



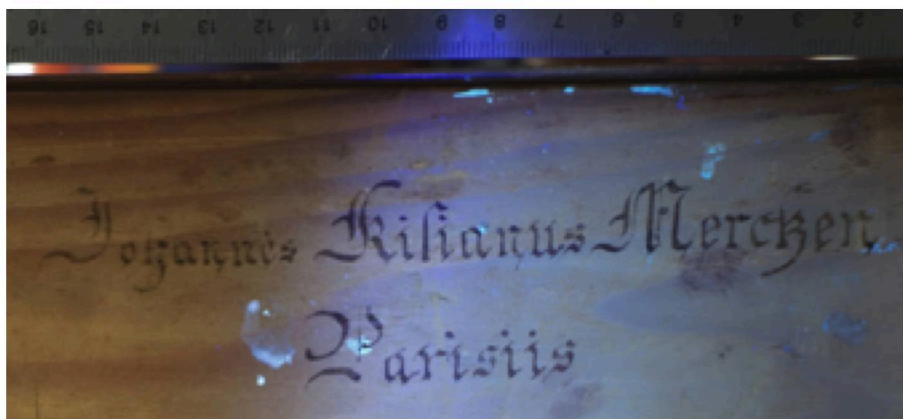
Fortepiano by J.K. Mercken: general views (photos K. Schwarz)

The recent discovery of a large wing-shaped fortepiano signed by Johannes Kilien Mercken (Übach 1743 - Paris 1819)¹ has provided us with what is probably the earliest extant French grand piano. The present paper seeks to demonstrate that the instrument probably dates from shortly after Mercken's arrival in Paris in 1767, and that in spite of its obvious similarities with the large instruments made by Jean-Henri Silbermann in Strasbourg, it shares numerous traits of conception, construction and decoration specific to square pianos made by Christian Baumann (Annweiler 1740 - Deux-Ponts 1816) in Deux-Ponts (Zweibrücken), leading to a robust hypothesis that Mercken worked for him as a journeyman.

The presence of two distinct action types in the instrument, and an astonishing castellated treble strike-line, is analysed and discussed, with the conclusion that the modifications were made by Mercken himself.

1) Description:-

The instrument is signed in ink, in a fair hand, on the rear of the removable board behind the keys, at the top of the bass end : "Johannes Kilianus Mercken/Parisiis". There is no date. Possible traces of an earlier inscription turned out, under ultra-violet light, to be an optical illusion.



Mercken's signature under ultra-violet light.
(all photos are by the author unless otherwise stated)

A smaller ink inscription behind the treble end of the nameboard reads: "restauré par Ch. Zipfel/Rue Saint-Dominique 14/Lyon./1885"

Dimensions are given in mm., without mouldings (in brackets, dimensions in "Pied du Roi", 1 *pied* = 12 *pouces* = 325mm.)

Case: length 2272 (7'0"), width 981 (3'0"), cheek length 542(1' 8"), tailboard width 258 (9½"). Case depth 254 (9¾"), total height from the floor 870 (3'8").

The case and lid are veneered in panels of figured walnut, framed by stringing consisting of a ± 9mm. wide band of vertical-grain ebony sandwiched between ±1mm - wide lines of a light wood (box?). The frame steps inwards by its own width at the central part of each panel,

1. Marie-Christine et Jean-François WEBER: *J.K. Mercken, Premier facteur parisien de forte-pianos*, 2^e. édition, 2008, Delatour, Paris. p.30

which thus forms a sort of dumb-bell shape. A band of reddish wood (pernambuco?) doubles up the outside of the frame at these points, so that the outside of the complete frame is a perfect rectangle. A wide diagonal cross-band ($\pm 36\text{mm}$) in plain walnut goes round the frame; its grain direction changes at the mid-point of each panel. The spine and lid interior panels have no frames, only cross-banding. The keywell surround and the top of the inverted wrestplank are treated in the same manner as the case sides. A stopped cove moulding in solid walnut runs round the bottom edge of the case.

Lid:- The main lid is mounted on three large hinges of blued sheet iron, visible on the outside of the spine but mortised into the lid. An articulated flap covers the front part of the piano and the front fall is hinged to it. A stopped cove moulding of the same section as that of the case runs round the rim of the lid. The fall carries a moulding along its lower edge, with a return at the sides, which follows and completes that of the case when the fall is closed. There is a little damage at this point. A lock with a decorative cast brass escutcheon is at the right of the fall.



The stand was originally supported on eight octagonal tapered, fluted and carved walnut legs. One leg is missing. The legs follow three slightly different patterns, which may be as a function of their visibility in their various original positions or because some are replacements due to woodworm. In the photo above, the legs at either end of the cheek and the one in the middle of the spine show an elegant trumpet-shaped taper of the lower, fluted section. The other designs have straight tapering. The panels of the lantern-shaped upper part of three legs frame a faceted pyramidal motif. The four other legs have flat framed panels. The frame of the stand is of walnut (some woodworm damage) and it is bordered by a flat walnut plinth. The front part of this is a replacement, as is part of the spine section.

The case structure appears to be of spruce. The inverted wrestplank, of oak, is jointed (dovetails?) at either end to vertical-grain walnut uprights, which in turn are dowelled to the case walls. A concealed iron rivet passes vertically through the rear of the wrestplank and its uprights, from top to bottom. At its rear, an iron support brace runs down the inside face of the bellyrail. The bellyrail judging by what one can see through a crack in the bottom-boards seems to be rather thin, around 26mm thick; it has no soundholes. Looking through the rose, it would seem that the bottom-boards are reinforced by closely-spaced flat straps running perpendicular to the spine, in exactly the same manner as in Baumann square pianos. The first of these is probably placed under the bellyrail. A vertical brace running at about 70° to the spine is also visible through the rose (see diagram, p.34). The veneered case walls are fairly thin and sit in a rebate formed by the edges of the bottom reinforcements and the bottom-boards. A moulding round the bottom of the case conceals the joint. The case is topped by a solid walnut cap, with a moulding on the inside, also like Baumann square pianos. Slight distortions of the veneer at the bentside-tail joint indicate the presence of a dovetail joint in solid soundboard liners, probably around an inch thick; the liners no doubt form a continuous inner frame.

Keyboard:- FF-g3, 3-octave measure 471mm. Two-piece ebony natural covers, heads thicker than tails; heads 35mm. long, tails 75mm. The heads have two incised lines and the edges are rounded in front of these. The keyfronts are flush with the heads, and are of black-stained fruitwood. The accidentals are of stained fruitwood capped with thin ivory plates.

The keytails and the accidentals are all around 12mm wide \pm 0,5mm.

The key-levers are of lime, guided at the rear by pins inserted between the keys.

Two large blocks veneered in opposing triangles of ebony and a light wood flank the keys. They do not leave any space for an *una-corda* or keyboard shift.

The action is divided FF-c1:c#1-g3.

The lower half is very similar to those of J-H. Silbermann; the keys carry sprung escapement hoppers riding in mortises; these act on notches in the middle of intermediate levers hinged at the back of the chassis, which in turn act on hammers pivoted on a string running through a guide comb at the front of the action. The hammer-heads rest in an incurved padded rail: there is no check. The hollow hammer-heads, of cardboard, are covered in two layers of soft oil-tanned leather.



J.K. Mercken c1768, action above, below.

The upper half clearly started life as a continuation of the bass half, and there are indications that it was played in this configuration. However, the present action is an “Intro *Prellmechanik*”² without an escapement mechanism. The hammers, heads pointing towards the soundboard, are pivoted on silk floss bundles in tall wooden *Kapseln* mounted on the keys. The prolonged tails of the hammers meet a leather-covered rail (*Prell-leiste*) attached above the original guide combs, and are thus flipped towards the strings. The heads are of solid lime-wood, covered with two layers of soft oil-tanned leather. The heads are aligned alternately in two strike-lines about 10mm. apart. This is no doubt to avoid hammers fouling on their neighbours, since the tall *Kapseln* multiply any play in the balance-mortises by a factor of around 6. This odd feature seems original to the modification. The rather distinctive pearwood used for the *Prell-leiste* seems to be the same as that of the action frame, so it is probable that this modification was done by Mercken. The mortises in the treble keys are covered by small patches of lime-wood veneer glued over them.

The dampers run in leather-covered guides and pass between the unison pairs of strings. Soft leather wedges are glued under wooden blocks at the top of the weighted damper sticks. About half the dampers re replacements. Divided treble and bass damper-lifter battens are provided with diagonal slits; brass pins pass through these into the bellyrail. The lifters are actuated by wooden posts passing through mortises at either end of the damper cover rail.

2. Nomenclature suggested by Michael COLE to describe the orientation of hammer-heads: in the more usual configuration, “retro”, the heads point ‘out’ of the instrument, towards the player. “Intro” heads point ‘into’ the instrument, away from the player.



Rose cut from three layers of pasteboard

The Soundboard and bridge Soundboard of medium-grained quarter-cut spruce. At the bellyrail, its thickness is $\pm 4\text{mm}$. Bridge of black-stained fruitwood, of A-shaped section with a rounded back. The bass end is slightly curved over the space of five notes. Notes 1-39 are back-pinned. 63 bichord notes with widely-spaced ($\pm 6,5\text{mm}$) unisons, 62 spaces laid out to fill 30" (cf. J.-H. Silbermann's 61 notes, 60 spaces to fill 30". The fairly broad hitchpin rail, of walnut, has an ogee moulding along its edge. Around note 58, it has split and detached from the bentside, causing a split in the soundboard. Otherwise the soundboard is intact though slightly stained in places. An X-ray will be needed to determine the ribbing system.

An elaborately-pierced geometrical rose (diameter 10,3mm., $3\frac{3}{4}$ ") in Rhenish style is built up of three layers of cardboard.

2) Discussion, comparison:-

Foreword:-

The grand piano built by Mercken is surprising in more ways than one. The fact that its style is so resolutely German (Fig. 1), both decoratively and instrumentally, might seem surprising in a Parisian fortepiano; we are accustomed to seeing the sumptuous Taskin instruments of the 1780's. But we should remember that in the Paris of the 1760's, the piano was still considered to be an exotic foreign harpsichord with hammers: small rectangular (square) pianos were mostly imported from England, large wing-shaped instruments, considered to be the invention of Gottfried Silbermann in Saxony, came from his nephew Jean-Henri Silbermann in

Strasbourg³. In the case of the square piano, French makers initially took over not only the instrumental forms of the English ones but also their decorative aspect as furniture. Mercken seems to be the first Parisian maker to have copied English square pianos; the oldest of his instruments that have come down to us dates from 1770⁴. The excellent monograph by Marie-Christine and Jean-François Weber⁵ emphasises Mercken's adaptability throughout his career, able to work in various fashionable styles. So it should not surprise us that he should make his harpsichord-shaped fortepiano in the German style, which naturally was familiar to him and which fulfilled Parisians' expectation of what such an instrument should be. This unique harpsichord-shaped fortepiano by Mercken is also almost unique in the cohabitation of two types of piano action; in the bass half, an action with an escapement mechanism similar to those of the Silbermanns, in the treble, an action without escapement of the *Prellmechanik* type.

Mercken and Silbermann: -

The kinship of Mercken's instrument with those of the Silbermanns is apparent from the first glance: walnut-veneered case, inverted wrestplank, regularly spaced strings (the space between unisons is almost equal to the space between two notes) with jack dampers guided between the unisons, a beautifully-cut rose in three layers of cardboard. The cardboard rolls forming the hammer-heads are almost identical to the Silbermanns'. There are further resemblances to the Silbermanns' work, Jean-Henri's in particular. Mercken's bass action, like Jean-Henri's but unlike his uncle Gottfried's, has no hammer-checks; however the hammers mounted in a comb are typical of Gottfried's instruments, those of Jean-Henri being hinged on parchment and leather hinges.⁶ The sharply-angled tail is also typical of Jean-Henri, Gottfried's being rounded.

When we look at the Mercken piano more closely, however, we can observe many deviations in design and execution from the Silbermann instruments.

The keyboard, (Fig. 2) in ebony with black-stained accidentals capped in ivory, is a little less wide (3 octaves 471mm) than J-H Silbermann (479mm). The heads have two incised lines, rather than Silbermann's three, and the tails of the diatonic keys all have similar widths whereas Jean-Henri has wider D keytails. The sharps have markedly sloping sides and fronts and the ivory veneers are thin. Jean-Henri's sharps are hardly sloped, and are topped by a thick bone cap; the lower part of the block is planed vertically to adjust the width. Mercken made a small mistake in shaping the head of the FF key; he rounded the left side adjacent to the keyboard block. Top g3 key is made correctly, without rounding the head at the right.

3. John KOSTER, "Foreign Influences in Eighteenth-Century French Piano Making," in: *Early Keyboard Journal* 11 (1993): pp.7-38.

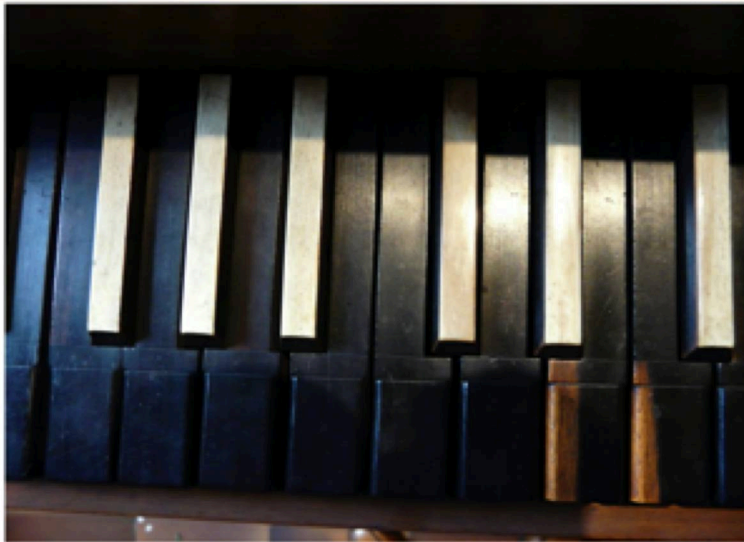
4. Recent re-examination of the inscription shows that the final figure "0" may have been altered from "9"

5. WEBER, op.cit.

6. It is perfectly possible that in the 1760's, Jean-Henri's hammers were still mounted in a comb; the earliest surviving piano by him is dated 1776.



(top)
J.K. Mercken c.1768



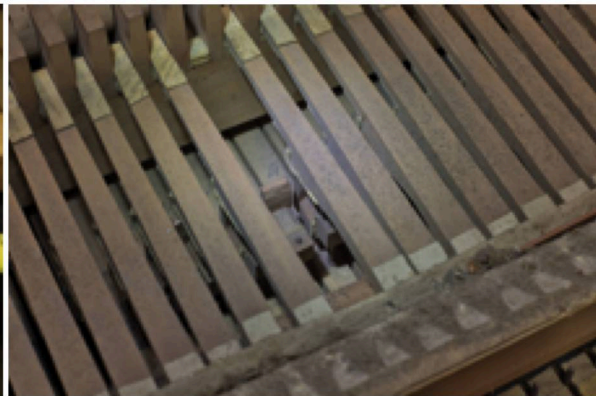
(left)
C. Baumann c.1785

(below)
J-H. Silbermann c.1782



Keyboard comparison.

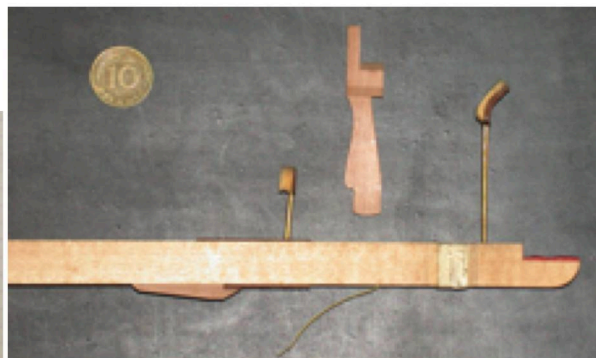
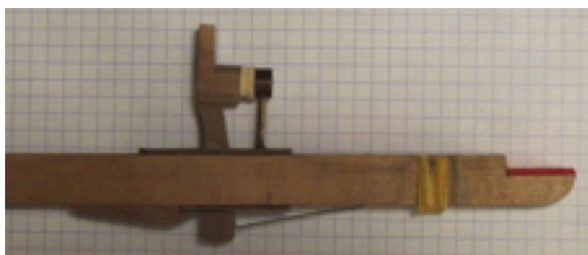
There is no keyboard shift to *una corda*, unlike the Silbermanns. The dampers are fitted with fairly thick pads of oil-tanned leather glued under a wooden block while the Silbermanns use a taut strip of thin leather passing through a horizontal mortise in the blade of the damper and glued on either side of the wooden top block. The blades of Mercken's dampers are small and weighted with round pewter inserts; Silbermann's are larger and are not weighted. Mercken's dampers are raised, divided into bass and treble, by small levers sliding in mortises at each end of the damper cover-rail. The Silbermanns have an iron lever projecting forwards on either side of the keywell acting on the corresponding side of a continuous beam which lifts the dampers. Mercken's hammers are guided in a comb and pivot on a bundle of (?) linen threads that runs through comb and hammer-butts. Gottfried here uses an iron pivot wire (ø1,5mm.) common to all the hammers.⁷



3)

J.K. Mercken c.1768: Key with escapement hopper, intermediate levers (photos CC, KS)

The escapement jacks (Fig. 3) are housed in mortises passing vertically through the keys; small leather rectangles, with punched mortises adjusted to the jacks, are glued to the top and bottom faces of the keys. A return spring acts on the bottom of the jack which projects from the underside of the key.



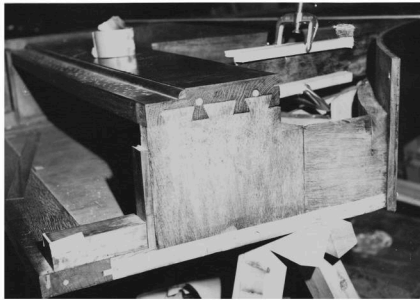
Key with escapement hopper: (l.) J-H. Silbermann c.1782 (r.) G. Silbermann 1749
(photo (l.) CC, (r.) M. Latcham)

Unlike the Silbermanns, Mercken does not have a block under the key for the jack to pivot on. A small wooden button with a leather pad is mounted on a brass rod on the top of the key; its position determines the position of the hopper at rest and so can be used to adjust the moment the hammers escape. The buttons are rectangular in section; the Silbermanns' are round.

The Mercken inverted wrestplank (Figs. 4 & 5) differs in many ways from that of J-H

⁷. Many thanks to Kerstin Schwarz for pointing this out.

Silbermann. The arrangement of Silbermann's wrestpins follows the usual French system, with the wrestpins for the accidentals placed further back compared to those for diatonic notes. In Jean-Henri's piano of c. 1782, the names of the notes are written in ink next to the pins, probably after the instrument was made. Mercken's pins are grouped diagonally in pairs of notes, except those for the E's and B's which have no partner. In the centre of the wrestplank, there is an empty space between b and c1 because the direction of side-draught of the strings between wrestpins and nutpins is reversed at this point; Silbermann's side-draught remains constant throughout the compass. In front of the first row of wrestpins, the note-names are stamped quite deeply in uppercase characters into the veneer of the wrestplank. The B naturals are marked with the letter "H", in German style.



The construction of the wrestplank is not the same. Silbermann's (see photo, left) is in quarter-cut solid oak, veneered only on its upper face, with a rebate at the level of the wrestpins. Its underside is bare, more or less flat, and the (?)pearwood nut is glued to it. The two ends of the wrestplank are dovetailed to vertical-grained oak planks and the cheek of the case is glued to this assembly.



J.K. Mercken c. 1768 wrestplank

The Mercken wrestplank is flat on its upper surface, which is veneered in marquetry. Underneath, the part that receives the wrestpins (and perhaps the entire surface of the plank) is veneered at 90 ° (therefore parallel to the strings). The nut seems to be developed in the thickness of a wide oak plank of more or less triangular section whose grain direction is the same as the wrestplank's (see diagram, p. 24). The straight nut, which runs diagonally from the back of the wrestplank in the treble to near the front in the bass, forms the thickest part and stands proud of the surface of the rest, which is tapered in thickness towards its front and back edges. The surface of this board, the bottom of the nut and the front of the wrestplank are almost entirely covered with paper, which hides the construction. At each end of the wrestplank, vertical-grained walnut planks are joined perpendicular to it; the veneer and nut plank both stop before this joint. These vertical planks are rather untidily dowelled to the outer case. At the rear of the wrestplank, an iron reinforcement screwed into the belly-rail supports its centre. The Silbermanns do not have this, perhaps because their wrestplanks are

more massive. The belly-rail of J-H Silbermann pianos is pierced with three rectangular openings; Mercken has none. Judging by what is visible through a crack in the bottom-boards, Mercken's bellyrail is pretty thin, perhaps less than 25mm, about half the width of J-H. Silbermann's. Furthermore, from the little that one can see through the small holes in the rose, the internal structure of Mercken's instrument differs considerably from that of Silbermann's (see p. 24).



J.K. Mercken wrestplank under view, treble (a broken damper hangs between strings).

A grand piano by J. K. Mercken, Paris c.1768: context and comparison with instruments by G. & J-H. Silbermann and C. Baumann.

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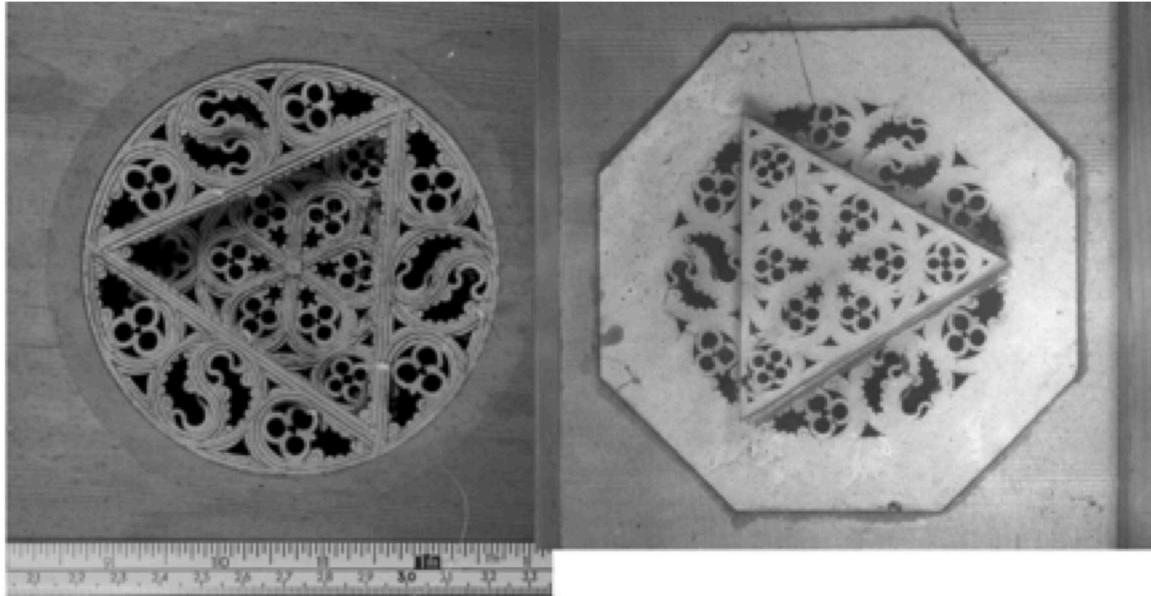


J.K. Mercken c.1768:
wrestplank under view,
bass (detail).



J.H. Silbermann c. 1782 wrestplank treble, under view

The Silbermann bass bridge ends in a straight line; Mercken's is slightly curved for the last five notes. The Silbermann bridge is double-pinned over the whole compass; Mercken's has single pins for the top 23 notes. Mercken's rose is larger than Silbermann's, and flat; Jean-Henri's grand piano roses (unlike his clavichord and square piano roses) are made with a recessed central part.



J-H. Silbermann c.1782, pasteboard rose top and under

The Mercken soundboard is about 4mm. thick at the bellyrail: Silbermann's are less than 2mm. in the treble. Although the exterior dimensions of the Mercken instrument (7 feet long, 3 wide) perfectly match the *Pied du Roi* (325 mm) the string spacing is based on 63 notes FF-g3 (62 intervals) spread over 30 inches (60 half inches), in contrast to the 60 intervals (61 notes FF-f3) over 30 inches *Pied du Roi* as practiced by JH Silbermann. It is possible that Mercken decided to take the range to g3 after starting the instrument and adapted it accordingly.

In conclusion, it seems to me that Mercken had certainly observed and perhaps done maintenance work on Jean-Henri Silbermann pianos, perhaps before moving to Paris (though already by 1761 there were already four in the city, one of which belonged to the Prince de Conti (1717- 1776), auctioned one year after his death)⁸. However, Mercken only borrowed Silbermann's general principles, and did not trouble himself with his constructional or decorative details, instead imposing his own ideas and practices. Suggestions that he spent time in any of the Silbermann family's workshops seem highly unlikely to me when looking at this instrument.

8. L'Avantcoureur 14, 6/4/1761 quoted by John KOSTER, *Foreign Influences in eighteenth-century French piano making* in: Early Keyboard Journal 11, pp.9-13. And: Michael LATCHAM *Towards a new history of the piano* Katzschler, Munich 2019 pp. 162-4

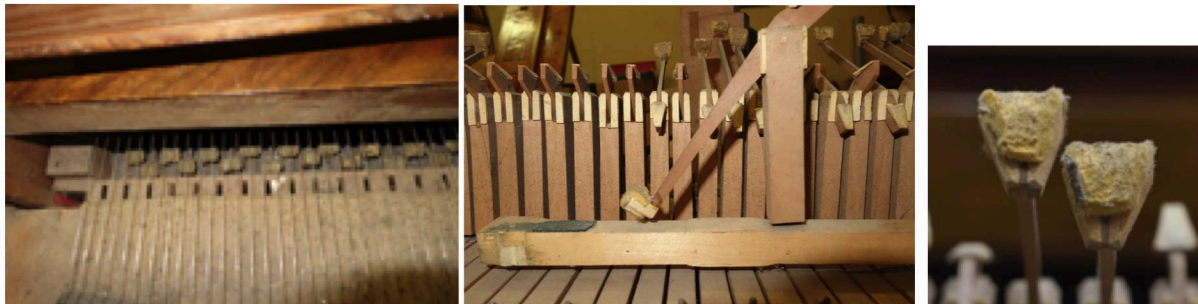
Let us now turn to the modified action in the treble half of Mercken's piano. It is of the "intro *Prellmechanik* " type, without an escapement mechanism⁹: the hammers are articulated

9. Christopher CLARKE *Érard's «double pilote» action and its significance in: Zur Entwicklung des Klavierspiels von Carl Philipp Emmanuel Bach bis Clara Schuman: Michaelsteiner Konferenzbericht Band 82, Michaelstein 2017*

in wooden forks (*Kapsel*) fixed in the backs of the keys by short metal stems. Their heads, in solid lime-wood, are oriented like the bass hammers. The tails of the hammer shanks are extended beyond their axes and padded with leather. On depressing the front of a key, the rear rises, and the tail of the hammer contacts the underside of a small leather-lined board, the *Prell-leiste*, attached by small leather nuts horizontally above the treble continuation of the hammer-rail. The board retains the tail of the hammer, thus flipping the hammer-head towards the strings as the key is further depressed. This action is a variant of one found mainly in German or Swiss square pianos at this time. The use of solid heads instead of cardboard rolls makes possible the use of smaller head dimensions better adapted to good treble tone production.

We can confidently assert that the modifications to the treble action were the work of Mercken himself. The *Prell-leiste* is made from the same rather unusually-figured pearwood as was used for parts of the keyframe and the treble hammer-heads are worked in a similar manner to the saddles that receive the cardboard rolls of the bass hammer-heads. The suggestion that Mercken may have modified another maker's piano¹⁰ is refuted by these observations and also by the fact that the instrument is signed by himself.

Examining the modification more carefully, we can see that the original hammer-pivot threads are still in place in the original comb. Moreover, it seems most likely that the piano was played for a while with its original Silbermann-type action, since the small leather pads on which the intermediate levers rested¹¹ are still present, and show signs of compression by the levers (which were discarded along with the hammers). The mortises through the keys to receive the escapement hoppers are covered by small patches of lime-wood veneer, and the holes for the return springs are still visible under the keys.



J.K. Mercken c. 1768, hammer details

The treble hammers are arranged alternately in a zig-zag pattern on two strike lines spaced approximately 10mm apart, something unheard-of. The rearmost line (furthest from the nut) is a continuation of the hammer strike line in the bass half. The hammer shanks for the front line have therefore been shortened.

In my opinion, this is a makeshift solution to a problem with keyboard wear and tear; I thought at first that the modification dates from the Zipfel restoration of 1885. But on closer

10. WEBER op. cit p.76 "Forte piano dont la mécanique a été remise à neuf par MERKEN; 300 Livres chez M. SIGNY rue Montmartre, vis à vis la Jussienne" (Affiches annonces et avis divers: 25 mai 1782, p.1228). 300 livres is a price typical for a square piano.

11. In J-H Silbermann's pianos these pads are glued to the tops of small square wooden pegs that slide in mortises in the keyframe, allowing adjustment of the height of the hammer-heads at rest so that they are suspended a few millimetres above the cushion. Mercken does not have these.

examination with Kerstin Schwarz, we believe it is a modification by Mercken himself. All the ends of the hammer-shanks are neatly and identically reduced in width, to form a tongue with shoulders which is glued into a groove at the bottom of each head. The reason for the zig-zag head positions is to be found in the extremely tall *Kapseln*; their height in effect multiplies any wear in the key balance-mortises by a factor of about six. So half a millimetre of play in the key translates into three millimetres of wobble at the hammer-head, quite enough for adjacent heads to knock together¹². A more elegant solution might have been to have introduced a comb to guide the tops of the *Kapseln* and thus to have maintained a constant strike-line.

Why was the treble action modified in this way? To us today, replacing an “escapement” action by a “non-escaping” one seems a retrograde step. However, a clue is given in the article “*Facteur de Clavecins*” written by M. du Moutier for the “*Dictionnaire portatif des Arts et Métiers*” published in Amsterdam in 1767¹³:

“For some time now, hammer harpsichords, called fortepiano, artistically worked in Strasbourg by the famous Silbermann, have been brought to Paris. These harpsichords, the exterior of which is all of the cleanest and most polished walnut wood, are made so that each keyboard raises a sort of hammer of cardboard coated with leather, which strikes against two unison strings, or against one alone if you want. They have this advantage that the pressure of the finger, stronger or weaker, determines the strength or weakness of the sound. They are very pleasant to hear, especially in pieces of pathetic harmony, & handled with taste by the one who performs it; but they are more uncomfortable to play because of the weight of the hammer, which tires the fingers, and which even makes the hand heavy with time.”¹⁴

This sentiment still finds an echo sixty years later; Pierre Érard wrote in his little booklet published in 1834¹⁵:

“The advantage of this escapement over the fixed pilot [i.e. the leather button fixed to the key in a non-escaping action] lies in the precision of the hammer stroke. But the pilot, in its turn, possesses a great one in its lightness and ease of repetition; for with it, the hammer always being in contact with the key, and thus at the performer's command, is thereby always ready to respond to the slightest movement of the finger; this would be a great element of superiority if it were not counterbalanced by its lack of fixity after striking the strings, which exposes it to the risk of rebounding when struck hard.

12. One of the reasons that Viennese makers introduced guide forks applied to the tops of the keys at the balance-point was to reduce the effect of key-wear on hammer orientation by effectively heightening the key.

13. LATCHAM op. cit p.164

14. “Depuis un certain temps on fait venir à Paris des clavecins à marteau, appelés forte-piano, travaillés très-artisement, à Strasbourg, par le fameux Silbermann. Ces clavecins, dont l'extérieur est tout en bois de noyer le plus propre et le plus luisant, sont faits en sorte que chaque clavier fait lever une espèce de marteau de carton enduit de peau, qui frappe contre deux cordes unissonnes, ou contre un seul si l'on veut. Ils ont cet avantage, que l'appui du doigt, plus fort ou plus foible, détermine la force ou la foiblesse du son. Ils sont fort agréables à entendre, sur-tout dans les morceaux d'une harmonie pathétique, & ménagés avec goût par celui qui l'exécute; mais ils sont plus pénibles à jouer, à cause de la pesanteur du marteau, qui fatigue les doigts, & qui même rend la main lourde avec le tems.”

15. Pierre ÉRARD, *Perfectionnemens apportés dans le mécanisme du Piano par les Érard, depuis l'origine de cet instrument jusqu'à l'exposition de 1834*, Paris, l'auteur, 1834.

This difference in the way the two mechanisms operate, each with its advantages and disadvantages, has for a long while divided opinions on the preference to be given to them. For this reason, for a long time the Erard brothers were engaged in the manufacture of instruments on both principles, to satisfy different tastes.

However, amateurs and teachers, accustomed to fixed-pilot actions, found it hard to adapt to escapement actions; they found them heavy, sluggish, with slow and difficult repetition; it was only by dint of art and care, and after long practice, that several of them succeeded, not in overcoming their difficulties, which was impossible, but in coping with their defects. It must also be said that they were encouraged to do so by the purity and strength of the sound produced by big grand pianos, which were adopted in public concerts and musical gatherings in preference to triple-strung square pianos¹⁶. So it was that Steibelt, Dusseck, and all the great artists of the time, ended up being heard exclusively on the large grand pianos made by the Erard brothers.”¹⁷

It is interesting to note that Pascal Taskin's¹⁸ pianos from the late 1780s all have actions without an escapement mechanism, moreover designed to be as light as possible. The earliest surviving harpsichord-shaped fortepiano from the Érard firm, dated 1791, also featured a non-escaping *double-pilote* action¹⁹, and the firm continued to manufacture square pianos with this action until 1824.

Lightness and rapidity of piano actions were qualities particularly valued in France. One can imagine that Mercken might have endured criticisms similar to those of M. du Moutier, which impelled him to modify the treble of his instrument in order to endow it with more desirable qualities. Close examination might enable us to assess how much the piano was played before

16. Triple-strung square pianos were a French speciality, introduced by the Érard firm.

17. *La précision du coup du marteau fait tout l'avantage de cet échappement sur le pilote fixe. Mais le pilote, à son tour, en possède un grand dans la légèreté et la facilité de répétition; car, avec lui, le marteau étant toujours sur la touche, et par conséquent aux ordres de l'exécutant, est aussi toujours prêt à répondre au plus léger mouvement du doigt; ce qui serait un grand élément de supériorité, s'il n'était contrebalancé par le manque de fixité après le coup à la corde, ce qui l'expose à rebondir lorsqu'on a frappé avec force.*

Cette différence dans la manière d'opérer de deux mécanismes présentant chacun des avantages et des inconvénients, a, pendant long-temps, partagé les opinions sur la préférence qu'on devait leur accorder. Cette raison engagea pendant long-temps les frères Erard à fabriquer des instrumens sur les deux principes, pour satisfaire les différens goûts.

Cependant, les amateurs et les professeurs, accoutumés aux claviers à pilote, ne pouvaient que difficilement s'habituer aux claviers à échappement; ils trouvaient ceux-ci lourds, empâtés, lents et difficiles pour répéter; et ce ne fut qu'à force d'art et de soins, et par la suite d'une longue habitude, que plusieurs d'entre eux parvinrent, non à vaincre les difficultés, ce qui était impossible, mais à en pallier les défauts. Il faut dire aussi qu'ils y étaient encouragés par la pureté et la force du son que produisaient les grands pianos à queue, adoptés dans les concerts publics et dans les réunions musicales, à la place des pianos carrés à trois cordes.

Aussi Steibelt, Dusseck, et tous les grands artistes du temps, finirent-ils par ne se faire entendre que sur les grands pianos à queue des frères Erard.

18. Jean-Claude BATTAULT, *Les pianoforte en forme de clavecin de Pascal Taskin. Recherches d'un facteur sous l'Ancien Régime* in: Cordes et claviers au temps de Mozart ed. Steiner, Actes des rencontres internationales harmoniques, Lausanne 2006

19. Christopher CLARKE, *Érard's Double-pilote action and its significance* in: Zur Entwicklung des Klavierspiels von Carl Philipp Emmanuel Bach bis Clara Schumann, eds Philipsen, Lustig & Omonsky, Michaelstein 2017

its alteration. It is quite possible that the transformation was done before the instrument left his workshop.

Another unusual aspect concerns the compass of the instrument, with its top g3. The first collection of sonatas by Jean Godefroy Eckhard published in Paris in 1763²⁰ bears the following preface:

"I have tried to make this work of common usefulness for the Harpsichord, the Clavichord, and the Forté & Piano. It is for this reason that I felt so frequently obliged to mark the soft and the loud, which would have been useless if I had only the Harpsichord in mind."²¹



In the Presto of the second sonata, the first octave jump that we expect logically to go to g3 only goes to d3; the modern edition silently "remedies" this. It is quite possible that Eckhard's instrument, unusually, went up to g3, but that for publication he modified the note to accommodate the majority of people whose instruments only went to f3.

In 1763, in Berlin, Johann Gottlob Schröter wrote in Marburg's *Kritische Briefe über die Tonkunst* in order to promote his claim to be the inventor of the pianoforte in 1717. He mentions instruments made under his orders with the extended FF- g3. Sonata K.485 by Domenico Scarlatti (1685-1757) requires a compass of 63 notes FF-g3.

It would seem that, unlike the Silbermann instruments, Mercken's never had *una corda* or keyboard shift, although there is enough room in the keywell to accommodate one. The action frame fits the keywell exactly, so it is probably not a modification because of the wobbly treble hammers; it could however be connected to the extension of the compass to g3.

20. Many thanks to John Koster for information concerning Eckhard et Schröter and for the facsimile of the score.

21. *J'ai tâché de rendre cet ouvrage d'une utilité commune au Clavecin, au Clavicorde, et au forté & piano. C'est pour cette raison que je me suis cru obligé de marquer aussi souvent les doux, et les fort, ce qui eut été inutile si je n'avois eu que le Clavecin en vue.*

Mercken and Baumann: -

We have examined the relationship between the Mercken piano and those of the Silbermanns. I should now like to demonstrate similarities of construction with the instruments made by Christian Baumann, who in 1766 was appointed²² Court organ and keyboard maker by the Duke of Deux-Ponts (Zweibrücken), Christian IV (1722-1775)²³. The earliest surviving square pianos by Baumann date from 1775.

Christian IV, ardent francophile and “protector of the arts”, was closely attached to the French Court and enjoyed an annuity and a permanent apartment at the Château de Versailles. In 1757 he purchased the Hôtel de Lorges, on rue Neuve St. Augustin in Paris from the Prince de Conti²⁴, which he renamed the Hôtel des Deux-Ponts. He spent his winters there in the company of his morganatic wife Marianne Camasse, Countess of Forbach, and their guests included Diderot, Baron von Grimm, the composers Philidor and Gluck (who composed his operas *Iphigénie en Aulide* and *Orphée* there), the painter von Mannlich²⁵ and many others; they also brought some of the eighteen musicians of the Ducal Court band each season. Moreover, he welcomed and actively encouraged many of the German artists and craftsmen working in Paris and he spent more than was prudent on works of art and furniture. We don't know if Christian took his organ and keyboard maker to Paris or recommended him to his peers. But three-quarters of Baumann's twenty known pianos were discovered in France;²⁶ it is not unthinkable that the Duke subsequently took Mercken under his patronage.

The Duke died in a hunting accident in 1775; Marianne's title of Dowager of the Duke of Deux-Ponts was contested by his nephew Charles and she retired immediately to her castle at Forbach. The Hôtel des Deux-Ponts was first let to an Englishman, then its contents were put up for sale in 1778, the King having decided to build the new Rue de la Michodière through its site. The Duke's extraordinary collection of paintings was auctioned off on April 6 of this year;²⁷ a copy of the catalogue is kept at the BNF²⁸. It would be interesting to know, if possible, the fate of the Count's furniture, which surely included keyboard instruments.

We have already mentioned Mercken's keyboard, pointing out the numerous differences with that of J-H Silbermann's. However, if we compare it to Baumann's, the conclusion is quite

22. Karl JOST, *Mozart und Zweibrücken* in: *Das barocke Zweibrücken und seine Meister*, 2. Auflage, eds. Julius Dahl & Karl Lohmeyer, 1957 Südwestdeutsche Verlagsdruckerei G. Hornberger, Waldfischbach. Reprinted 2015: Mozartgesellschaft e. V. Zweibrücken – Bitsche – Pirmasens

23. Patrick MICHEL *Christian IV, duc des Deux-Ponts (1722-1775): Un prince allemand francophile, “protecteur des arts” et collectionneur à Paris* in: *Bulletin du Centre de Recherche du Château de Versailles: Sociétés de cour en Europe, XVIe-XIXe siècle*. <https://journals.openedition.org/crcv/16148?lang=fr>

24. Conti was one of the four owners of Silbermann pianos in 1761, see note 6

25. See: Hans Oskar KOCH: *Zweibrücker Musikgeschichte bis zum Ende des Alten Reichs - unter besonderer Berücksichtigung ihrer bedeutendsten Persönlichkeiten* in: *Die Wiege der Könige, 600 Jahre Herzogtum Pfalz-Zweibrücken*, ed. Charlotte GLÜCK-CHRISTMANN, Zweibrücken 2010.

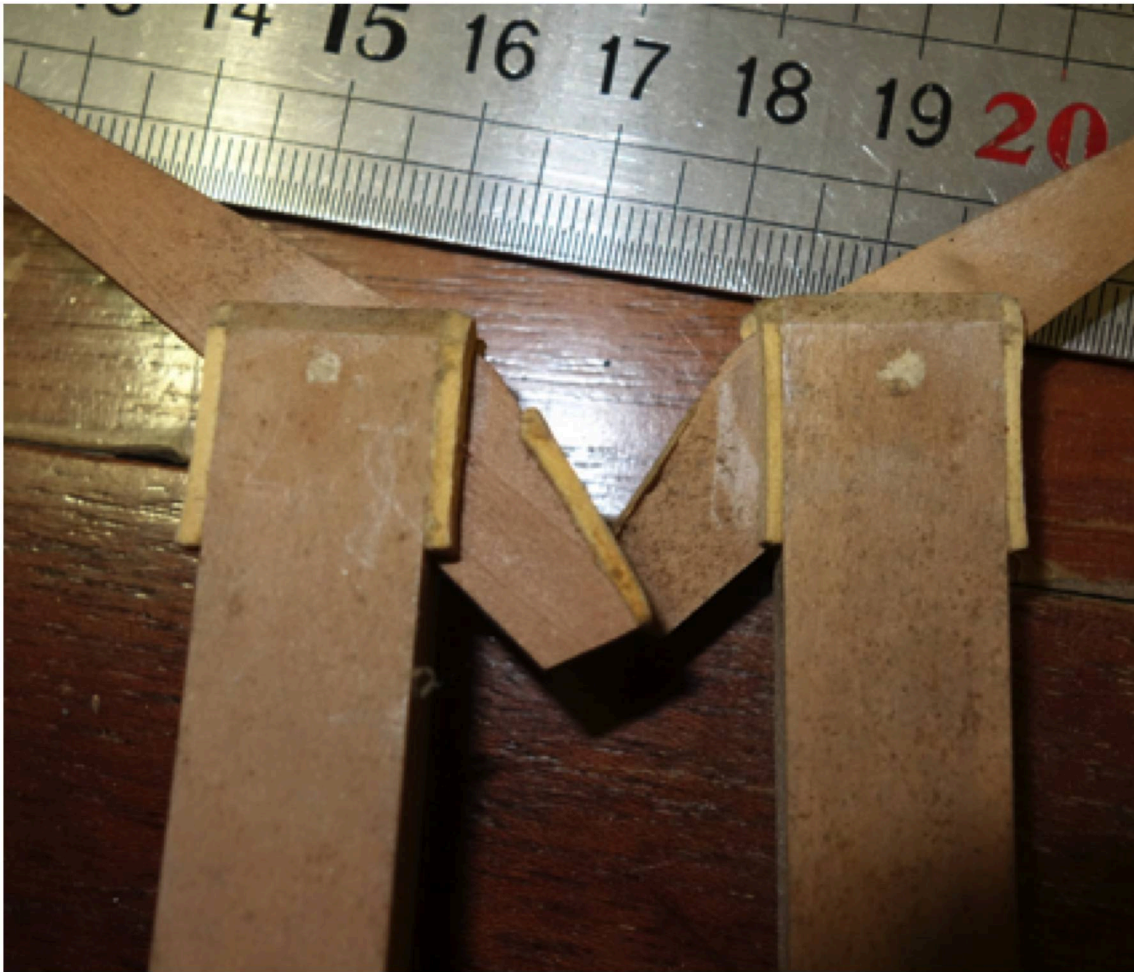
Also: Johann Christian VON MANNLICH "Histoire de ma Vie" ed. Spee, Trier 1993

26. Christopher CLARKE "Ein gutes kleines Pianoforte": *the pianos of Christian Baumann, 1775-1810* : in *préparation*

27. Patrick MICHEL op. cit.

28. Département des Imprimés (8°V36). Note #121 in: Patrick MICHEL op. cit.

different; they are almost identical both in form and dimensions²⁹. Mercken's 3-octave measure 471mm is identical to Baumann's and the keytail widths are also almost identical.



J.K. Mercken c.1768: *Kapsel* pivots of silk floss

Another strong resemblance is that of the *Kapseln*. Baumann had a most unusual way of making action *kapsel* pivots; a bundle of silk floss is glued into the pivot-hole in one arm of the pearwood fork; it passes freely through a slightly larger hole in the shank of the hammer sitting between the arms, and then goes through the corresponding hole in the other arm. On the outside, the fibres are splayed out in a star round the hole and glued. This procedure is almost a Baumann trademark and I have only seen it elsewhere in two recently-discovered square pianos³⁰ that are manifestly based on Baumann's designs,³¹ made by an organ-builder, Johann Georg Geib (1739-1818), working in nearby Frankenthal. A third square piano made in Alsace by Geib's nephew Louis Geib also has such pivots. Mercken reproduced this process to perfection.

29. Christopher CLARKE "Ein gutes kleines Pianoforte": the pianos of Christian Baumann, 1775-1810.

30. Radbon Collection, Schwörstadt, Germany. The earlier one, c.1778, is not signed; the second is signed and dated 1809 on the bottom-boards under the soundboard.

31. see: CLARKE "Ein gutes..." op. cit.



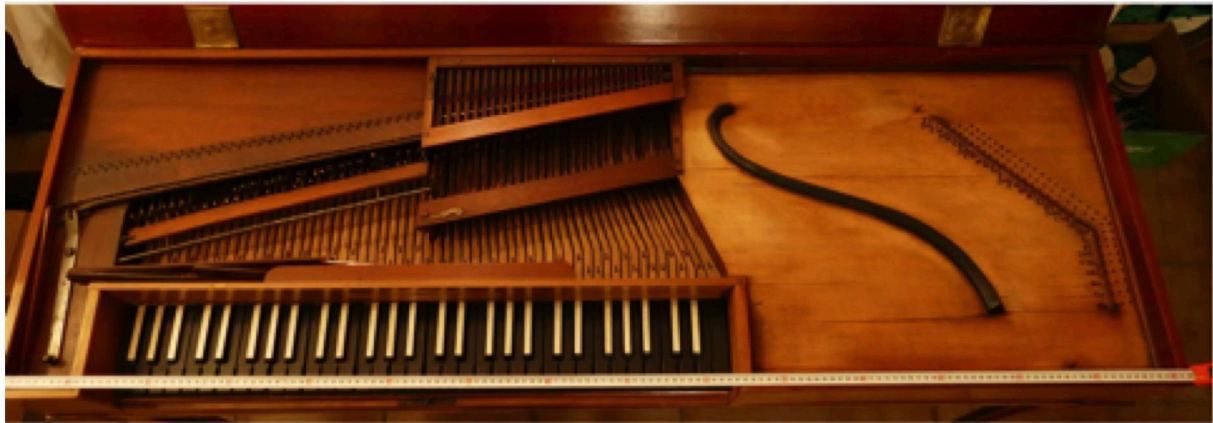
C. Baumann c. 1785 *Kapsel* pivots of silk floss

A possible example of mutual influence between Mercken and Baumann can be seen in a square piano which is certainly by Baumann but now has a clumsily-inlaid but genuine name plate "Érard et frère" and the date 1793³². I situate the construction of this instrument at the time of the re-opening of the Baumann workshop after the Revolutionary Wars had ended and after the annexation of the Duchy to France (Department of Mont-Tonnerre). It is remarkable because it has two types of action, "retro" and "intro" *Prellmechanik*. The treble therefore has the same kind of action as Mercken's grand piano. It is curious to see that the hammer flip-rail (the *Prell-leiste*, lower photo) is leathered in exactly the same way as that of Mercken; another Baumann piano from 1799, this time entirely with an "intro" *Prellmechanik*, has no leather here. We cannot exclude the possibility that Mercken later modified the action of his grand piano in imitation of of Baumann's experimental hybrid fortepiano.

32. Radbon Collection, Germany

A grand piano by J. K. Mercken, Paris c.1768: context and comparison with instruments by G. & J-H. Silbermann and C. Baumann.

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Square piano by Christian Baumann, c.1791, with hybrid action (photos P. Radbon)

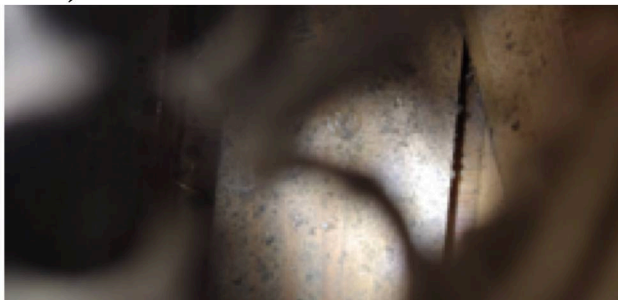
The tuning-pins have extremely flattened heads; Baumann's, Mercken's and Silbermann's are similar in this respect. But the bottom end of both Mercken's and Baumann's wrestpins is quite pointed, whereas Silbermann's are blunt.



Note-names: C. Baumann 1775 (l.) J.K. Mercken c. 1768 (r.)

Baumann habitually branded the names of the notes next to the corresponding wrestpins with a hot iron, thus: C, Cis, D, Dis, E, F, Fis, G, Gis, A, B, H. (L) He seems to be the only maker to have done this; other makers used paper labels or wrote directly on the wood in ink. Mercken cold-stamped his wrestplank with the names of the diatonic notes in characters very similar to Baumann's: C, D, E, F, G, A, H (R)- the latter being a uniquely German note-name. Since the soundboards of Mercken's oldest square pianos made between 1770³³ and 1780 have all been changed³⁴, one can only surmise when he adopted the French nomenclature for the hand-written note-names, but it was probably quite soon after his installation in the Quinze-Vingts.

A look through the openings of the rose reveals that the internal structure of the body is very unusual: flat and wide reinforcements crossing the body are glued quite closely-spaced side by side to the bottom, at approximately 90 ° from spine. A higher brace, about 70 ° from the spine, crosses the body near the rose (see photo below: (l.) Mercken c.1768, (r.) Baumann 1775).



This bottom-board construction is analogous to the singular one Baumann used in his square pianos until around 1785 (on the right, an instrument from 1775, Fondation La Ménéstrandie, Geneva). The edges of the flat reinforcements stop short of the edge of the bottom-boards, forming a rebate into which the case walls are glued. In the Mercken grand piano, slight distortions are visible on the outside of the angles of the case, probably caused by movement in the dovetailed joints of substantial full-depth case liners showing through the thin case

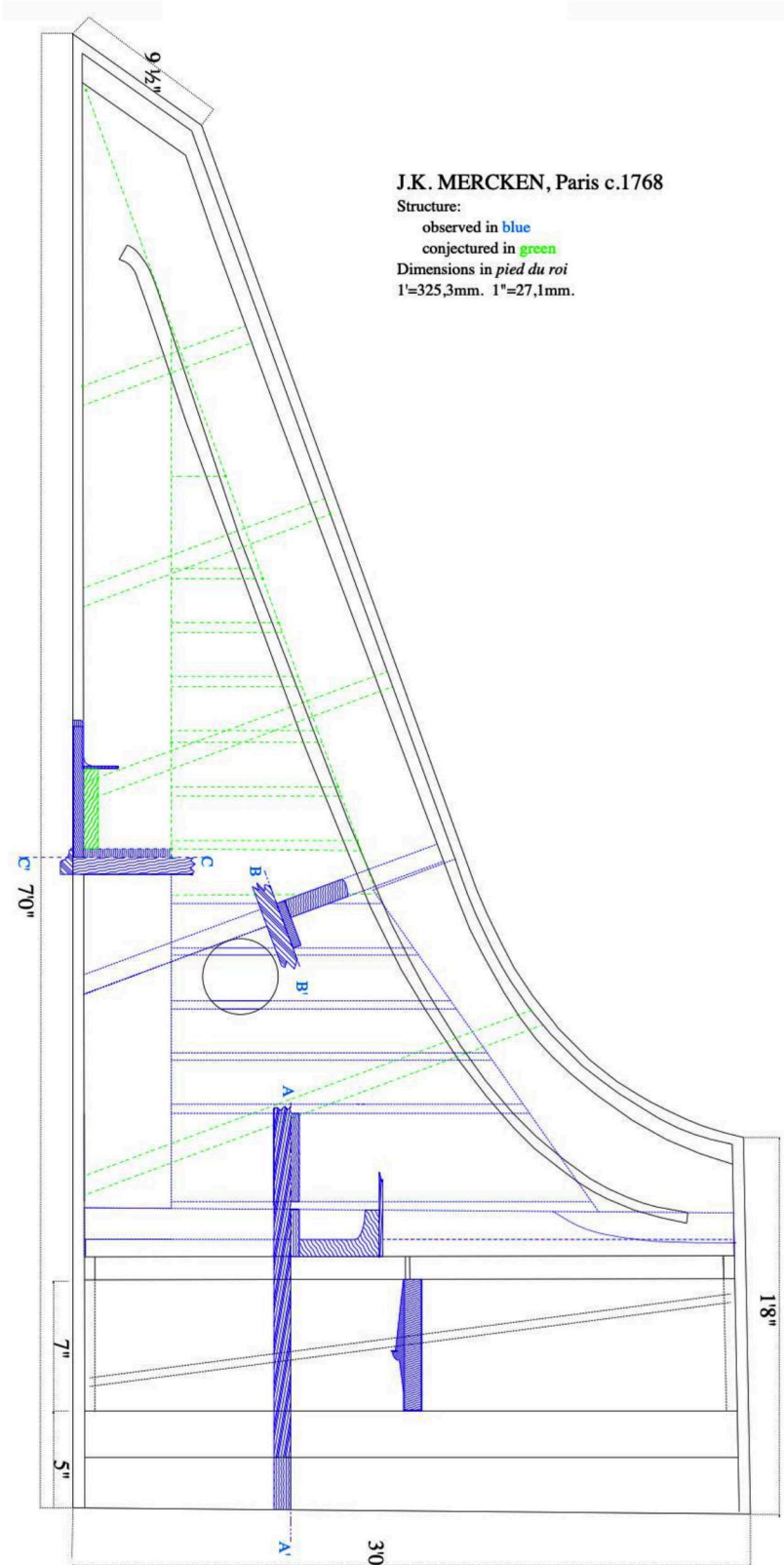
33. See note 4

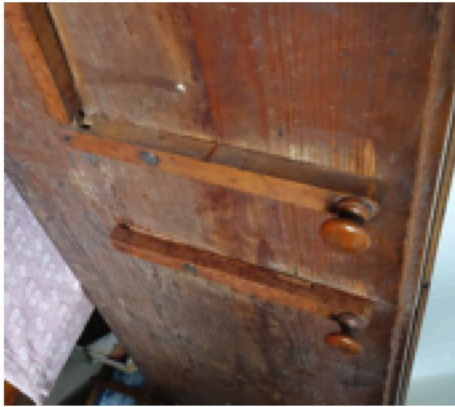
34. WEBER, op. cit. pp.94 ff.

A grand piano by J. K. Mercken, Paris c.1768: context and comparison with instruments by G. & J-H. Silbermann and C. Baumann.

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walls. The diagram below is a hypothetical one, based on what one can observe visually through the rose and through cracks in the bottom-boards. An x-ray examination is needed to give us the full picture.





Another resemblance between Mercken's later square pianos and Baumann's design is in the operation of their knee-levers: rather unusually, in all Baumann pianos that have them, they move horizontally (see photo, left), on the same on/off principle as hand-stops; Baumann often had combinations of hand- and knee levers in the same instrument. Mercken's pianos of 1782³⁵, 1791³⁶ 1792³⁷ and possibly in 1784³⁸ all have horizontally-moving knee-levers.

Cabinet-work

Two Baumann square pianos from 1782 show cabinet-work remarkably similar to Mercken's: especially noteworthy are the large central mirrored panels of highly-figured walnut, surrounded by broad herring-bone cross-banding.



35. Ibid. pp.110ff

36. Ibid. pp.125, 127ff

37. Ibid. pp.129ff

38. Ibid. pp.118ff

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Square piano by C. Baumann, 1782 (private coll. Switzerland).





Mercken c.1768

Notice the similar omission of stringing on the interior of the lid.

A grand piano by J. K. Mercken, Paris c.1768: context and comparison with instruments by G. & J-H. Silbermann and C. Baumann.

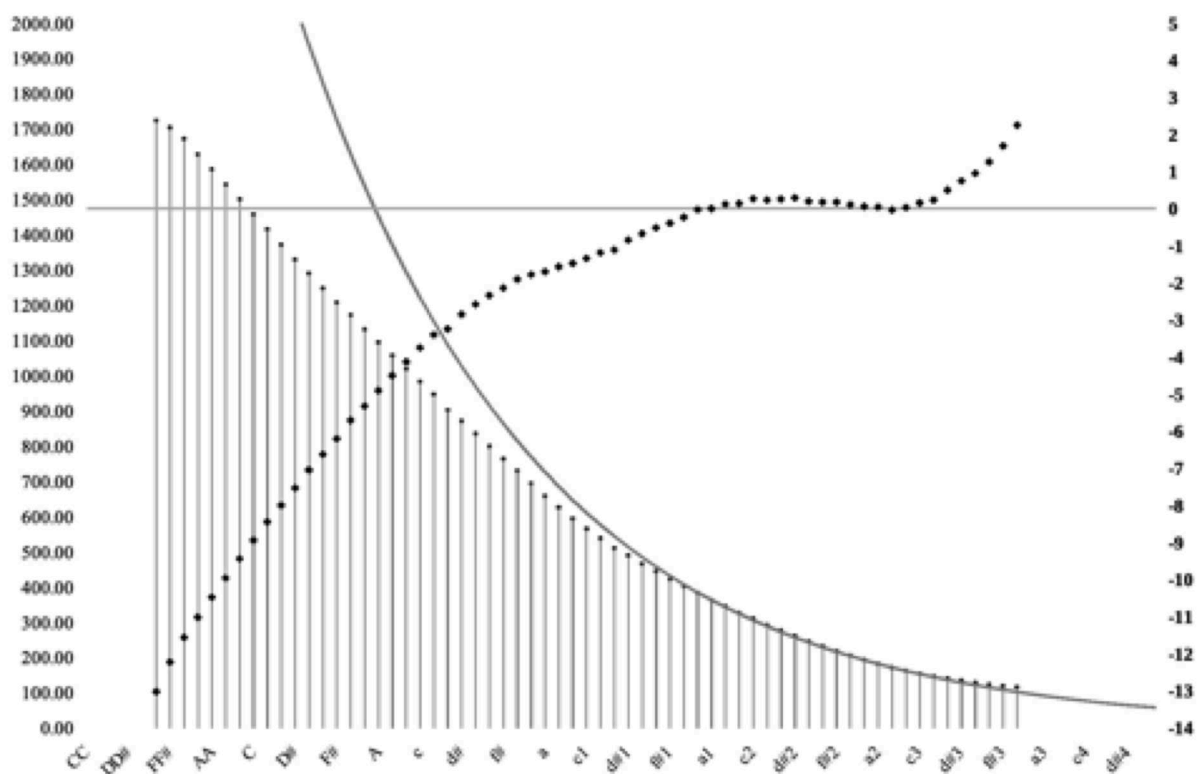
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Scaling:-

n° note	note	longueur / cordes (mm)	point d'attaque (mm)	L/point d'attaque	n° jauge	diamètre (mm)	remarques
1	FF	1724	128	13.46875		0.75	corde laiton
2	FF _#	1704				0.75	
3	GG	1672				0.75	
4	GG _#	1628				0.75	
5	AA	1585				0.75	
6	AA _#	1542				0.7	
7	BB	1500				0.7	
8	C	1457	113	12.8938053		0.7	
9	C _#	1415				0,7-0,68	
10	D	1371				0.69	
11	D _#	1329				0.69	
12	E	1290				0.7	corde laiton
13	F	1248	107	11.6635514		0,71-0,72	corde fer
14	F _#	1207				0.71	
15	G	1172				0.65	
16	G _#	1131				0.65	
17	A	1094				0.62	
18	A _#	1057				0.63	
19	B	1019				0.63	fente sur la table
20	c	983	93	10.5698925		0.63	levier intermédiaire cassé
21	c _#	947	92	10.2934783		0.63	
22	d	902				0.63	
23	d _#	871				0.62	
24	e	835				0.62	
25	f	799	85	9.4		0.62	
26	f _#	763				0,6-0,62	
27	g	754				0.63	
28	g _#	712				0.63	
29	a	672				0.55	
30	a _#	634				0.55	
31	b	599				0.56	
32	c1	565	73	7.73972603		0.55	marteau de carton
33	c1 _#	533	57	9.35087719		0.55	prellmecanik
34	d1	503	66	7.62121212		0.55	
35	d1 _#	475				0.55	
36	e1	448	60	7.46666667		0.55	
37	f1	423	46	9.19565217		0.55	
38	f1 _#	400	57	7.01754386		0.55	
39	g1	377				0.53	
40	g1 _#	356				0.55	
41	a1	336				0.5	
42	a1 _#	317				0.5	
43	b1	299	40	7.475		0.5	fente sur la table
44	c2	283	52	5.44230769		0.5	
45	c2 _#	267	33	8.09090909		0,5-0,49	
46	d2	252				0.5	
47	d2 _#	238				0,5-0,49	
48	e2	224	43	5.20930233		0.5	
49	f2	212	35	6.05714286		0,5-0,51	
50	f2 _#	200	41	4.87804878		0.5	
51	g2	189				0.5	
52	g2 _#	178				0,5-0,51	
53	a2	168				0.5	
54	a2 _#	159				0,5-0,49	
55	b2	150	25	6		0.49	
56	c3	141	33	4.27272727		0,49-0,5	
57	c3 _#	133	21	6.33333333		0,48-0,49	
58	d3	126				0.48	
59	d3 _#	119				0.49	
60	e3	112				0.49	
61	f3	106	17	6.23529412		0.49	
62	f3 _#	100	23	4.34782609		0.45	
63	g3	94	16	5.875		0.45	

The steel and brass strings found on the instrument undoubtedly date from the 1885 restoration. Comparing the present stringing with one based on original strings found on a c.1782 J-H. Silbermann grand, we find an overall tension at a-415Hz of 1,762 kgf as opposed to 1 134 kgf. The extra tension at present is most marked above middle c; it is now 947 but originally was 534, a 77% increase that no doubt explains the damage to the treble hitchrail.

The most meaningful way to compare the scale design of different makers³⁹ is to represent the deviation of each note from a Pythagorean progression (string-lengths halve at the octave, twelve semitones) based on a reference note (in these graphs, a1). In these graphs, the left-hand scale is the speaking length in millimetres, the right-hand scale is the deviation of a note in semitones from a Pythagorean scale. If the note in question obeys a Pythagorean progression, it is on the horizontal line (0) which represents it. If it is shorter, it is found below this line, if it is longer, it is above.

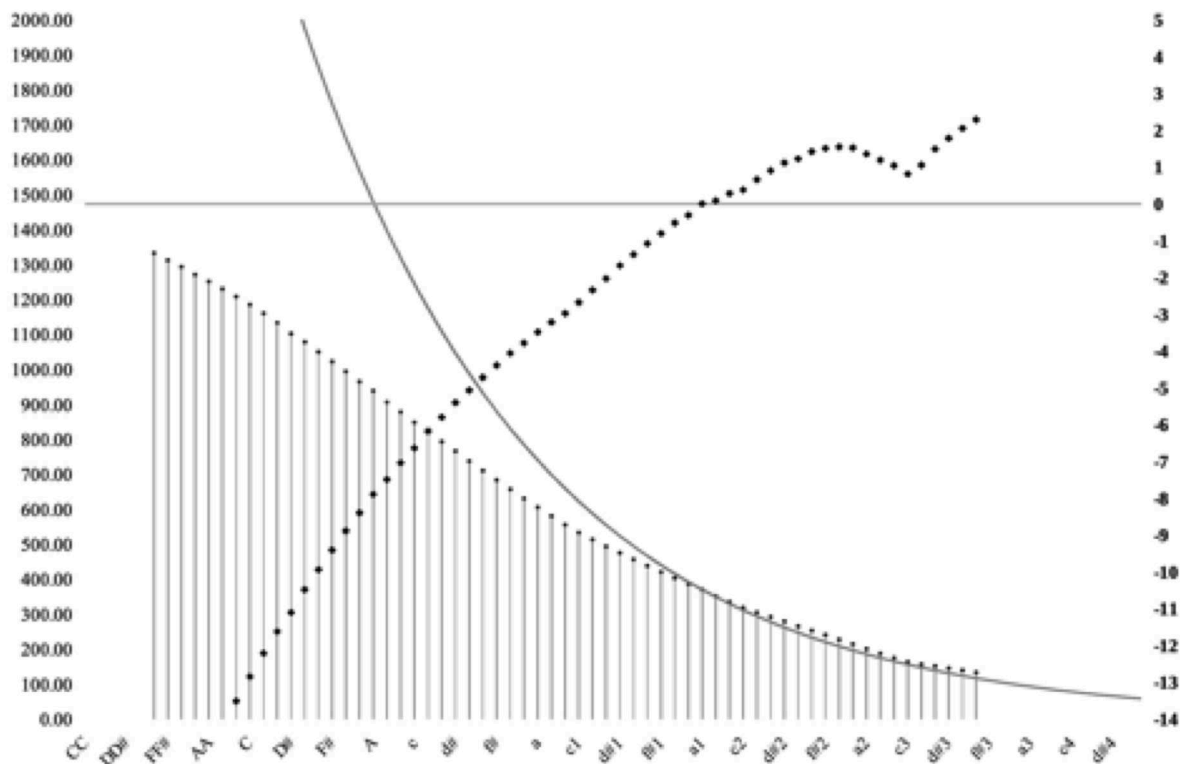


1). J. K. Mercken grand piano c.1768

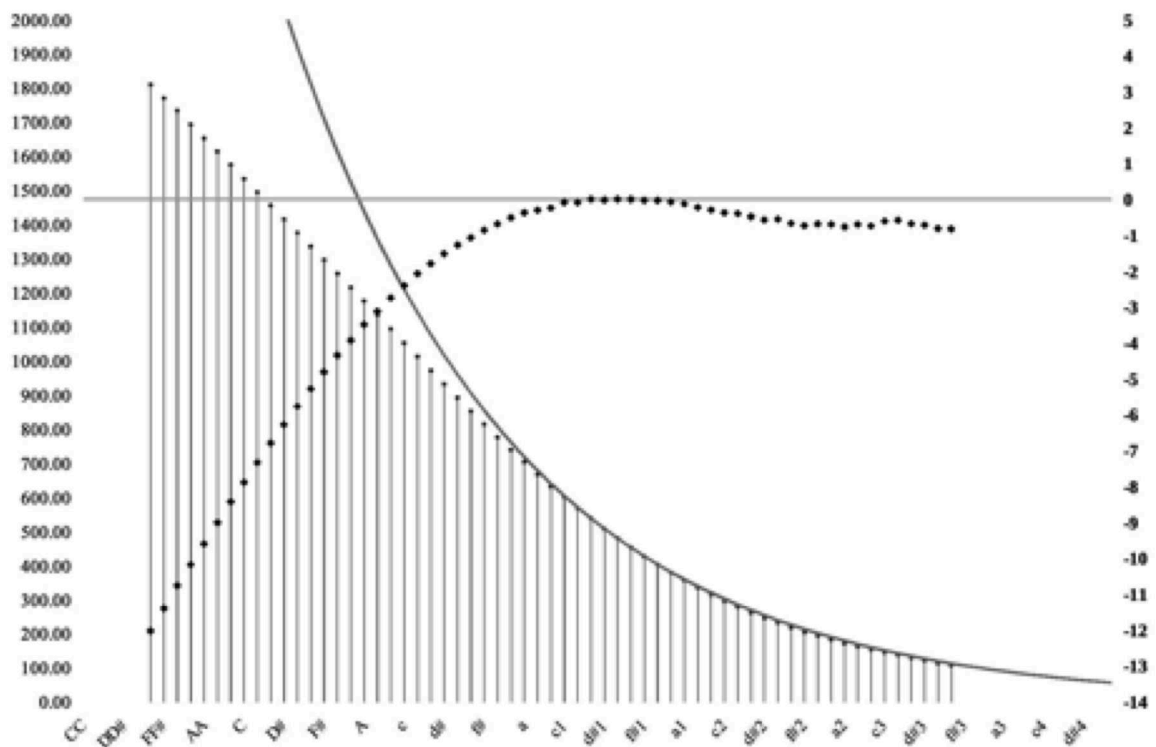
39. Paul POLETTI, *Beyond Pythagoras: Ancient Techniques for Designing Musical Instrument Scales* in: Instruments à claviers - expressivité et flexibilité sonore ed. Steiner, Actes des rencontres internationales harmoniques, Lausanne 2002. Many thanks to Paul for the use of his "Scale-o-Scope" spreadsheet.

A grand piano by J. K. Mercken, Paris c.1768: context and comparison with instruments by G. & J-H. Silbermann and C. Baumann.

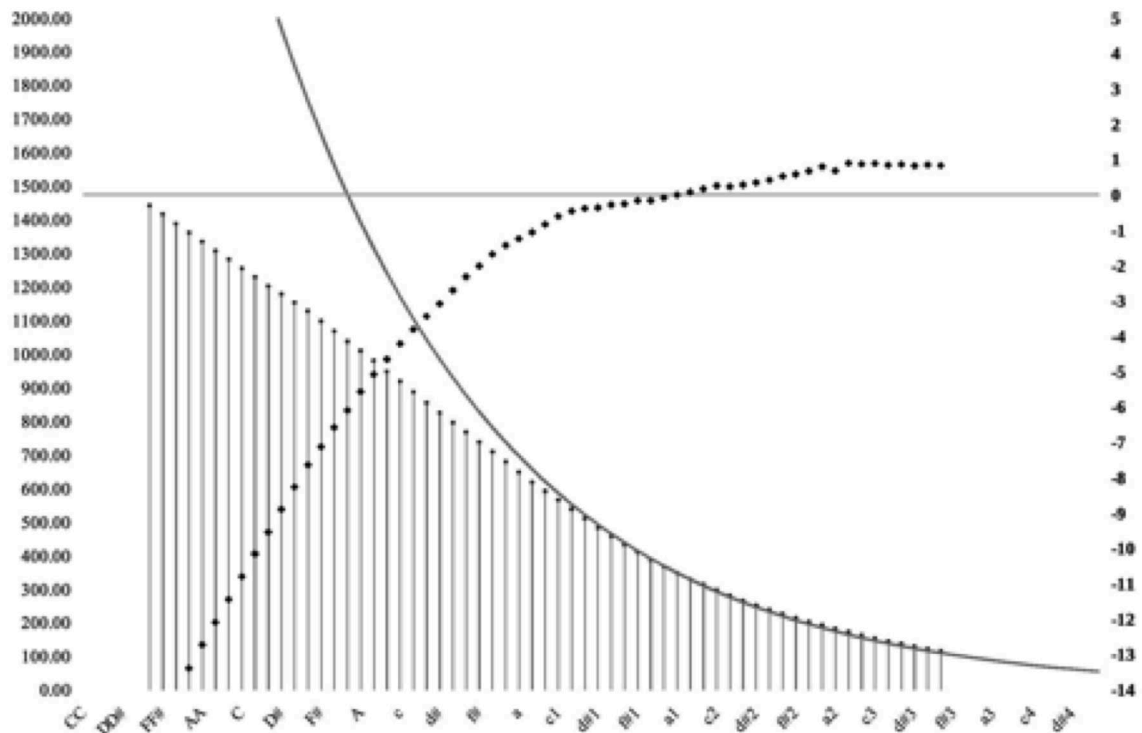
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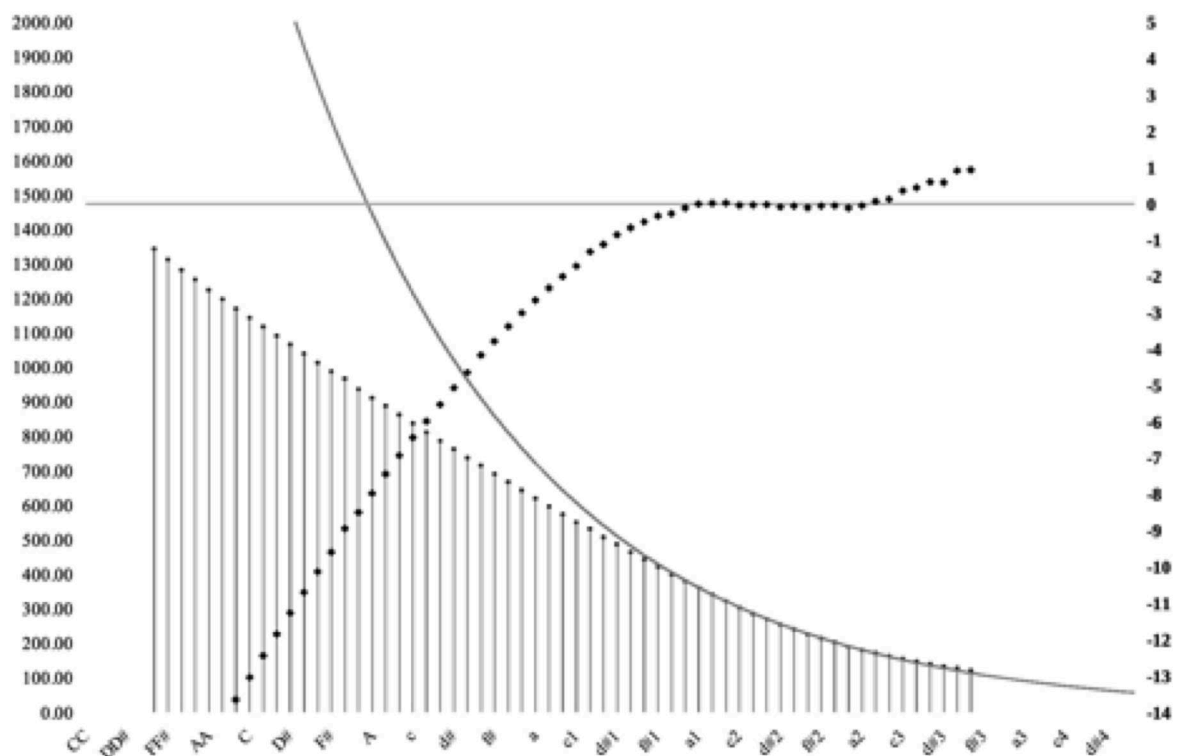
2). C. Baumann square piano 1775 (Fondation La Ménéstrandie)



3). J. H. Silbermann grand piano c.1782 (private collection, Switzerland)



4). J.A. Stein, piano section of vis-à-vis 1777 (Philharmonia, Verona)



5) J.K. Mercken, square piano 1770 (Musée des Arts et Métiers, Paris)

The Silbermanns opted for a Pythagorean progression in the treble. The instrument by Jean-Henri shown in (3) shows what was no doubt intended to be a Pythagorean progression above c1, though case distortion has made it sag somewhat so that f3 is almost a semitone too short.

Other makers took advantage of the fact that, through the process of drawing iron strings, thinner strings are relatively stronger than thicker strings. Since more highly-stressed strings (within their elastic limit) sound purer, these makers gradually increased the deviation from a Pythagorean progression into the treble, in order to optimally stress their strings. Each maker had his own individual approach to this stretching.

J.A. Stein's piano section of his vis-à-vis combined harpsichord-piano of 1777 (4) shows this tendency; from c1 upwards his strings regularly halve in length at the thirteenth note rather than the twelfth. Again, there is slight sagging of the case so what should be a rising straight line ending in a 2-semitone stretch ceases to rise in the high treble.

Baumann (2) also routinely stretched his treble scaling, which overall halves at the 13th. note, so that the length of f3 is 3 semitones above Pythagorean. But his progression is more complex and the curve has a very recognisable rising "s" shape, inflected at c3, with a sort of pirouette for the very last notes. This is because Baumann tended to scoop away the treble end of the hitchrail/nut in his square pianos, in order to simultaneously increase the scaling and move the strike-point nearer the middle of the strings, for a rounder timbre. Mercken in 1768 (1) also stretches f3 by 3 semitones and his stretching seems to be following a similar "s"-shaped pattern, though less extreme because his nut follows a straight line.

Mercken's square piano of 1770 (5)⁴⁰ shows a similar approach to scaling, though further rationalised; between a1 and a2, his scaling is Pythagorean, and from there upwards halves at the 13th. note, ending in a 1½-semitone stretch. This is very typical of contemporary French practice in both harpsichords and pianos.

The nature of any pre-industrial craft is such that working methods and approaches to design are transmitted directly, on a personal level. A master naturally imposes a uniform style on the products of his establishment. In the large cities of countries with a centralised power structure, guilds closely controlled the products of their members, *de facto* imposing a degree of conformity; this effect persisted even after the dissolution of the guilds, lesser artisans copying the designs of their fashionable peers. Furthermore, a certain fluidity of employment meant that skilled workers might work for several masters over the span of their careers, if indeed they did not become masters themselves, thus feeding the tendency to uniformity. Provincial workshops tended to emulate the productions of capital cities, so that in this context, it can be difficult to pinpoint the style of individual craftsmen or even of workshops.

Eighteenth-century Germany was not such a country. In a patchwork of kingdoms and principalities, divided in their religions and in their loyalties, the pressures of uniformity were a much weaker force, with the result that individual initiatives were able to flourish and often very specific and personal styles could be developed. The tradition of the *Wanderjahr*⁴¹ encouraged newly-fledged journeymen to work for masters in many different places for shorter or longer periods, something that promoted an effervescent exchange of ideas.

40. WEBER op. cit. annexe 7, p. 192ff.

41. STEIN, Johann Andreas, ed. Michael Latham., *The notebook of Johann Andreas Stein : facsimile - transcription - translation*. Nötzel Verlag, Wilhelmshaven, 2014.

Christian Baumann's workshop was certainly one where an individual style and vision was developed, to the extent that Mozart recommended his excellent square pianos. On the 31st. August 1782, Mozart wrote to his father in Salzburg:

"Now I have a request to make of you; - the Baroness Waldstätten is travelling from here - and would like to have a good small pianoforte. I no longer know the name of the keyboard maker in Zweibrücken, and I would like to ask you to order one from him. It must however be ready in a month, or at most six weeks; and at the same price as the Archbishop's one..."⁴²

Although there are no known surviving Baumann pianos from the late 1760's, it is probable that he had already established the basis for his designs and was starting to concentrate on this instrument rather than on organ-building. In 1771, Philip Daniel Schmidt was appointed Court Organ-Builder in Zweibrücken, presumably in place of Baumann.

Zweibrücken is halfway between Übach (where Mercken originated) and Paris. It is entirely plausible that Mercken, three years younger than Baumann, worked for him as a journeyman, as did J.A. Stein for the Silbermanns in Strasbourg. Mercken's initial working style, as we have seen, embodies so many of Baumann's specific practices and design choices that it seems extremely likely that he came straight from Baumann's workshop to Paris. That he afterwards modified his working style to suit a Parisian market is not surprising, and there are numerous examples of emigrant makers adopting the style of their new country (van Casteel in Lisbon, Kirkmann, Schudi and Zumpe in London, Taskin and Kayser in Paris, to name but a few).

3. Signature and dating: -

The instrument is elegantly signed in ink on the back of the board at the rear of the keywell. Some people have seen this as questionable, going so far as to cast doubt on the identity of its real author. But this is to forget that the German and Alsatian makers, unlike their Parisian counterparts bound by guild regulations to do so, rarely signed their instruments in an ostentatious manner. Often the most visible trade-marks were their cardboard roses, the design of which was specific to each maker.

Here are a few examples: of the three surviving signed pianos from the workshop of Jean-Henri Silbermann - two grand pianos of 1776⁴³ and c.1782⁴⁴ and a square piano of 1789⁴⁵, only the instrument of c.1782 bears its paper label on the soundboard. That of 1776 is glued to the front of the hammer-rail, and so is only visible when the keywell board is removed, and that of 1789 is pasted under the lid of the toolbox. The same goes for Gottfried Silbermann's instruments, discreetly signed in manuscript on the inside. The vis-à-vis combined piano-harpsichord made by J.A. Stein in 1777 has no apparent signature; the inscription on the action frame of the piano is a transcription made by the restorer in 1912. Christian Baumann's

⁴² *Nun habe ich ein Bitte an Sie; - die Baronin Waldstätten wird von hier wegreisen - und dürfte ein gutes kleines Pianoforte haben. Ich weiß den Namen des Claviermachers in Zweibrücken nicht mehr; und da wollte ich Sie gebeten haben, eins bey ihm zu bestellen. - Es müßte aber in Zeit eines Monats oder längstens 6 Wochen fertig seyn: und der nemliche Preis wie das vom Erzbischof..*

43. Musikinstrumenten-Museum Berlin, cat n°. 12

44. Private collection, Switzerland.

45. Augustinermuseum, Freiburg im Breisgau.

square pianos are discreetly signed on small printed labels pasted to the soundboard, with the result that many are missing.

Mercken did not want to conceal his signature; he was merely adhering to the conventions the public would consider specific to this kind of “foreign” instrument (cardboard rose, discreet signature inside the instrument). Subsequently, when he started to make square pianos in the English style, he also respected their conventions as to signature, and signed them ostentatiously on the front of the board above the keys⁴⁶. Mercken probably hired a calligrapher to write the signature on his grand piano, something he probably would not have bothered to do if he had simply modified the work of some other maker; in this case, he would simply have signed in his own hand.

However, it cannot be denied that Mercken’s signature in this instrument does not conform entirely to conventions. Most German and Alsatian labels, generally written in German or French (the latter including Baumann and Stein in Germany as well as J-H Silbermann in Alsace) specify the qualities of the maker (e.g. *Orgel und Klaviermacher*, *Facteur de Forté-Piano & de Clavecin*) as well as the town of origin, but do not include a verb denoting authorship. Most, but not all, are dated. Parisian signatures were usually written in French, though some were in Latin. They mention the city of origin, the date and sometimes the address, and a verb denoting authorship. A square piano sold at Vichy in 2019 is signed “*Fait par Balthazard Peronard/à Paris Rue des Poissonneries/1772 . 37.*” The signatures of many of Mercken’s surviving pianos have been tampered with⁴⁷ - as already noted, the “1770” inscription should probably read “1779” and the instrument is stylistically similar to his 1778 piano. Both have the macaronic inscription, “*Johannes Kilianus Mercken/fecit à Paris 177**”. By 1781, Mercken was using the formula “*Johannes Kilianus Mercken Parisiis fecit 1781/Rue du Chantre près le Louvre*”. The signature of the present instrument thus falls between two conventions, something which might be explained by Mercken’s recent arrival in Paris (the earliest indisputably dated signature falls two years after his admission to the Corporation) and the omission of the word “*fecit*” before “*Parisiis*” could be due to adherence to his native tradition, because he was at that time working outside the Corporation, or perhaps because he did not make it in Paris (see below).

Dating the instrument

It is difficult, in the absence of additional evidence, to give firm dates for the construction and the subsequent modification of this piano. The Webers⁴⁸ give a probable date of 1767 for Mercken's installation at the Quinze-Vingts in Paris, a church enclave that permitted him to work without interference from the *Corporations* (Guilds). The characteristics of this piano are entirely compatible with a construction at this date; several clues suggest that perhaps Mercken, newly arrived in the capital, wanted to make a strong impression by presenting a large and ambitious instrument, both decoratively and musically. I have already suggested that he may have come fresh from employment with Christian Baumann, in Zweibrücken. It is not impossible, if this were so, that he may have received encouragement in Paris from Duke Christian IV; this is a line of archival enquiry that may yield shed further light.

Be that as it may, the style of Mercken’s instrument is very German. The case design owes much to J-H Silbermann and the marquetry is very much in the same manner as that of

46. See the illustrations in WEBER, op. cit.

47. Ibid. pp.94-152

48. Ibid.

Baumann square pianos of 1782. As we have seen, the note-names are in German style. It is certainly a prototype instrument, with some evidence of haste - in places, a certain clumsiness, hesitation or sloppiness is observable. The acknowledged Silbermann specialist Kerstin Schwarz, who came to examine the instrument, agreed with me : the instrument is the work of a young man. The craftsmanship of his subsequent square pianos is much more stable and assured. The modification of the action, which we both believe is the work of Mercken himself, was done without measuring the consequences of making very high *Kapseln*, which greatly multiply the inaccuracies caused by wear in the balance-mortises of the keys. The expedient of alternating hammerheads on two strike-lines to avoid collisions between hammers seems to be Mercken's handiwork.

Two other hypotheses are possible concerning the build date of Mercken's grand piano; that he brought it ready-made to Paris, having made it beforehand and elsewhere; or that Mercken made it as a masterpiece for his entry of into the Corporation of Tablet-makers, Luthiers and Fan-makers in 1776.

Concerning the first hypothesis, we can only observe that the style of the piano is resolutely German and that the measurements of the instrument correspond to the Pied du Roi, however this is a system that we know was used by makers as far afield as J.H. Silbermann in Strasbourg, C. Zell in Hamburg and J.A. Stein in Augsburg, so construction elsewhere remains a possibility. Could he have had the case of the piano made to order by a cabinet-maker in Zweibrücken and brought it with him to Paris to be completed? The fact that the case dimensions are precisely 7' long and 3' wide is quite unusual; most makers in practice adhered only nominally to these.⁴⁹ This might argue in favour of the case having been constructed to order elsewhere.

As for the second scenario, knowing that Mercken was already producing very neatly made English-style square pianos, perhaps by 1770, and that he seems by then to have adapted his work to Parisian tastes, it would seem strange for him to have built a piano in such an unreconstructed German style several years later.

I therefore propose a very probable construction date of 1767-8 with modifications shortly thereafter, no doubt before 1780 anyway. Consequently, Mercken is not only the maker of the oldest surviving Parisian square piano, but also the maker of the oldest surviving French harpsichord-shaped fortepiano.

Christopher Clarke, Donzy le National , November 2021
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49. see for example CLARKE *Ein gutes...* op. cit. Appendix 3, Baumann case dimensions.