

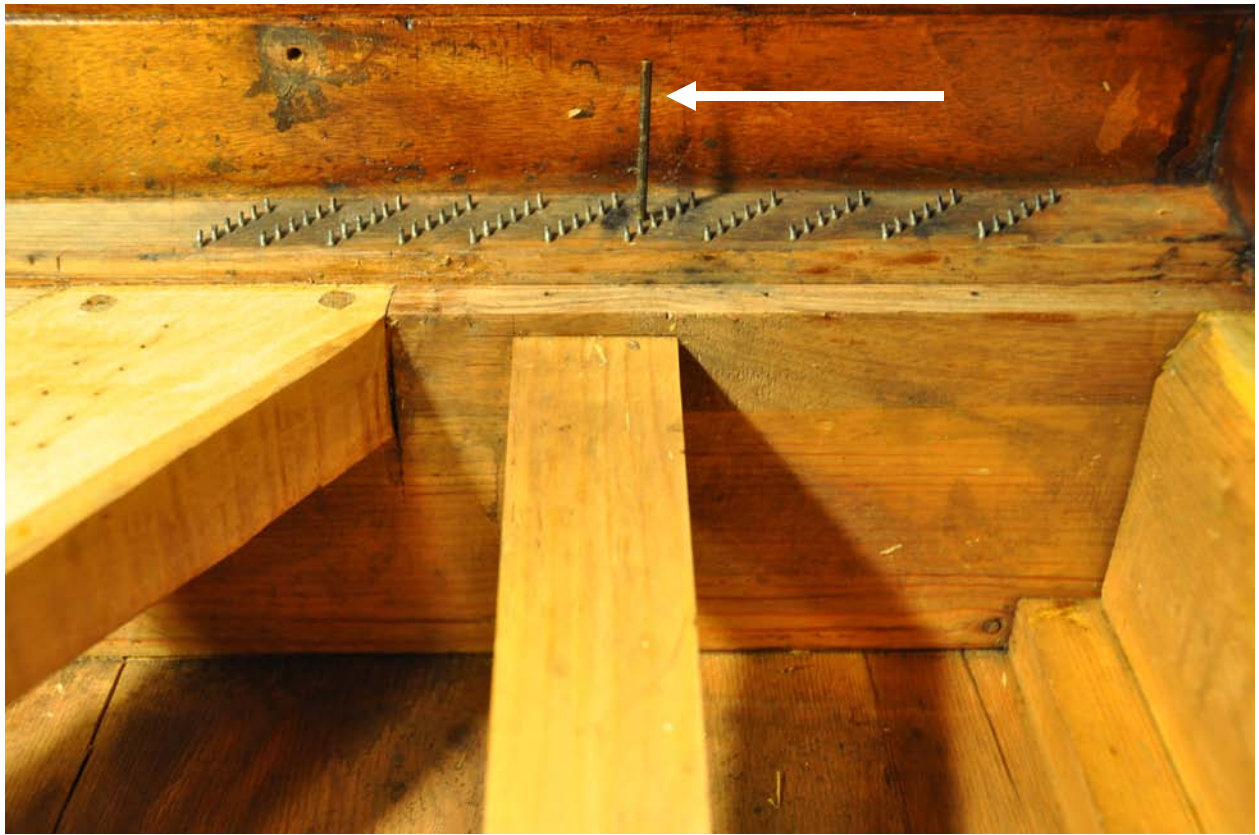
The Removable Cover in Square Pianos

From about 1778¹ until about the mid 1830s in America, square pianos were often fitted with a separate removable cover that fit inside, initially covering the action and strings as defined by the main lid, and later exposing the soundboard but leaving the action covered. The function of this cover, commonly known as a dust cover, has been extensively debated for years. It is clear that as the pianos aged, the cover was considered superfluous and many pianos today are found with evidence of having once supported a cover which has been discarded by the tuner or family.

Early models by Broadwood are of high grade soundboard quality spruce, about 2 mm thick, with battens top and bottom at the two long ends and near the middle (not quite symmetrically placed though), also ~2 mm thick each.

These covers are supported by small mahogany wedges and with Broadwood, an additional vertical brass rod ~3 mm thick and positioned among the hitch pins on the right, where this post allows cover support without interfering with a lid support arm.





Covers for Longman and Broderip squares, which are common by at least 1785, were universally covered in dark green silk² and made more robust than the Broadwood covers. These are more typically 4-5 mm thick, of pine or deal wood, with battens underneath. Below is a Longman & Broderip of 1790.



Joshua Done, c. 1792

By the late 1790s the cover had begun to morph, remaining over the action, but exposing the soundboard:



Broadwood, 1809





Longman &
Broderip,
1795



Clementi,
1812



Clementi 1812



John Green, circa 1805, hinged cover

Green silk gave way to paint, and these later covers were universally thicker than the early Broadwood, typically between 4 and 6 mm. In America they became elements of high decoration, involving design motifs that mirrored the national style, such as stars and eagles for the Federal period, or later gilded leaves from the neo-classical period.

The panel begins to be made of mahogany and rose wood, thus losing any trace of sound board like resonant properties.



Robert and William Nunns c.1830



William Geib, 1831





Another W. Geib about the same year, c.1830, but in a plain mahogany style with simple border.

As to the function of this cover, the following uses have been proposed:

Sound Modifier – The tone of a square piano can at times be a bit rich in overtones, but with the lid down, or the lid up but the insert panel in place, this can be modified to direct sound only from the sound board, and so a tone more rich in fundamentals. Arguments for this application are particularly strong in light of several points.

There is historical period description of the cover for this application

Covers begin appearing from the Adam Beyer shop, known for his meticulous craftsmanship and highest quality sound.

Covers were not present from the beginning, so the need was ‘discovered’ rather than guessed at or imposed by developing conditions.

“Resonant Soundboard” – Where the panel acts to increase elements of the tone by resonating and emitting its own sound. This is very possibly a consideration particularly with the thin early Broadwood panels, but ineffective once the panel is covered in silk or made of Rosewood and thicker. Additionally, for a soundboard to function it must be fitted in tightly at the edges, and a removable panel cannot be fitted to meet this requirement without fixing the edges in a more rigid manner than we find here.

Noise Reduction – The action of early squares in particular is replete with clicks and potential rattles, so modifying this and subduing it can give a more pleasant experience in front of the instrument. This may well have been an additional benefit discovered by Beyer and used by the best builders. The lever damper style square is prone to clicks from the action as the actuators rise and fall in the hitchpin block, and levers operate in the rack.

Modesty – The goings-on of the action was considered somewhat impolite, particularly to subject the ladies to, so a modesty panel spares them the indignity of seeing the hammers in actual motion. I suspect few ladies ever protested, but that never prevented a gallant from charging to a rescue! But why wait 10 years to introduce it. Surely modesty begins from day one. We were never squeamish about seeing the inside of a clavichord operate over the hundreds of preceding years, nor the spinet or grand harpsichord. I think this one is a modern take on 18th century sensibilities.

Dust cover – Last and not least, this panel can act as a shield of last resort for errant items falling into the works. Again, why wait 10 years to introduce it, and if so valuable, why do we see this useful feature retire in favor of clean powerful tones from later squares?

Given that paintings of square pianos invariably show them with the lid closed, even when playing to a room full of people, we can suspect that lids were rarely raised. This author conjectures that the original intent was for sound modification, and a treatise by Wachtl and Bleyer bear this out. An excerpt is given below from a translation courtesy of Edward Swinson:

Historical Description of the Vertical Fortepiano Invented by Wachtl and Bleyer in Vienna (1811)

(Historische Beschreibung der aufrechtstehenden Forte-Pianos, von der Erfindung Wachtl und Bleyers in Wien) Allgemeine musikalische Zeitung (Vol. 13, Intelligenz-Blatt, November, 1811), pp. 73-77.

Translated by Edward Swenson

All of our wood is artificially kiln-dried. In this we followed the good example of Mr. Mündinger (a local citizen and master cabinet maker) who has been using such a method for the last twelve years. Only a few wood workers are aware of the advantages in treating the wood in such a manner. Most claim that only time dries wood out. But if one lets wood lie in the open air for fifty years, it will not dry to the point of being magnetic [?], something which does occur, however, within eight days if the artificial drying method is used.... The timber used for our soundboards and keyboards is steamed for forty-eight hours before going into the kiln. The hot steam of salted water penetrates all the pores of the wood and dissolves the resin found within the pores, and draws it out onto the surface of the wood where one can see it in the form of brown drops.

One can easily see that a soundboard thus treated will not only be more lasting but also more suitable for its acoustic function.

Some pianists have rightly remarked that the tone of our upright fortepianos seems too strident [grell] to the ear. This fault has been remedied when we started using a sound-cover [Schalldeckel] (an English invention)

It is noted that many Viennese grands and even a few English grands had these covers fitted over the strings, such that with the lid raised, the tone continued to be modified by this panel. These modifiers were not of resonant spruce however, and seem to be there for the reason stated by Wachtl and Bleyer, to modify the sound.

It has been proposed that a more authentic name for this cover is the German **schalldeckel**, or sound cover. Historically the English seem to refer to them as dust covers when they are referred to at all, which is rarely, and Michael Cole has rooted this precedent in deeply with his authoritative book on *The Pianoforte in the Classical Era*. However, covering against dust, if intended, was an intent rarely if ever met, while modifying the sound and reducing action noise is something they can assertively all be said to do. Even when our current sensibilities can no longer be assaulted by seeing mechanics in action, we can appreciate a mellow sound from the instrument.

Restorations of period squares where we can find the brackets to hold a schalldeckel but where it has been discarded, are really not complete until we make a replacement and refit it. Early Broadwoods up to about 1800 are in thin unpainted spruce, and Longman & Broderip in spruce or pine covered in dark green silk. After 1800 Broadwood can be found with cream colored covers, sometime light green, and Clementi in green, both with gilt or gold leaf banding and decorative devices.



¹ Two extant Adam Beyer square pianos from 1778 and 1779 have brackets for a cover, and the 1779 cover is intact. Graham Walker, who restored the 1778 Beyer, makes this contribution:

Adam Beyer was probably the first maker to fit internal covers (or dust cover) and this was probably used to conceal the workings of the piano in an age in which it may have appeared impolite to show these parts of the instrument. There were two options for the cover. Both options adopted a full length board inside the piano covering the strings and tuning pins except for a small area to the front of the soundboard. One option adopted a second cover that covered the dampers and also acted as a damper restraint rail and the second option retained the normal damper restraint rail leaving the dampers uncovered. The Bate Collection Beyer (1799) adheres to the first option and the 1778 Beyer to the second.



1778 Beyer with spruce cover and damper cover rail



1779 Beyer with separate damper cover board (mahogany) and spruce main cover.

The earliest Broadwood square pianos and a Christopher Ganer, all of 1780, have the support wedges for a cover. Zumpe, Beck, and Pohlman never show evidence of having one. As Walker states, Beyer may well have originated this device. Froschle of 1776 does not show it, so unlikely Broadwood got the notion from his neighbor, though the brass under damper concept probably came from Froschle. Beyer was highly respected as a builder, and would have been a potential influence as Broadwood considered how to introduce square pianofortes into the business.

² A well known case of theft of the silk was tried in the Old Bailey where an assistant had removed a roll of green silk from John Geib's premises, establishing that Longman & Broderip bought materials and these were used by Geib and others in making the pianos.

535. EDWARD JOHNSON was indicted for feloniously stealing, on the 28th of April last (1785), 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.