later, by letter).

The second possibility, that Berent was told about such pianos and so produced one, would be very difficult to accept were it not for a vector of information that became available to Berent at just the right moment. Americus Backers was protective of his piano invention, warning of frauds and copyists in 1775, and would have held his construction as secretively as possible. Even a musician would not have known enough to give Berent the detailed information we see in this piano. A builder, however, might know enough to convey what we find, and such a person arrives in Philadelphia in September, 1774.

Herman Bernadees Vietor, Americanized to Victor on arrival in Philadelphia, was an organist and sometimes builder of square pianos in London in the 1760s. One square piano by Vietor from 1767 survives. Michael Cole and Margaret Debenham have researched his life in London[34] such that we can form some concept of the man as someone who aspired to more than he could become. He was in any case constantly involved in musical efforts involving the early piano as it came into being in the 1760s in London. As early as 1769, Vietor advertised having for sale a large piano that matches Berent's piano closely (fig.31).

Vietor does not claim he built the piano, but fails to mention another builder. "To be disposed of" is language often used for second-hand goods at the time, and the piano is part of a miscellaneous group of instruments for sale. A notice from Vietor appears again in the same newspaper on 22 March 1770, more than one year later, with the same wording, and could

34. Margaret Debenham and Michael Cole, "Pioneer Piano Makers in London, 1737–1774: Newly Discovered Documentary Sources," *Royal Musical Association Research Chronicle* 44, no. 1: 55–86.

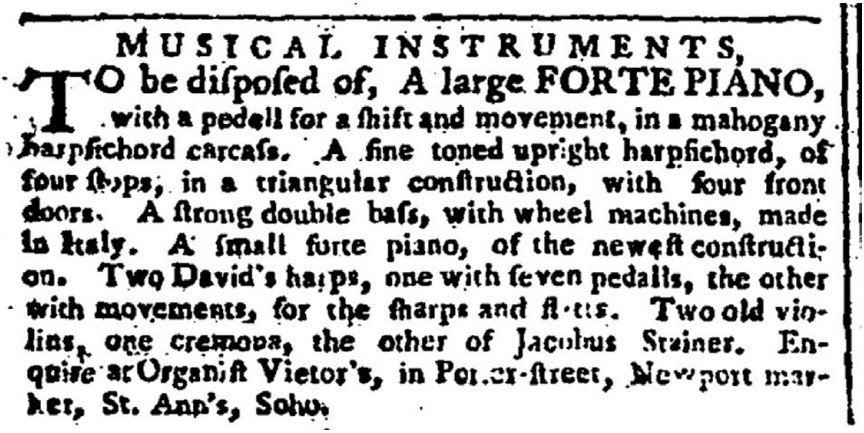

MUSICAL INSTRUMENTS,
TO be diſpoſed of, A large FORTE PIANO, with a pedell for a ſhift and movement, in a mahogany harpſichord carcaſs. A fine toned upright harpſichord, of four ſtops, in a triangular conſtruction, with four front doors. A ſtrong double baſs, with wheel machines, made in Italy. A ſmall forte piano, of the neweſt conſtruction. Two David's harps, one with ſeven pedalls, the other with movements, for the ſharps and flats. Two old violins, one cremona, the other of Jacobus Steiner. Enquire at Organiſt Vietor's, in Poter-ſtreet, Newport market, St. Ann's, Soho.

FIGURE 31. Early notice of a used forte piano being sold privately by H. B. Vietor. The word "large" implies a grand piano. *Gazetteer & New Daily Advertiser*, London, 14 February 1769.

have referred to the same instrument.[35]

Following a family crisis involving the rape of his daughter and resulting scandal as outlined by Cole and Debenham, Vietor immigrated to Philadelphia. Arriving on the fifth of September, 1774, he describes himself in a notice as *H. B. Victor*.[36] He was of the same German Lutheran faith as Berent, and would likely have gravitated to the same church. From his house in "Carter's-alley, between Chestnut and Walnut-streets, and between Second and Third-streets," it was an easy walk up Third Street, one mile from where Berent lived. Victor announced his arrival with a performance spectacle (which failed to come off as planned) soon after he settled in Philadelphia, meaning to make his living publishing instrument education texts by subscription concerts and performing—not in making instruments. Victor also enlisted as a private in the Continental army, possibly at the same time as Berent, though well after a first piano was completed.

35. The authors are grateful to Graham Walker for bringing these notices to our attention and for the many conversations over the years regarding H. B. Vietor and his keyboard building work in London.

36. "Whereas many people make a mistake in his person, taking him for one of the same name, who has been many years in Maryland and Virginia. Mr. Victor thinks it his duty to inform the public, that he came into this country the 5th of September last, and never was in America before; that he went from Germany to London in the year 1759, and lived there ever since, as can be proved by many noblemen and gentlemen residing there, with whom he had the honour to be acquainted." *Pennsylvania Gazette*, 22 February 1775 (Philadelphia).

One month after Berent's will was probated, H. B. Victor issued a notice "To Be Sold, a New Harpsichord, with three stops, and completely finished. Enquire of Bernadees Victor, Musick Master, in Carter's-Alley, from eight to ten o'clock of a morning."[37] Where this harpsichord came from is unknown; it is unlikely Victor himself built it. But if the widow Barbara Berent still retained her husband's piano, unsold, to dispose of, Victor might have been a logical choice to sell it, this time describing it, however, as a common harpsichord. This last speculation is an optimistic conjecture—no written record exists that ties Victor to Berent.

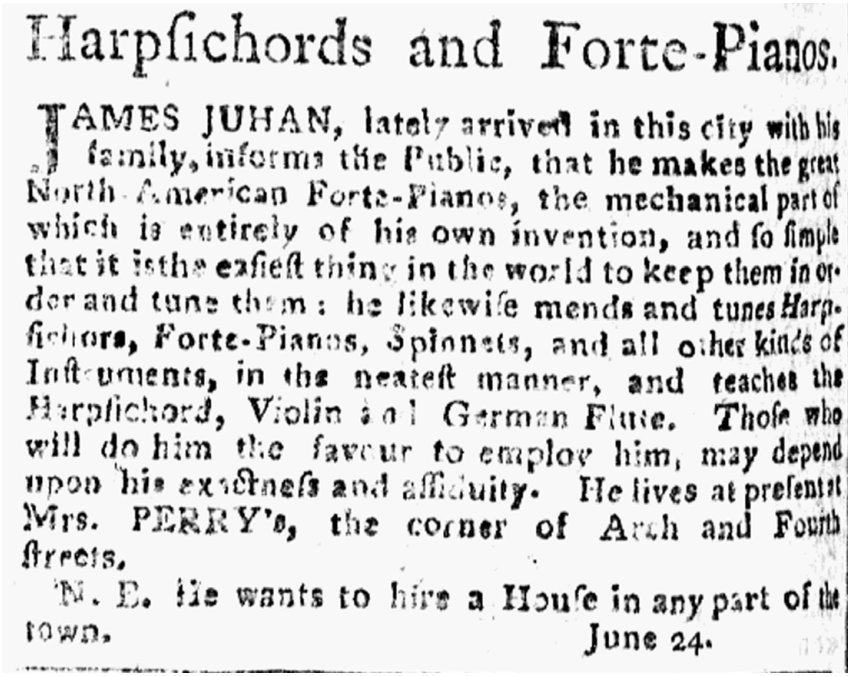
No one else with the exact knowledge needed to inform Berent has come to light, and whether Victor told Berent about the advantages of the Backers-style piano that was gaining traction in London, or if Berent came to America armed with that knowledge, is unknown. However, we can assert that Berent's approach was far too close to that of Backers to have been any kind of coincidence. We can also maintain that in no way did Berent make a a true copy of a Backers piano, as the instrument differs in important acoustic and mechanical aspects. So, Berent and his piano remain a bit of an enigma, waiting for the correct scrap of information to fill in several gaps in our understanding.

Why the piano then needed a second action so early in its life is also puzzling, though in this case there may have been motivation. Berent was dead after mid-1780, while Victor likely died or moved sometime around 1781, as his tax notices in Philadelphia end there. No one remained in Philadelphia at that time who might understand the piano well enough to repair some small problem. It is certainly possible that it simply failed to work properly, as Berent only poorly understood the English grand piano action approach, and a local musical instrument workman was engaged to "make it play," taking a simple expedient to do so.

However, another potential character in the world of early American pianos comes into view, and we should not discount him. John James Juhan played several roles in the early American music scenes in the key coastal centers of Boston, Charleston, and Philadelphia. Born around 1740, he was a Swiss native, according to family genealogy, arriving in Nova Scotia in 1760 as a language tutor, and in Boston by 1768.[38] He

37. *Pennsylvania Packet*, 14 November 1780 (Philadelphia).

38. Betty Frank Coy, *The Juhan–Payzant Family History* (Salt Lake City, Utah: Family History Library and www.familysearch.org, 1968). Photocopy of genealogical correspondence between Major Betty Frank Tanner Coy, U.S.M.C.R., of Washington, DC,



Harpſichords and Forte-Pianos.

JAMES JUHAN, lately arrived in this city with his family, informs the Public, that he makes the great North American Forte-Pianos, the mechanical part of which is entirely of his own invention, and ſo ſimple that it is the eaſieſt thing in the world to keep them in order and tune them: he likewiſe mends and tunes Harpſichords, Forte-Pianos, Spinets, and all other kinds of Inſtruments, in the neateſt manner, and teaches the Harpſichord, Violin and German Flute. Thoſe who will do him the favour to employ him, may depend upon his exactneſs and aſſiduity. He lives at preſent at Mrs. PERRY's, the corner of Arch and Fourth ſtreets.

N. B. He wants to hire a Houſe in any part of the town.

June 24.

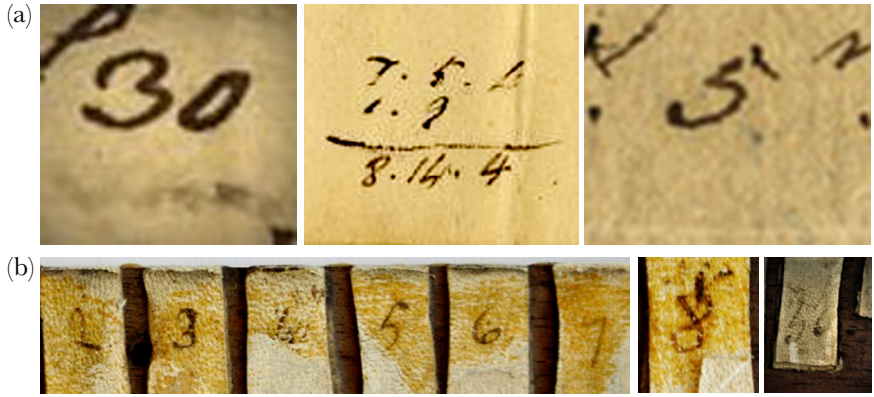
FIGURE 32. Notice by James Juhan. *Pennsylvania Packet*, June 15, 1783.

went to Charleston in 1771, then to Santo Domingo until the end of the Revolutionary War. He then went to Philadelphia with his son, Stephen Alexander Juhan, in or before June of 1783, placing a notice of his arrival in the *Pennsylvania Packet* (fig. 32).

The key take-aways are that while Juhan is recorded to have made rather straightforward things like violin bows in Boston, he has previously advertised himself as a musical instrument repairer and teacher, and not as a harpsichord or piano maker. Yet here he claims, after just arriving in Philadelphia, that "he makes the great North American forte-pianos, the mechanical part of them being entirely of his own invention, and so simple, that it is the easiest thing in the world to keep them in order and to tune them."[39] The "great" North American forte piano would, of course, refer to a grand piano, and Juhan points us directly to the action he claims to have invented.

and Marion M. Payzant of Wollaston, Mass., on the Jess, Juhan, and Payzant families, 1954–1973.

39. *Pennsylvania Packet*, 15 June 1783, (Philadelphia), 4.



FIGURES 33a–b. (a) Examples from Juhan's letters; (b) numbered leathers from the second action of the Berent piano.

The second action made for the Berent piano would answer this notice very well, and would fall within Juhan's more narrow skill set. Are we in fact seeing an example of James Juhan's "Great North American forte piano?" Did the Berent piano fall into Juhan's hands and emerge in its altered form? What we know is that Juhan ran this notice from mid-June into early August 1783, but largely disappeared from print after this, with his son Alexander making most of the postings after 1784.

We hear no more about James Juhan's pianos in Philadelphia. In the 15 April 1786 issue of the Virginia Gazette, he stated that he taught music, repaired instruments, and was a "Harpsichord and Forte Piano maker." He also advertised as a journeyman cabinetmaker or joiner.[40] Accounts of James Juhan in Virginia in 1786[41] involve a series of defaults on debts, or letters explaining why debts were left unpaid. He disappears from the records in 1792, never quite achieving prosperity in America.

Juhan left personal letters in his own hand containing numbers, and a few of the numbers survive on the leather for the second action of the Berent piano. There are similarities in the approach to forming the numbers, but on such slight evidence, we can only say that whoever numbered the leathers did not form their numbers in a way that excludes them from being Juhan.

40. *Virginia Gazette*, 19 April 1786, 3.

41. Chris Kolbe, "I Told you I had No Money & Therefore Could Not Pay You," Richmond, Virginia: https://uncommonwealth.virginiamemory.com)

Conclusions

The initial suggestion that the John Behrent piano had come to light was met with intense skepticism. Subsequent investigation, as each element checked out, resulted in the only possible conclusion that this was in fact a piano crafted by the John Behrent whose notice appeared in the March 1775 *Pennsylvania Packet*. Whether it is the very instrument mentioned in his 1775 advertisements, or perhaps a sister instrument, it is a remarkable discovery as an American-made grand piano, closely modeled on those of Americus Backers and made concurrently with Backers's work in London. With the rapid advancements towards war and a skittish public, who quickly lost interest in frivolous things like pianos, the turbulent environment more than likely prevented Berent from making more than one grand piano—the one we now have for study and future display.

With the action lost and soundboard replaced, we can never know precisely how the original piano sounded. Yet assuming that Belt's action is close, and assuming the new soundboard is not far from the response of Berent's rather odd choice, we can say that as it is today (having brought a few notes back to tension) it is not at all a bad-sounding piano. The Philip Belt action is not noisy, the response can be swift, with a light touch and rather shallow key dip, as in other early English grand actions. The resulting sound is much like other early English grands in the Sigal Music Museum collection, perhaps a bit softer, but not unpleasant. Whether it is brought back to playing condition in the future is another subject entirely, though producing a copy might the best approach if funds and resources permit.

The acoustical analysis[42] of Dr. Giordano on the original side-grain-oriented soundboard, modeled in the existing case, indicated that it should have a less robust performance than later English grands, and this conclusion is indisputable, though incomplete. The aesthetic it was designed to meet is exceedingly different from that of today's musician and listener, and even of the listener of 1800, but was entirely understandable to the colonial ear of 1775. The study of Berent's surviving piano will continue with that aural dichotomy firmly in mind.

42. Nicholas Giordano, "The First Piano Made in America: A Structural Analysis of the Grand Pianoforte of Johann Behrent," Paper presented at the conference Analysis and Description of Music Instruments using Engineering Methods, Halle an der Saale, Germany, 12–13 May 2011.

Appendix

Contextual Timeline for the Piano in Early America
and the Work of John Michael Berent

Citations for most entries are given above, in the text of the article.

1745. Traditional date for appearance of an upright piano with Pennsylvania Moravian associations and attributed to John Clemm.

1762–66. Period to which Burney is presumed to refer when he wrote "After the arrival of J. C. Bach in this country . . . all the harpsichord makers tried their mechanical powers at piano-fortes, but the first attempts were always of the large size . . . till Zumpe . . ." (Abraham Rees, "Harpsichord," in *Cyclopaedia, or Universal Dictionary of Arts, Sciences, and Literature* (London: Longman, Hurst, Rees & Orme, 1820)

1766. Zumpe introduces small (square) piano-forte.

1767. Pether of London advertises "To be seen and heard, A curious PIANO FORTE HARPSICHORD . . . at Mr. Pether's, harpsichord-maker, . . . It is the second he has made.
(*Gazetteer and New Daily Advertiser*, London, July 18, 1767)

1770. September 20. "John Berend, Joyner and instrument-maker, lately arrived from Lisbon (London) makes and repairs spinet, harpsichords and clavichords, with a new harpsichord for sale."

1770. December 4. John Michael Berends marries Barbara Schott (1750–1797) in Philadelphia.

1771. Americus Backers publicly introduces his "Instrument of the Harpsichord Kind . . . an Original Forte Piano . . . entirely his own Invention."

1772. April 21. Johann and Barbara have a son, also named Johann (John) Michael Berendt.

1772. Earliest surviving Backers grand piano, Serial Number 21.

1772. June 30. "John Berndt, joiner and instrument-maker, about the 11th of July he will move from Race-street into Third-street, in Campingtown, opposite Mr. Coats's Burying-ground, to a lot, on the back of which is erected a two-story brick kitchen, and in the front a frame work-shop, with his name on the sign-board. He has for sale, a harpsichord, and spinet, well made, of walnut; which, he will keep in good order for 12 months. Any person having an instrument that wants repairing, he will put the same in good order for a reasonable price or take it in part of payment for a new one."

1774. June 8. "Imported and to be sold by Michael Hillegas, at his house, in Second street, between Arch and Race-streets . . . Also a variety of very elegant spinnets, forte piano's, guittars, violins with or without cases, German flutes, hautboys, clarinets, common flutes and fifes; a neat organ, with a very elegant mahogany case, fit either for a gentelman's chamber, or a small church.

1774. September 5. Herman Bernard Vietor (Victor) arrives in Philadelphia.

1774. October 10. John Sheybli advertises for a "spinnet with hammers" in the *New York Mercury*.

1775. February 28. "Johann Behrent, carpenter and instrument maker, residence on Third Street, in Campingtown, opposite the churchyard of Mr. Coates, has an extra-well made Piano Forte made of Mahogany wood, like a harpsichord with hammers and various changes. . . ." (translated from German). Ad runs through April 1775 in English.

1775. Surviving Pether harpsichord with key levers cut for English grand piano forte jacks. Presumably the instrument was begun as grand piano forte, but completed as harpsichord. (N.B. If it had been completed as a grand piano forte, it would be the second-oldest surviving English grand piano forte.)

1775. March 14. Backers places notice in the *Morning Post*, London, to warn the public about counterfeit Backers pianos.

1778. December. Backers dies in London. William Frecker likely assumes the position of builder once the estate is cleared.

1779. Tax records for Philadelphia: John Berendt's assessed value is £2300.

1780. Tax records for Philadelphia: John Berendt's assessed value is £2200; £500 rebated so only taxed on £1700.

1780. August 31. John Michael Barendt's last will and testament. He signs (poorly) John Michael Barendt and Barbara signs Barendt (both spelling with an "a").

1780. September 10. John Michael Berent (Berens) buried.

1780. November 14. H. B. Victor announces: "To Be Sold, A New Harpsichord, with three stops, and completely finished. Enquire of Bernadees Victor, Musick Master, in Carter's-Alley, from eight to ten o'clock of a morning."

1782. Barbara Berendt receives tax exemption of £200.

1790. May 16. John Berendt Jr.,18-year-old son of John Berendt, dies and is buried.

1793. January. Barbara Berendt makes her will.

1797. October. Death of Barbara Berendt.