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"The English Wing Spinet of the 17th And 18th Centuries:with Special Reference to the Extant Haward Spinets Introducing Newly Discovered Evidence for Samuel Pepys' Haward Spinet and Queen Anne's Haward Spinet"

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THE ENGLISH WING SPINET
OF
THE 17TH AND 18TH CENTURIES

With Special Reference to the Extant Haward Spinets
Introducing Newly Discovered Evidence for Samuel Pepys' Haward Spinet
and Queen Anne's Haward Spinet

Chas West Wilson

2021

MULTUM IN PARVO

Begin with a one-manual harpsichord. Rotate the treble of its keyboard counter-clockwise by about 65 degrees leaving its string and jack angles unaltered.

The harp shape will survive, a wing shape will be created, and spine length will be cut by the length of the key levers.

Maximum depth will be trimmed by a third; and wall space, no longer needed for a chair, will be freed.

Many visual draws will remain – but in compressed, enhanced form, visible over a wide sight-angle.

Supported by a reticent English trestle, its cantilevered, volant wing will appear levitated – its shape evoking its audial promise.

Both visually and aurally, the English Wing Spinet is kinetic art.

PROEM

National Importance

Of the musical instruments most closely associated with England, perhaps the most obvious are: the lute, the viols, the recorder, the flageolet, the virginal, the guitar, the concertina, and the spinet. If 'England' is broadened to mean the British Isles, we could add the bagpipes and the Celtic harp. Subject each of these instruments to a five-part test:

1. Instruments made mainly, or solely, in England
2. Instruments made mainly by native English makers
3. Instruments bought and played primarily in England and colonial America
4. Instruments enjoying a reasonably long-term popularity in England and colonial America
5. Instruments enjoying widespread geographical popularity throughout England and colonial America

Out of this list only the spinet could satisfy more than three of these requirements; the spinet could lay claim to all five.

Out of, perhaps 6000 or so made during England's 'spinet century', about 300 spinets survive.

About a quarter of these survivors are now in America – largely in private hands.

ABSTRACT

The wing spinet, evidently introduced to England in 1663 by its acknowledged inventor, Gerolamo Zenti, displaced the virginal in the 1680s and was, in turn, displaced by the square piano a century later. A breakdown of the instrument's form into four chronological groups is proposed. Prior literature has focused primarily just on two of the spinet's major makers, Stephen Keene and Thomas Hitchcock, of the middle years and earlier. This study examines in detail the heretofore under-researched surviving spinets of the earliest maker, Charles Haward, and compares his instruments to some of those of the two other early shops of Stephen Keene and John Player.

One of Haward's six extant spinets is shown to have been largely constructed by the inventive septuagenarian, John Haward, shortly before his death in 1667 and then completed by Charles Haward in 1668. Direct and circumstantial evidence is shown to support this conclusion and also Samuel Pepys' purchase and ownership of this spinet from July 1668. It is shown to have been a stand-alone instrument and not, as claimed, one of several built speculatively at this early date. A hiatus of, perhaps, 10 to 15 years between the finishing of this spinet and the dawn of commercial spinet production is shown. Newly discovered information about Queen Anne's Haward spinet is introduced. It is shown to have been a spinet, and not a virginal. A case is made that it still exists and it is one of three spinets we are examining here.

Tonal considerations are analyzed – in particular, comparable string lengths and plucking points. Visual aesthetics, particularly important for spinets, are discussed as well as the importance of the English trestle to their design. Spinets from Ireland, Scotland, and America -- all made in 'England' - are referenced as well as one by Jacob Kirkman.

The three-section paper begins with an overview of the known surviving spinets and their makers. It ends with a discussion of the spinet's inherent pluses and its correctable and non-correctable drawbacks. An optimal design is proposed. A case will be made that the spinet's historic advantages are as relevant today as they were three centuries ago.

INTRODUCTION

The Design

This thesis inverts the, expected order. It is intended to assist the reader to come to a basic understanding of the subject, the spinet, at the very beginning. A short passage, "Multum in Parvo", (what) is followed by another short, "Proem" (why) just prior to the Abstract. In the usual manner, the Table of Contents which follows functions as both a directory and a broadening of the Abstract – a link to the paper's detail which begins in Chapter 1.

A summary begins each chapter rather than being placed at the end. From that initial point, the reader can decide if greater detail is wanted.

Three Major Sections

This thesis consists of three major sections: The Overview, the Haward Spinet section, and the Descriptive section. The first, the Overview, is warranted; for although this is a normal starting point for the first of multiple thesis on any subject; with spinets, it has not been attempted before. Here, it defines the instrument historically. It lists and discusses the known surviving spinets and their probable survival rates, considers their makers as well as all makers of record, examines some masters/apprentice relationships, and considers both the genesis and the decline of the spinet – the two, a century apart. Appendix C, a chronological table, relates many noteworthy spinets to various events of the 17th through the early 20th centuries.

The second is the Haward Spinet, section. Following a determination of their number, there is a detailed examination of the extant Haward spinets. This examination is supported by Appendix A (over 150 pictures plus descriptions) and Appendix B (detailed data and descriptive information). This examination then focuses on an undated Haward-inscribed spinet which I refer to as **16XX** throughout this paper, and show with both direct and circumstantial evidence that it was begun by the senior John Haward just before his death in 1667 and was then finished for Samuel Pepys by Charles Haward the following year. In the preceding section, it will have been shown to have been a stand-alone instrument made more than a decade before commercial spinet production began in England.

Finally in this section, I lay out eight 18th, 19th, and early-20th century accounts of Queen Anne's spinet. I show it was a spinet, and not a virginal and these accounts show evidence it survived until about 1860 when it quietly disappeared. I point out her spinet was evidently important to her and speculate about the possible reasons why. I conclude that it is still with us – one of three Haward spinets. Although the leading candidate is **16XX**, the evidence is circumstantial -- and, in part, negative: the provenance as reported by its owner from c.1882 or before will be shown to be spurious and an alternative provenance is highly likely. Everything in this second, Haward, section is entirely new and singularly important to the English spinet's early years. Four of the six known Haward spinets are dated, and every one was made before 1690.

The third section, the Descriptive Spinet section, examines the spinet's design – its pluses and minuses, what is gained and what is lost with its canted keyboard, and suggests some correctable measures. It explores the spinet's visual impact – owing to the unique importance of the English trestle to the overall form – particularly the later composite trestle. The spinet on

its stand will be related to two architectural aspects. In this section, I also propose a division of English spinets into four chronological groups.

In this section, I have also placed a seemingly unrelated chapter on graphing. I feel this is necessary here because I have substituted comparable string lengths for actual string lengths in this thesis and it is important to explain how this is accomplished and the reasons why.

A lengthy chapter sub-section on the Haward line appears at the end of Masters and Apprentices in the first section rather than in the second, Haward, section. This is because it is more closely tied to the instrument makers comprising this sub-section than to their instruments – the focus of the next section.

Research to Date – An Antecedent Review

Miscellaneous

Darryl Martin (2003:5) has listed 23 works from Rimbault (1860) to Harley (1994) that have sections allotted to the virginal or to music "contemporary with the instruments". Many of these works also include at least a brief mention or short description of the spinet.

Peter Mole (2009:11-13) has listed five "classic and now outdated textbooks", eight collections catalogues, two "standard reference works", and a mention of Martin (2003), Stephen Morris (1983, sic) and John Barnes (1985), "which do deal in part" with the "English spinet".

Barnes

In 1985, John Barnes (1928-98) published a monograph, *The Making of a Spinet by Traditional Methods*. This is a highly valuable work dealing with a markedly important spinet – a Keene & Brackley with numerous detailed photographs and a comprehensive description. Barnes not only showed step-by-step how this spinet was probably constructed, but it directs our focus to the spinet as an artifact – not just a social accessory. His monograph would be of immense help to today's builder as well as the organologist. His undated "c.1712" (Mole); "c.1715" (Barnes) spinet, except for its terminal note just to e3 (rather than g3), its marquetry panel, and its open- brass design hinges, anticipates spinets of the years ahead. Most important, it exhibits the most consequential single revision in spinet design: the change from triangular, bottom-supported bracing requiring "bottom-first" construction to elevated, horizontal, spine-supported bracing requiring "bottom-last" construction (Tom Strange's descriptive terms). This spinet shows that this major revision was made a generation earlier than generally thought and Keene may have been the first to make the change.[1]

Gilbert

Barnes, however, was not a spinet-construction pioneer. In my research I discovered that 15 years before, in 1970, Geoffrey Gilbert, an instructor at Seven Oaks boys' school, directed two 15-year old students in copying the 1758 Crang spinet, then and now at the Victoria & Albert Museum (the V&A). Inspired and motivated by a harpsichord that was built by Dr John Catch of Amersham, he, nevertheless, decided to copy a spinet rather than a harpsichord, for the soundboard they proposed to use that they removed from "a very old Erard grand piano" was insufficient for a larger instrument. In a five-part series (March – November 1970), in *'Woodworker'* magazine, he described how they made various parts. Not knowing the Crang's

[1] I am personally familiar with this spinet. I measured and photographed it and tried to buy it when it was first brought to Barnes' home in the 1970s. I would like to think Mole's acquisition in 2007 of this important transitional spinet could have been the spur for his thesis published two years later.

internal bracing, they designed their own, and their LH tail was straight and not arcuate (a descriptive Mole term). The remainder seems to have been faithfully copied, however. One of those two boys may still have that interesting spinet. The Crang was an outstanding spinet for them to copy.

Morris

By writing the first of just two spinet theses as far back as 1986, Stephen Morris is the groundbreaker. Although his was an undergraduate thesis, *The English Bentside Spinet 1660 to 1730 – a Detailed Look at Four Major Makers,* it is remarkable for its level of research, its depth of coverage, and its understanding of the early- and middle-period spinets he examined. He assessed the knowledge available at the time of Charles Haward, John Player, the Cawton/ Aston partnership, the Keene and Hitchcock workshops, and then added his own corrections and additions. Most impressive are seven accurate, top-down scale drawings he made that supplemented a number of photographs he included of important spinets.

He wrote, perhaps prematurely, "This is a beginning to the very long task of collecting information on all the surviving English bentside spinets, which will take the form of an open information bank…" (1986:01). But then he wrote more prophetically, "I end this introduction with a challenge for anyone to take up the subject of English virginals…" (1986:01)

Mole

Covering and updating much of Morris' groundwork, Peter Mole's thesis, *The English Spinet with Particular Reference to the Schools of Keene and Hitchcock,* written 22 years later in 2009, is the spinet's first and only doctoral thesis. It follows the third and last edition of Donald Boalch's *Makers of the Harpsichord and Clavichord* (BM3) by 14 years. As a result of his "organological inspections", he classed the surviving Keene spinets into four groups and the Hitchcock spinets into two. His primary thesis was the refutation of "The commonly held view that the spinet was merely a cheap and compact substitute for the harpsichord" (2009: iii).

He supplied highly useful data for case heights, keyboard-to-spine angles, spine lengths, compass, and string lengths for several spinets. He also showed that the rather central, overtone-suppressing, treble plucking points that we tend to associate with late spinets could be found (by exception) on early Hitchcocks. He also described and pictured many visual details found on many c.1680 to c.1740 spinets.

It is superbly well-written – for the layman as well as the organologist. It is logically and consistently arranged. And although it is limited in its time-span (as is Morris') to the death of Thomas Hitchcock in 1737 and has little to say about the Hawards and their spinets, it is comprehensive in its scope up to the year 1737.

At the end, Mole listed three interesting "opportunities":

1. "…A substantial number of instruments from the years 1740 onwards have survived. It is thought that these instruments, which have been included here by exception could provide the focus of one or more major research projects".
2. "A more limited opportunity would be to investigate the Harris family…"
3. "In the choice of the scope for this research…one major maker, Charles Haward, did not receive any significant attention. A research project directed to Haward's instruments would

be valuable, though there are some practical difficulties inherent in this since the instruments are widely spread geographically."[2]

Martin

Earlier, in 2003, Darryl Martin wrote his PhD thesis which he titled simply, "The English Virginal". It is being mentioned here because his 19-page Chapter 6, "The Decline of the Virginal" is essentially all about spinets and Martin was Mole's faculty advisor. There are corrections I make in this thesis to several of Mole's assertions and all of these have their origins in Martin's Chapter 6.

In the second half of this chapter, Martin has chosen three spinets: a Keene, a Player, and the 1687 Haward to measure and describe. The early Keene – perhaps the earliest, tied to Haward's late design, is singularly important. The choice of a very early Player is, too. But since the 1687 Haward, like the 1622 Knole harpsichord, had been totally gutted, but unlike the harpsichord, reconstructed, its internal data is conjectural. All three spinets are discussed in this thesis.

Martin's subject was virginals, and on this subject his research, his conclusions, his writing, have made a unique, definitive contribution to England's organology.

Conclusion

It is my hope that by inverting the normal order and then, gradually broadening out the subject, I will enable the reader to come away with more information about this overlooked instrument than initially sought. It is also my hope that every reader will be encouraged to turn to this thesis' important predecessors (both presently on the internet) by Stephen Morris and Peter Mole. This thesis is intended to be an extension of their notable research. Any changes or criticisms I will make to their or others' work will be made, where necessary, throughout the text.

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[2] None of the six extant Haward spinets are now in England. Four of them are widely scattered in America: in New York, Pennsylvania, Florida, and S. Dakota. One is in Scotland; one is in Germany.

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SECTION I OVERVIEW

CHAPTER 1 THE SPINET DEFINED

Summary

The term "Spinet" has had an on-going disputed origin and, in Continental Europe, a confused and chequered usage.

Eight English and American dictionaries from 1706 to 1853 have defined, "Spinet", "Virginal", and "Harpsichord" fairly consistently. All share a clear and modern distinction between these three instruments in English usage. It appears there has never been any confusion in the English-speaking world between the two single-strung instruments made in England – the square virginal and the wing-shaped spinet.

Samuel Pepys, who owned two keyboard instruments in the 1660s, always made a palpable distinction between "Virginalls" and "harpsichons". He may also have been among the first – and last – to use a new term, "espinette" in 1668.

A surviving English-made ottavino, laid out in spinet-fashion, suggests that such an instrument could have been the source of Zenti's spinet invention.

Edmund Ripin's pre-1975 spinet definition, currently in Grove's Dictionary, has been supplemented more recently, but left unchanged. While accurate and encyclopaedic, it is rather confusing. Much more concise and more sharply focused is one found in Mole's thesis earlier. I have further reduced Mole's definition to the spinet's most salient attribute: its canted keyboard. By employing the adjective, "wing", I am following Jean-Claude Goujon (1763) and Charles Mould (1995). Unlike the more customary, "bentside", "wing" describes the spinet's overall form – not just one of its sides.

The disputed origins of the term, "spinet" and its confused and chequered usage in Continental Europe have been frequently referred to.

The Spinet Defined - Text

A. The Term's Disputed Origin – Usage On The Continent

Its Origins

Does the term come from the Latin, "*spina*" (thorn), or from Giovanni Spinetti (c.1500), believed to be the inventor of the square virginal? Or, to triangulate the square, as it were, was the latter named for the former? This matter seems to be unresolved.

Its Usage

On the Continent, the term was used, perhaps, two centuries before it was first used in England. Over the years and in different countries it was applied variously to all string keyboard instruments, to all single-strung keyboard instruments, to virginals with LH keyboards, and finally to all polygonal straight-sided instruments. Hence the choice of the adjective "bentside" in Continental usage to distinguish the later harpsichord-shaped instruments from the many other instruments depicted with the same noun.

Since England was a late-user of the term, its historical usage there has been more restricted. Particularly illustrative, I believe, is a series of English and American dictionary definitions of the term "spinet" spanning a century and a half from the end of the 17thC to the middle of the 19thC that show surprising consistency.[3]

B. Eight Historic English and American Definitions from 1706 to 1853 of Spinets, Virginals, and Harpsichords

The New World of Words or Universal English Dictionary – E. Phillips, (6th Edition, London 1706)

> SPINNET – A Musical Instrument, A sort of small Harpsichord.
> HARPSECORD – or harpsecol, A kind of Musical Instrument.
> VIRGINALS – A noble sort of Musical Instrument, touch'd after the same manner as the Organ and Harpsichord, and probably so called as having been counted a proper instrument for Virgins to play on.

Since this dictionary originated in the late 17thC, these definitions may have, as well.

Dictionary of The English Language – Samuel Johnson, (1st Edition, London 1755)

> SPINET – (Espinette, French), A Small Harpsichord; an instrument with keys.
> HARPSICHORD – A musical Instrument.
> VIRGINAL – (More usually virginals), A musical instrument so called, because commonly used by young ladies.

A Dictionary of The English Language -Samuel Johnson, (8th Edition, London, 1799)

> SPINET – A Small Harpsichord; An instrument with keys.
> HARPSICHORD – A Musical Instrument, strung with wire, and played by striking keys.
> VIRGINAL – (from Virgin) Maiden; maidenly; pertaining to a virgin.

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[3] References to the harpsichord and virginal are included as well, because of their important sibling relationship.

Over half a century, "spinet" was unchanged, "Harpsichord" was expanded; but the word "Virginal" had become uncoupled from the instrument.

A Compendious Dictionary of The English Language – Noah Webster, (1st Edition, New Haven, 1806)

> SPIN'NET – N. A musical instrument, a small harpsichord.
> HARPSICHORD – N. A fine musical instrument.
> VIRGINAL – An old string musical instrument, ob.

This was Webster's first American dictionary.

The Cyclopaedia – Abraham Rees, 1802-19, (1st American Edition, Philadelphia)

> SPINET – Spinetto, Ital. Espinette, Fr. From spina, a thorn or quill, the tone being produced by a crow's quill inserted in the tongue of a little machine called a jack. (See Jack and Tongue) ...It is played with keys, like the virginal, or small pianoforte; the long keys are the diatonic or natural notes, and the short for the flats and sharps. (See keys and scale.) The keys, when pressed down at the ends of the finger, on the principle of the lever, make the other end throw up jacks, which strike the strings, and cause the sound by means of the quills with which they are armed.
>
> The thirty thickest strings are of brass; the others, for the more delicate notes, are of steel or iron-wire, fastened at one end by hooks, and at the other on pins, by which they receive their tension over the bridges already mentioned.
>
> The figure of the spinet is like that of the harpsichord, a horizontal harp, and the harp an inverted spinet. It is tuned in the same manner as the other keyed instruments by 5ths, and 8ths, with or without bearings, as the tuner or the owner of the instrument shall please....
>
> The spinet has but a single string to each note. As the spinet rivalled the virginal, the small piano-forte has supplanted the spinet in the public favour; and we believe that very few have been made since the middle of the last century.
>
> VIRGINAL, is a keyed musical instrument of one string, jack, and quill to each note, like a spinet; but in shape resembling the present small piano-forte....

Charles Burney (1726-1814) was responsible for the musical entries in Rees' *Cyclopaedia*. I have quoted so much of this because of the importance of its author. It was written 25-30 years after he wrote his *General History of Music* and it shows us his important views about spinet tuning, string material, and manufacture near the end of his long musical life.

A Critical Pronouncing Dictionary and Exposition of The English Language – John Walker, (1st Edition, London, 1813)

SPINET – A small harpsichord; an instrument with keys.
HARPSICHORD – A musical instrument.
VIRGINAL – More usually virginals. A musical instrument so called because used by young ladies.

Walker simply lifted his definitions from Johnson's 1st edition.

The London Encyclopaedia – (Printed for Thomas Tegg, Cheapside, 1829)

SPINET or SPINNET – A musical instrument ranking in the second or third place among musical instruments...The harpsichord is a kind of spinet, only with another disposition of the keys. See Harpsichord. The instrument takes its name from the small quill ends which touch the strings, resembling spinae or thorns.
HARPSICHORD was not defined – neither was VIRGINAL.

An American Dictionary of The English Language (Unabridged) Revised & Enlarged – Noah Webster, (Springfield, Mass 1853)

SPIN'ET- (It. Spinetta; Fr. Epinette; Sp. Espineta) An instrument of music resembling a harpsichord, but smaller; a virginal; a clavichord.
HARPSICHORD – (harp and chord). An instrument of music with strings of wire played by the fingers, by means of keys. The striking of these keys moves certain little jacks which move a double row of cords or strings stretched over four bridges on the table of the instrument.
VIRGINAL – A keyed instrument of one string, jack, and quill to each note, like a spinet but its shape resembling the forte piano. Out of use.

At this late date, here was a clear definition of the harpsichord and the virginal – less so the spinet. Note, it was to be pronounced with an accented first syllable.

In all of these dictionary definitions there seems to have been a clear distinction made between these three instruments and no confusion between the virginal and the spinet as there seems to have been on the Continent.

C. Samuel Pepys' Keyboard Ownership and Terminology in the 1660s

Decades prior to the earliest of these dictionary definitions, in 1661 (14 June) the diarist and naval administrator, Samuel Pepys (1633 – 1704) wrote in his diary that he had acquired from Lord William Brouncker (1620 – 84) a polygonal virginal, or possibly an ottavino (a small octave-tuned keyboard string instrument) at the time that Lord Brouncker may have replaced it with a harpsichord. Coming out of an age when in England "virginals" was the term employed for all plucked string keyboard instruments, Pepys, nevertheless, regularly made a clear modern distinction between the "harpsichon" and the instrument he had acquired from Lord Brouncker. In his diary he referred to the latter variously as his "tryangle", his "triangle" and his "triangle virginall".[4]

Whatever happened to his "virginall" is unclear. Pepys last mentioned it 1 July 1664 when he wrote that he brought it down to his chamber after acquiring a "new frame proper for it to stand

[4] Strangely, he made a solitary reference to a "spinette" (1 July 1664) that he had heard played. If what he then owned was a polygonal virginal – a virginal with chamfered rear corners creating essentially a trilateral shape, then the "spinette" he heard must have been an ottavino. Neither instrument would likely have been English; both are primarily Italian.

on". Since he bought his Haward spinet in July 1668, he must have been without a string keyboard instrument for four years.[5] [6]

The instrument Pepys saw, unfinished, in Charles Haward's shop (4 April 1668) and then purchased three months later (13 July) he called by a new term, "espinette". This French term is meaningful: for Pepys had to have heard it used by Charles Haward, who would have heard it from John Haward, and that could support a link of this unfinished spinet to a probable spinet of Gerolamo Zenti's (? – 1667/8). Just before spending a year (1663) in England as King Charles' "Virginal maker", Zenti had spent a year or more at the French court. It is highly likely that he made wing spinets, instruments generally accepted as having been of his design, in both countries and at both courts.[7] Zenti's activities in France before coming to England are the likely reason the Hawards may have erroneously associated this new instrument to that country. Zenti, himself, could have encouraged that then-prestigious association.

Two things seem clear: First, both the instrument in Charles Haward's shop and the term used to describe it were new to Pepys, and, evidently, new to Charles Haward as well. Second, "espinette" may prove to be the first and possibly only known written use of that French term in England. Not until the 1680s is there a likely surviving written reference, again, to the wing spinet in England, and by then both terminal "E's" were dropped.

D. An English Anomaly

An interesting anomaly is the 1750-dated London-made, 4-1/3 octave ottavino of triangular, spinet form signed by Stephen Hill at the Victoria & Albert Museum (the V&A) (No. 145-1878). Since it seems to bear a workman's number 27, it was probably one of a batch and not a special order or an experiment. Except for its straight "bent" side, parallel to and just to the right of the RH transverse brace, it resembles a c.1750 English wing spinet in miniature. It is mounted on a period-correct trestle that is very likely original. Italian ottavinos were made in this tricon form but more commonly with their harp-shaped string band flipped over, creating a mini-rectangular virginal with bass strings on a diagonal.[8]

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[5] Over 200 years later in a confused account under "Spinet" in early editions of Groves Dictionary, A J Hipkins (1826 – 1903) erroneously referred to a Pepys reference "concerning the purchase of triangles for the spinet – a three-legged stand as in our illustration". He then pictured the undated Haward spinet I refer to as "16XX" in this thesis. This spinet was pictured for close to a century and in the 3d edition (1935 printing) it was assigned an impossible date of "c.1660". The misleading sentence remained unchanged from 1883 through, at least, 1935.

[6] In his Appendix-4, Martin (2003:294-99) has helpfully tabulated all of the stringed keyboard instruments he found in Pepys' diary).

[7] The sole surviving Zenti spinet is one dated 1637, owned today by the Brussels Musical Instrument Museum. Although it is considered genuine, it passed through the hands of the infamous forger and "restorer", Leopoldo Franciolini (1844 – 1920). Judging from its improbable bridge placement, Franciolini seems to have reconstructed the inside. Helping to tie this Zenti spinet to Charles Haward is its LH tail shape and its keyboard-to-spine inclination of 17 degrees – the same angle found on three of the early Hawards.

[8] Zenti would have been familiar with both of these commonly-seen ottavinos in Italy; many, perhaps, warranting Burney's frequently-quoted view of their having a sound that was "more wood than wire". Zenti's spinet innovation could have stemmed from the obvious augmentation of an existing ottavino form rather than from the rotation of a harpsichord keyboard, but I believe this is less likely.

E. Recent Definitions

In recent years Edwin Ripin (1930 –75) was responsible for a needed updated and corrected re-write of Hipkins' spinet definition in Groves. Although more recently supplemented, his writing remains in "Groves On-Line" today largely as he wrote it. His ten paragraphs, while accurate and encyclopaedic, deal as much with certain spinets' exceptional features as with those normally expected, particularly on English instruments, leaving the lay reader with a rather turbid understanding of the spinet.

Much more concise was Mole (2009:2) who, in a single sentence, wrote, "The term, 'spinet' in English was used narrowly to denote a small, generally triangular, plucked keyboard instrument". He then wrote that in his thesis; an instrument with all of the following characteristics would be an "English spinet". (I have taken the liberty of expanding his numbering):

1. With a "generally triangular shape"
2. With an "arcuate or serpentine" RH casewall
3. With a string band "substantially parallel to the spine"
4. With the "longer (bass) strings" adjacent to the spine
5. With a "single bridge" and a "nut attached to the wrestplank"
6. With an "eight-foot sounding pitch"

Let me propose another rather basic way of viewing and defining the English wing spinet:

1. Fundamentally, an altered 1-manual harpsichord, or even (providing for the Crang-Hancock spinet-pianos) a harp-shaped early grand piano.
2. The treble of the keyboard rotated towards the spine by, typically, c.65 degrees.[9]
3. By compressing the string- band, this tilt requires each successive harpsichord-spaced string to rise by a chromatic half-step.[10]

This more open definition focusing on its harpsichord relationship and its canted keyboard rather than the shape of its RH side, will allow us to accept interesting variants like the Hill ottavino, without our having to see them as non-spinets.

I have chosen the adjective "Wing" throughout this thesis. Like the more gustatory "Leg-of-Mutton", but unlike the more customary "Bentside", it describes the shape of the entire instrument. This follows the usage of Jean-Claude Goujon ("*en aile d'oiseau*") in 1763 and of Charles Mould (BM3) in 1995.

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[9] A minimum found of 6-degrees on a 1779 Crang Hancock spinet-piano and a maximum found of 45-degrees found on an 1827 Jos. Small, Pennsylvania-made spinet – both property of the writer.

[10] At a c.27-degree angle, the harpsichord string spacing will be retained.

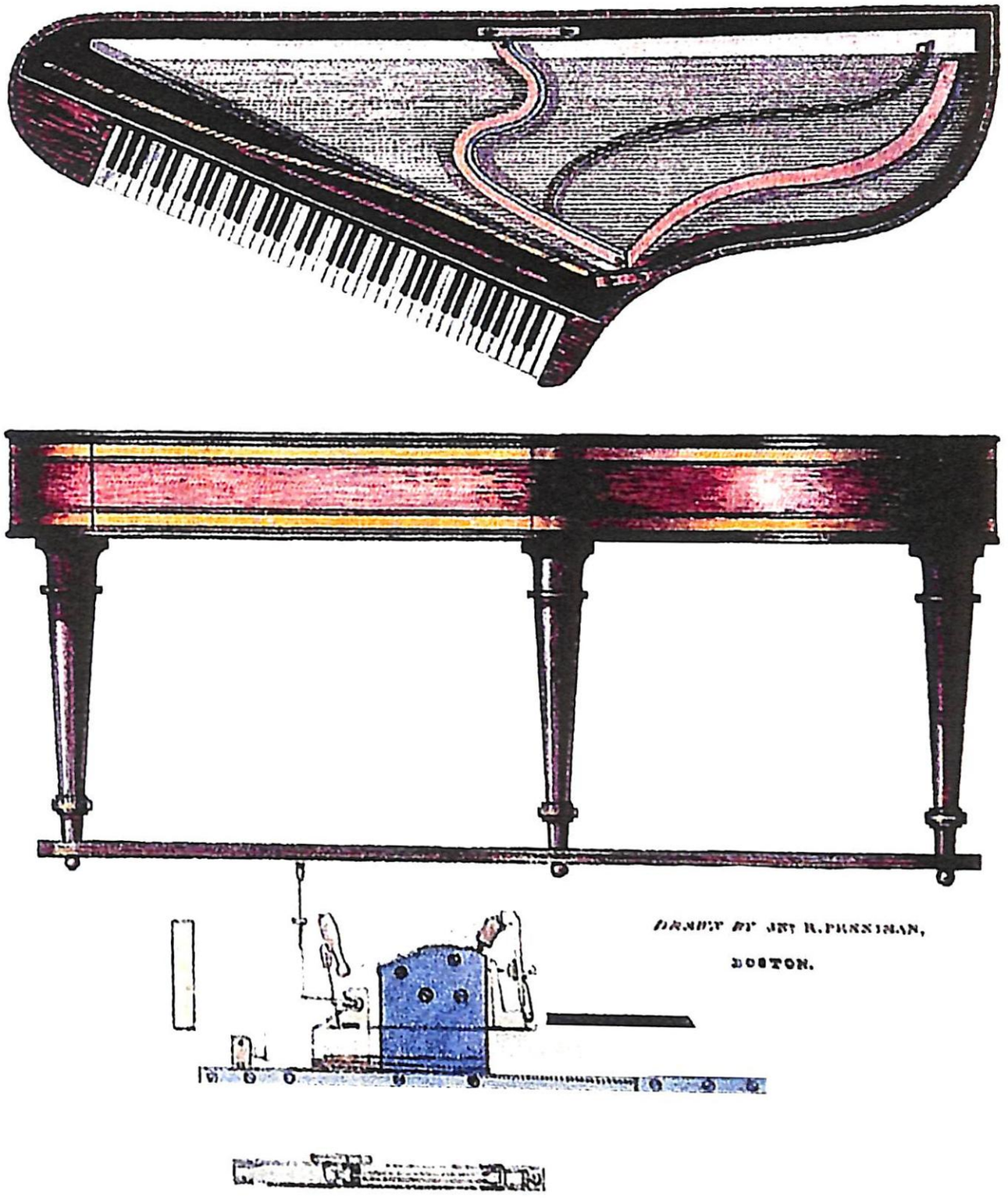

Table 1.1.Six-octave piano painted by the artist, John R Penniman.

This 6-octave piano painted by the artist, John R Penniman of Boston, Mass (1782 – 1841) around 1835 was designed to play at either the unison or the octave pitch. It may have been designed by Alpheus Babcock (1786 – 1842). Were any built? Is this not a spinet? (The Magazine "Antiques", July 1981 p.159)

CHAPTER 2 SURVIVING SPINETS

Summary

Any plucked keyboard instrument count will have to begin with Boalch: three editions – each a generation apart. An instrument count will have to be an approximation.

In 1968 I made a rough count of all instruments using Boalch (1956) (B1)-listed instruments. English wing spinets were just under half of the English keyboard instrument total.

Of greater significance, English wing spinets accounted for seven-eighths of the total spinet count and dwarfed every other major instrument category.

From 1956 (B1) to 1995 (BM3) there has been a major growth in the number of listed instruments and an even greater percentage growth in spinets – both English and Continental.

Despite its obvious historic prominence, the spinet was scarcely recognized as a serious musical instrument in the mid-to-late 20thC.

The growth in known English spinets to about 285 in 1995 parallels the growth in known English virginals to 20 (plus two, undated) in 2003.

Surviving Spinets -Text

A. A Rough Count: Plucked Keyboard Instruments – Spinets, in Particular

Today, any study of surviving plucked keyboard instruments will have to begin with, or at least draw heavily on Donald Boalch's *Makers of the Harpsichord and Clavichord.* Three editions, written a generation apart (1956, 1974, 1995), record every known (at those times), signed instrument made before 1830. Because of duplications, attributions, and so many missing instruments, any count we might attempt to make will be an approximation and any recount will result in slightly different totals.[11]

SURVIVING INSTRUMENTS IN BOALCH I (1956)
NB: Numbers are rounded

	Harpsichords		Spinets	Virginals	Octave Instruments	Clavichords	Other (Co. Ca. etc.)	Σ
	Double	Single						
ENGLAND (incl. U.S., Ireland, Scotland)	100	100	180	15	2	1	5	400
ITALY	5	100	5	70	20	10	2	210
FLANDERS	80	40	7	50	15	-	3	200

[11] Following Morris' and Mole's usage, the adjective "English" will be used for "English-school" spinets made in England, Scotland, Ireland, and America – but the noun "Britain" for their country of origin. Here and throughout this thesis, the three Boalch editions will be referred to as B1, B2, and BM3.

FRANCE	25	20	5	-	1	-	-	50
GERMANY	5	10	15	2	5	75	-	110
OTHER (Demark,	3	-	-	-	1	35	-	40
Σ	220	270	210	135	45	120	10	1000

Table 2.1.a. Surviving Instruments from Boalch - 1.

One thing that stood out in these editions was the high proportion of wing spinets to all listed English instruments – accounting for just under half of the English instrument total.

Even more significant was the high proportion of spinets made in Britain compared to those made elsewhere: they accounted for just under seven-eighths of the total spinet count. My listing shows that in 1956, known, named, surviving English wing spinets dwarfed every other major instrument category in every country.[12]

Despite its historical prominence, as proven by this listing, the English wing spinet was scarcely recognized as a serious musical instrument at that time. The harpsichord-maker, John Challis, along with many others, refused to build one.[13]

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[12] Writing, however, in 1999, (CSJ: 1999:108) Grant O'Brien estimated that "750 or so" Italian harpsichords, virginals, and spinets have survived from the historical period – more than half, unsigned. His conclusion, of course, would make a major shift in our assessment by nation of surviving plucked instruments, for essentially all English instruments can be assumed to have been "signed", and only a few have had their names defaced. A similar situation exists with unlabeled (usually white-dial) clocks. Unsigned instruments and unsigned clocks can only be attributed.

[13] "Everything is on a bias", he once said (PC). While his "Petite Harpsichord" could have been much improved if he had laid it out in a space-saving spinet fashion, (he had to use wound strings in his short bass), with his uniquely cut leather plectra, he felt he needed the precise *Cyclopaedia* regularity of a 90-degree harpsichord layout. Challis' father had been a clockmaker.

Contemporary reviews estimated the total number of instruments listed grew to about 1500 in the 2d edition of 1974 (B2) and to about 2000 in the 3d edition of 1995 (BM3).

The count of "spinets" listed in B1 and B2, and "wing spinets" in BM3, gave these totals:

SPINET COUNT
NB: Numbers are rounded

	English	Continental	Total
B1 (1956)	180	30	210
B2 (1974)	229	34	263
BM3 (1995)	284	41	325

Table 2.1.b. Surviving Instruments from Boalch - 2.

In all three editions, discovered English spinets continued to be about seven-eighths of the spinet total from all countries. In BM3 the breakdown was:

SPINETS BY COUNTRY
NB: Numbers are rounded

	Double	Single	Spinets	Virginals	Octave Instruments	Clavichords	Other	∑
England (including Ireland, Scotland)	100	100	180	15	2	1	5	403
Italy	5	100	5	70	20	10	2	212
Flanders	80	40	7	50	15	--	3	195
France	25	20	5	--	1	--	--	51
Germany	5	10	15	2	5	75	--	112
Other (Denmark, Sweden, etc.)	3				1	35		39
∑	220	270	210	135	45	121	10	1013

Table 2.1.c. Spinets by Country in Boalch - 3.

The discovery of more spinets over time parallels the discovery-growth in the known number of dated English virginals:

1935	GD-3	12
1940	GD-4	14
1956	B1	18
1995	BM3	19
2003	Martin	20 (plus 2 undated)

(Sources: Groves, Boalch, Martin)

B. Today's Estimated Spinet Count

Through extrapolation, we might assume that today's counts might conservatively be (in round numbers): English wing spinets 300; total wing spinets 350. But since we are relying on BM3 for other analysis, we will assume the counts remain: English wing spinets about 285; total wing spinets about 325.

Concentrating on dated instruments can convey a specious sense of accuracy; nevertheless, it can help us tie observed spinet traits to narrow time intervals. It can also allow us to try to determine changes to spinet popularity over a century.

There were 128 explicitly-dated English spinets listed in BM3 – a little less than half of the spinet total.

SPECIFICALLY DATED EXTANT ENGLISH SPINETS A LUSTRUM GROUPING

To 1700	7
1700-04	7
1705-09	5
1710-14	2
1715-19	2
1720-24	4
1725-29	5

1730-34	8
1735-39	1
1740-44	9
1745-49	6
1750-54	6
1755-59	4
1760-64	11
1765-69	13
1770-74	19
1775-79	7
1780-84	7
1785-89	5
Total	128

Table 2.2. Specifically-Dated Extant English Spinets – Lustrum-Grouped – From BM3.

There were just seven before the year 1700 – four Hawards and three Keenes.[14] Fully a third date from the 15-year period: 1760-75, which could reflect a comparatively high survival rate or, perhaps, a higher percentage of dated instruments. Based on Burney's c.1810 observation, "We believe that very few have been made since the middle of the last century" (Rees, '*Cyclopaedia*'), there may have been a high survival rate for the late spinets. Burney, after all, was greatly involved in all things musical over many decades: his organological memory must be taken seriously.

Since only four surviving Hitchcock spinets are dated, the omission, here, of close to 50 undated Hitchcocks, seriously impacts our impression of the surviving spinets from the era they had dominated. If we were to add, arbitrarily, ten Hitchcocks to each lustrum period (5-year intervals) from 1715 through 1739, surviving spinets in each semi-decade of this era (now up to 11-18) would resemble the counts of numbered survivors among the same cohorts from 1760-75. But this would leave us with an unexplained lacuna from the mid-1740s to about 1760, the late George II period – the years when spinet sales should have been strong.

C. English Spinets – Largely London-Made

A surprising finding was the high proportion of surviving spinets that were made in London – about 250, or seven-eighths. However, this is not unlike virginals where 19 of the 22 known survivors were also made in London (Martin:2003:3). It is interesting that the three virginal exceptions were made in Exeter, where no extant spinets were made. It might be assumed that this high London proportion reflects the high output of major makers located there. But if we

[14] The "1680-dated" Player is being excluded for its newly-revealed date on several grounds. This will be discussed elsewhere.

were to subtract the surviving spinets of the two largest makers – those from the Hitchcock and Harris families, totaling about 100 extant spinets – the London-proportion would still be over 80-percent.[15] According to Martin (2003:11), London's population in 1700 was 575,000. This is less than 12-percent of England's population then, which was about 5-million.[16] Wealth concentration, however, is less clear. Joseph Massey (Gatto:2010:24) has estimated that in 1759 about 20-percent of English families earned £50 or more a year and, in England alone, this represented about ¼-million households. While a Kirkman or Shudi double in the 1760s or so was priced well over this annual threshold amount, Pepys was able to buy his spinet a century earlier for just £5. Let us assume from c.1680 to c.1790, or 110 years, close to 6,000 spinets were probably made and sold in Great Britain. Considering an amateur's need for a fixed-pitch instrument (probably a recorder) which was required to tune a spinet, and the skills and willingness to maintain the spinet, 6,000 would seem to be an impressive total. But it is still a small number compared to those able to afford one. Nevertheless, these talents coupled with a desire to make instrumental music were probably most commonly seen in London.[17]

D. English Spinets – Now in America

Another surprising finding was the number of English wing spinets found in America in 1995. Of the total number of survivors – 285, 76 were in America. This is 27-percent, or over a quarter. Some were here originally, some (most of those in museum collections) were purchased in the late-19thC, and some were brought in more recently. Certain makers were heavily represented:

Of 20 by Baker Harris, 11 (over half) were in the US.
Of 7 by Jacob Kirkman, 4 (over half) were in the US.
Of 36 by Thomas Hitchcock, 8 (close to a quarter) were in the US.
Of 11 signed, "Longman & Broderip", 4 (over a third) were in the US.
Of the 6 Hawards (current estimate), 4 (two-thirds) were in the US.

Spinets made by Thomas and John Hitchcock and Baker Harris, together, accounted for about a third of the number in America in 1995.

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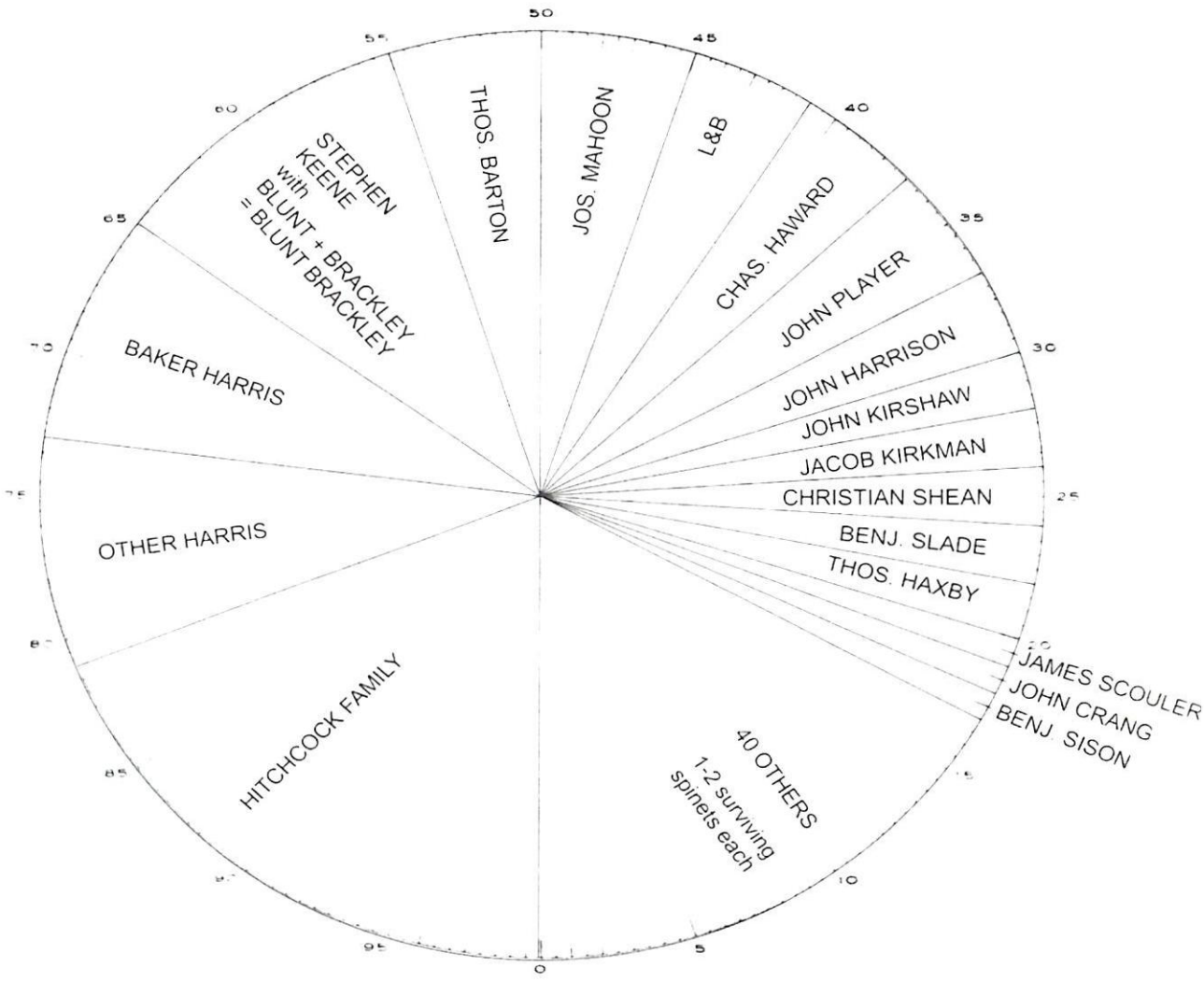
[15] 250/285 = 88% vs 150/185 = 81%

[16] Michael Fleming's estimate is just under 10-percent (GSJ:2005:89)

[17] There is another issue that could have dampened potential spinet sales. The Puritan musical aversion was supposed to be restricted to music in the church. However, it may have had a broader, more sinister, effect. Michael Fleming, in a rather doleful article "An Old Old Violl" (GSJ:2005), seems to show that musical instrument ownership, and, by extension an interest in music, generally, plummeted in about 1640 and failed to recover with the Restoration. It is interesting to pair this decline with that of modern piano purchases. In 1909, the USA population was 90.5-million. That year, piano sales peaked at 364,500. In 2016, the population was up 3.6 times that to 323.1-million, but acoustic piano sales were just 30,000 – a sales reduction of 92-percent (AARP Bulletin:10/17:38). John Challis, no doubt reflecting Dolmetsch's thinking, claimed a "clavier" was any sort of keyboard – including a typewriter (PC). With today's plunging sales and so many museums closeting their instruments, will the "QWERTY" be the only keyboard we will eventually understand?

CHAPTER 3 THE MAKERS



A. The Spinet Makers

Summary

Although there were 40 listed makers leaving 1-2 spinets each, half of the approximately 285 spinets listed in 1995 in Boalch were made by just the Hitchcock and Harris families, the Keene shop, and Thomas Barton.

In contrast to the 50-percent-plus increase in spinets in Boalch over four decades, the known, listed makers grew by less than 15-percent.

Since over three-quarters of the spinet-discovery growth from 1956-95 was from the top eight makers, they will probably be the source of most future discoveries.

The Spinet Makers - Text

The following pie-chart next shows that over half of the known English spinets in 1995 were made by just the Hitchcock and Harris families, the Keene workshop, and Thomas Barton.

In contrast, fully 40 makers (two-thirds of the makers) were responsible for only 1-2 surviving spinets each, implying there might be a still much larger number of minor spinet makers, none of whose instruments having survived. However, BM3 names only 27 English makers that have left us with no instruments.[18]

Figure 3.1. The Makers.

The following table is a listing of the 40 makers not shown on the pie chart. In contrast to the major growth of more than 50-percent in reported English spinets from the 1st to the 3rd editions of Boalch (about 180 to 285), there was just a 13-percent increase in the number of makers (61 up from 54) of these spinets over the same four-decade span.

[18] In this pie chart, the French decimal compass has been used. Since the French 100-degree circle represents 285 spinets; here, each degree reflects three known, surviving spinets in 1995.

40 ENGLISH SPINET MAKERS WITH 1 OR 2 EXTANT SPINETS EACH

ARGENT, Humphrey
ASTON, Cawton
BAUDIN, Joseph
BECK
BLUNT, Edward
BLYTH, Samuel
BRACKLEY, Charles
BRADSHAW, Albion
BRIDGE, Richard
CLEMM, J. G.
CULLIFORD, Thomas & Barrow
CULLIFORD & WALLCOTT
DEELEY, William
"H, I"
HANCOCK, John
HANCOCK, Thomas
HOLMES, James
JOHNSTON, John
KEEYS (?)
KEMP, John
KEMYS, John (?)
KRICKHOF, Frederick
LADYMAN, John
LOGAN, J.
LONGMAN, LUKEY & CO.
LONGSHALL, John
PLENIUS, John
PRINGLE, Arch.
RELFE, John
ROUCHEAD, Andrew
SLADE, Charles
STEWART, Neil
VAN KAMP
VESEY, Richard
WATSON, John
WEBER, Ferd.
WELMAN, Stephen
WILBROOK, John
WOOLFINDEN, John
ZOFFE, John

Table 3.1. Forty English Spinet Makers (Source = BM3)

GROWTH IN KNOWN ENGLISH SPINETS (1956-1995) FROM EIGHT LEADING MAKERS

	B1	B2	BM3
1. Hitchcock Family	34	41	52
2. Harris Family (excl. B.H)	14	16	23
3. Baker Harris	14	20	21
4. Keene Shop	16	27	30
5. Thos. Barton	0	11	15
6. Jos. Mahoon	6	9	13
7. L&B (Culliford)	5	9	11
8. John Player	4	7	10
Total	93	140	175

Table 3.2. Known English Spinets (1956-1995).

This table shows that almost 80-percent of the growth in the extant spinet count (B2 up to BM3) was from eight major contributing makers, possibly suggesting that most future finds will continue to be of spinets from these major makers rather than from the less significant shops.[19]

B. The Virginal Makers

Summary

Out of 12 virginal makers leaving us with surviving virginals, just two – John Player and Stephen Keene – have left us with surviving spinets.

Over a third of the 20 dated extant virginals were made from 1668 to 1684, suggesting a late, c.1680-or- so, start for commercial spinet making.

If so, this further confirms the spinet that Charles Haward finished in 1668 is uncoupled from the steady extant spinet series dating from the 1680s.

A likely explanation is that the 1668 spinet was begun and then left unfinished by John Haward-the-Elder at the time of his death in 1667. Given the 10-15-year hiatus in spinet-making the spinet must have been seen as irrelevant by Charles Haward, his rivals, and their customers at that time.

A century later, after the foreign-born piano makers had established the popularity of their new instrument, many spinet makers turned to piano-building.

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[19] For the chart and the tables, the counts cannot be considered numerically exact, but they are statistically usable. No correction has been made for known Haward double-counting, for example, and each attribution has required an ad hoc decision to be made.

The Virginal Makers -Text

Of the 12 makers of the 20 signed virginals, only two: John Player and Stephen Keene, have left us with any spinets. From a manufacturing perspective, the spinet is a very different instrument than a virginal, and the other 10 makers may not have satisfactorily made the transition.

The fact that no fewer than seven of the 20 dated extant virginals (35-percent) were made between 1668 and 1684, could be one important piece of evidence of a late, 1680-or-so, commercial spinet beginning.

When the Haward spinet was finished in 1668, none of the younger Hawards and none of the other virginal makers seemed to feel the need, then, to follow John Haward-the-Elder's curious lead. They had all been schooled in making a very complex and dissimilar instrument. The familiar virginal was still what their customers knew and wanted. A century later, in contrast, many, perhaps most, spinet makers seemed to have no reluctance in turning to the making of pianos. However, most did so a generation after Zumpe's first known square (1766) and only after the foreign-born "12 Apostles" (an 18thC term) had secured their advantage.

CHAPTER 4 MASTERS AND APPRENTICES

A. General

The Boalch Listings – Summary

In all three editions: 22 Masters / 65 Apprentices of the Joiners' Co 1622 – 1758 were listed.

All Masters, today, are familiar names, but fewer than half of their apprentices became free and only three of them left surviving instruments.

Graduation rates show a wide variation: A majority of John Haward's were freed in contrast with a quarter or fewer of Townsend's or Player's.

Four Hawards were responsible for about a third of the apprentice total – the senior John Haward for at least 11 – over several decades.

There were two parallel dynasties: White's and Haward's, and only one apprentice linked the two: John Sandles, who was transferred to Charles Haward from Thomas Hill in the 1680s.

A listing weakness: only two masters were also listed as apprentices earlier; yet, all had to have been apprenticed earlier.

The Boalch Listings –Text

All three editions of Boalch (B1, B2, BM3) list "Some London Apprentices 1622 – 1758". These record 66 London apprentices and 22 masters from the records of the Joiners' Co to the death of George II. The names of all these masters are familiar to us as virginal or spinet makers and all but four (T Hill, N Farnaby, T Markham, T Haward) have left us with surviving instruments; yet, of the 29 apprentices who became freemen, only three (J Harris , R Vesey, R Welman) did so. Presumably the other 26 must have made virginals or spinets, although none of their instruments have survived. It is important to note: these 29 apprentices who became freemen were in the minority – over half, apparently never did.

Ten of the masters listed supervised two or more apprentices over the years:

The John Hawards (3)	16
Gabriel Townsend	9
John Player	8
Thomas White	8
Stephen Keene	5
Thomas Barton	3
Edward Blunt	3
Thomas Haward	3
Chas Haward	2
Cawton Aston	2

Except for Thomas Haward and the John Hawards, these masters all left us with surviving instruments.

One measure of a master's pedagogical success would have to be the proportion of his apprentices being granted their freedom. Based on these listings, the success rates of the

major masters differed rather significantly. At the one extreme, just two (22%) of Townsend's, two (25%) of Player's, and three (38%) of the Thomas Whites' apprentices became freemen according to the Joiners' Co records; yet,10 (63%) of the combined John Hawards' apprentices were granted their freedom. The 16 apprentices under the John Hawards accounted for just under a quarter of all the listed apprentices but just over a third of those who were granted their freedom. Although five Hawards were evidently responsible for the 21 total Haward apprentice count, John Haward-the-elder was probably responsible for at least 11, and possibly 15 of them.

Given the Haward-centrality of this thesis, these Boalch lists are particularly valuable to us for four reasons:

> First, they strongly suggest that the elder John Haward was England's largest string keyboard instrument builder in half, or more, of the 17th century.
>
> Second, he must have taken on two of his earliest recorded apprentices in 1617 and 1618 at the latest.
>
> Third, if in 1617 he had to have been at least age 24 (allowing for three years as a journeyman after being granted his freedom at 21[20], he must have been born in 1593 at the latest; and, therefore, when Joiners' Co records show that he died in 1667, he had to have been in his mid-70s.
>
> Finally, in 1622, the year of the Knole harpsichord, a uniquely significant and complex instrument requiring a wide variety of in-house talents, John Haward had no fewer than three apprentices working for him: William Dutton, John Cooke, and Orlando Edwardes.

Since both Dutton and Cooke were just two to three years shy of being granted their freedom, they each must have had four to five years of Haward-supervised work experience by 1622. This, in part, requires us to take a fresh look at the conclusions of Frank Hubbard and Raymond Russell about this singularly important harpsichord which we are doing in the appendix section.

Perhaps the high Haward graduation rate came with a cost. His apprentices who became freemen might have been subject to less rigorous training than those trained by others in the Thomas White line.[21] There are two pieces of evidence for this:

> First, out of the 21 apprentices assigned to the Hawards, none have left us with any virginals or spinets. However, perhaps too much should not be made of this, for only Keene among Player apprentices[22] and Vesey among Keene apprentices have left us with instruments.
>
> Second, the indifferent workmanship shown on Haward's 1683, 1684, and 1689-dated spinets is markedly inferior to that on surviving Players and Keene's.[23] [24]

The apprentice, Joseph Sandles, was reassigned from Thomas Hill to Charles Haward sometime between 1680 and 1689. This is the only connection between the White and Haward

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[20] Martin made this observation (1992:19).

[21] Player and Keene had both been apprentices of Gabriel Townsend, who, in turn, had been a Thomas White apprentice.

[22] Keene had been reassigned to Player on the death of Townsend.

[23] See Appendix A.

[24] Most of the Haward spinet '16XX', however, shows craftsmanship at least equal to that found on Players and Keenes.

lines on record. Sandles may have been the one responsible for the design- update and workmanship- upgrade found on Haward's spinets '**c.1685**' and **1687**. He may have been the one responsible for the more conventional reconstruction of the **1683** Haward harpsichord, whose nominal date may be the year of its reconstruction as it clearly is on the **1689** spinet. Earlier, Sandles had begun his apprenticeship with Player.[25]

In addition to possibly less stringent training of apprentices under John Haward is the further issue of freedom through patrimony. Charles, as well as a Thomas and one of the two junior Johns were so admitted. Did they receive the sort of rigorous training they should have received as normal apprentices?

A closing caveat about the Boalch listings: they cannot be considered complete; for of the 21 masters, only two (John Harris and Thomas Hill) were also listed as apprentices. Yet, most of the other 19 must have been trained earlier by somebody, and this should have been recorded.

The Martin Biographies – Summary

Darryl Martin (2003) listed 122 "Known Virginal Builders" with biographical information, including 50 of the 65 London apprentices listed in Boalch. Although these listings overlap, the 15 that Martin excluded fell outside the virginal period and Boalch's was confined to London makers.

Martin demonstrated the existence of a senior Thomas White – the patriarch of a long line of Virginal and spinet makers.

There could have been a single direct connection from Thomas White to the Harris family in the late 18thC.

A correction to an apparent error: John Haward's last apprentice (1658-67) appears to have been Corney Barres rather than Philip Jones, based on Jones' virginal design evidence as determined by Martin. Both men were given the same specific dates and the same nine-year apprentice span.

The Martin Biographies - Text

Using four named sources, Martin (2003:300-12) created a detailed makers' register of 122 "Known Virginal Builders". While 53 of these were obscure apprentices – the majority of whom were never, apparently, granted their freedom, many of the rest have to be considered acknowledged instrument builders, and this register is a valuable fleshing out of the listing of the 65 London apprentices found in all Boalch editions.

Both of these lists should be considered together, for Martin's has omitted 15 apprentices that fall outside of the virginal period [26] and the Boalch lists are confined to London makers.

Expanding a footnote in the Boalch listings, Martin has explained that our knowledge of the existence of a senior Thomas White, a Thomas White I, is based on Gabriel Townsend's freedom, which was granted in 1625. We know that a Thomas White II was clearly too young to

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[25] Because of this, a possible tie of this rebuilt Haward harpsichord to that described in the Talbott manuscript, thought by Martin to be of Player design, could make a worthwhile study.

[26] Seven of these were not later shown as freemen of the Joiners' Co.

have been his master. Hence, despite Martin's caveat, "this individual may not have existed" (2003:312), I feel we can be virtually sure that he did exist and there were three generations of this pre-eminent instrument-making family, who have left us with six of the 20 dated, surviving virginals plus an apprentice succession extending well into the spinet period. This senior Thomas White had to have been the pioneer. Of the six White virginals, two were made by his grandson, John, and four, probably by his son, Thomas. Since the earliest is dated 1638, none of the four were likely made by Thomas Senior, however.

Of the eight apprentices (other than Townsend) assigned to a Thomas White, only two were assigned prior to 1635: John Dermore (1629) and Thomas Stevenson (c.1622) – two of only three White apprentices that would become free. While I would agree with Martin that it is not possible to determine which Thomas White was the master of any of these eight, it is likely that at least six were assigned to Thomas White II and not his father.

There is a possible connection between the Thomas White's and the Harris family – the leading spinet makers in the 3rd quarter of the 18thC. The Boalch listings and Martin both show that a John Harris was apprenticed for ten years (1675-85) to Stephen Keene, who had been an apprentice to Gabriel Townsend in 1655 (before being turned over to John Player). John Sison, son of the early spinet maker, Benjamin Sison, was, in turn, an apprentice to this John Harris, and Martin established this was after 1688. Both sources show that a James Harris was the father of John. Granted, "Harris" is a common name, but could James have been an ancestor to the late 18thC Harrises: Baker, John, Joseph, and William?

An apparent error should be addressed if not absolutely resolved. There is a question about John Haward-the-elder's last apprentice: Was it Corney Barres or Philip Jones? The Boalch listings show that a Corney Barres, bound 1658, free 1667, was assigned to "John Haward-the-elder". This listing fails to show Philip Jones as an apprentice, although it does list Jones as the master over the apprentice, Thomas Small in 1671. In the text of three editions of Boalch, Jones was mentioned as being apprenticed to John Haward for eight years (actually, just over nine years) from an ultra-specific "13 July 1658" until the date of his freedom in "August 1667". The year-dates and the longer than usual apprenticeship span is identical for both men. Martin reprinted the Barres listing information and also the Jones biographical data, eliminated the dating-specificity, and then concluded that Jones had to have worked as a journeyman for Keene before setting up on his own in 1671. His two conclusions were evidently based on similar characteristics he found on Jones' 1671 virginal to the two survivors made by Keene[27] and recognized that the name and date on Jones' virginal meant he was then the owner of a shop and not just a journeyman.

It is most unlikely that there were two apprentices working for John Haward at exactly the same time and for the same nine years each. I believe the Joiners' Co records must be considered more reliable than the unsupported biographical entries. The biographical-entries' "8-years" is at variance with its overly-precise dates and its writer may have just as easily confused the two well-known masters, Keene and Haward. Finally, after working nine years with John Haward, would Jones, as an independent shop owner, be inclined to incorporate a whole new set of shop practices recently picked up as Keene's journeyman? I believe Jones must have undergone his apprentice training with Keene, and Corney Barres, as Joiners' records tell us, was John Haward-the-elder's last apprentice – free in 1667, the year of John Haward's death.

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[27] He described it as "clearly related" (2003:13).

The Mole Chart – Summary

Peter Mole (2009:392) prepared a condensed but highly useful chart showing "Master / Apprenticeship Relationships" from Gabriel Townsend to "The Hitchcocks". It highlights the two legs of the White succession through Player and through Keene plus the short collaboration of their apprentices: Aston and Barton.

There is no mention of or connection to the Haward dynasty running parallel to White's through most of the 17thC.

The chart's value is that it encourages us to focus on descent.

The Mole Chart – Text

Peter Mole (2009:392) has given us an abbreviated but highly useful chart of "Master / Apprenticeship Relationships" from Gabriel Townsend to "The Hitchcocks". It shows graphically the bifurcation of the White line separating Player and Keene. It also shows the brief but important alliance of Cawton Aston (trained by Player) and Thomas Barton (trained by Keene), but not the earlier and interesting Keene apprenticeship – initially (1655) under Townsend but then followed by Townsend's former apprentice, Player. It displays the important, on-going relationship of several leading spinet makers following after Keene. Because it is restricted to Thomas White's line, it is unable to incorporate Benjamin Sison, a fourth, early spinet-maker, or any of the Hawards, however.

Specifically, it lets us see a direct connection from the unlisted and un-named Whites through the Hitchcocks, reaching, possibly, even to the late 18thC Harrises – makers of so many surviving spinets.

In contrast to the White – Hitchcock ladder, the Hawards, which would have formed a parallel ladder, despite all their apprentices and their extended family, had become a garth or cul-de-sac, perhaps a decade or so before the close of the 17thC.

While the information conveyed on this chart may be skeletal, it directs our thinking and prods us to 'fill in the blanks'.

B. The Hawards

John Haward-The-Elder – Summary

John-the elder, the patriarch, was born in 1593 or before and died in 1667.

Pepys is believed to have visited his shop at St Helen's, Bishopsgate, in February 1661.

John Haward-The-Elder – Text

The family patriarch, "John-the Elder" was born in 1593 or before and Joiners' Co records show he died in 1667, age 74 or more. In 1649, and probably for many years earlier and later, he lived in St Helen's Parish, Bishopsgate. Apparently, in 1668 there were no Hawards still living there. Pepys went to Bishopsgate according to his diary (4 April 1668) and finding a "Harpsichon-maker" no longer there, he went, instead, to Charles Haward's in Aldgate[28] where he found an unfinished "espinette". Seven years before, on 26 Feb 1661, he may have convinced a friend to back out of a harpsichord purchase because they were unable to lower the £14 price: "The master not being at home, we could make no bargain". The "master" on Bishopsgate Street, then, was probably John Haward-the-elder. There was, presumably a workman at the shop in 1661 who was unable to negotiate a better price, but possibly it was a family member.

The Younger Hawards – Summary

There appears to have been five Hawards born about 35 – 45 years after John-the-elder: two Johns, probably two Thomases, and one Charles.

In this generation, only Charles has left any examples of his work. We have no birth dates and a death date (1689) only for Charles.

The Younger Hawards – Text

The younger Haward line is tenebrous. There appears to have been five Hawards born about 35 – 45 years after the senior, John Haward. We have the dates of freedom of four and the some-time addresses of three. Two were named John, two (assuming a Thomas Howard was Thomas Haward) were named Thomas, and the fifth was named Charles. A John, a Thomas, and Charles, who became freemen of the Joiners' Co through patrimony within a few years of each other, were probably brothers and, arguably sons of John-the-elder. Their dates of freedom were 1652, 1657, and 1660, respectively. Assuming these three had been trained in John-the-elder's shop, other non-family apprentices must have been there at the same time.

A second, older, John, was free in 1648 – but not through patrimony. Remarkably, through most of this man's apprentice- period, there were no other John Haward apprentices-of-record for several of those years. Clearly, although undoubtedly related, he cannot have been a brother to

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[28] Although both diary translations refer to 'Aldgate', unaccountably Martin (2003:299) substituted "Aldersgate" and Mole later questioned whether Pepys had confused the two (2008:94). Aldgate is close to and just northeast of Seething Lane where Pepys lived and he had to have known the difference.

another John, and, therefore, to a Thomas, and Charles. A year after his freedom, he may have stayed on as a journeyman, however, for his address continued to be St Helen's Bishopsgate.

We know of another Thomas, but have little information about him. We know that in 1650 this Thomas bound an apprentice, Hugh Brome. Because of this, Thomas must have been born in 1626 or before and had to have become a free man in 1647 or earlier. This was possibly just a year before the non-brother John's freedom. According to information in Boalch, this Thomas may have taken on another apprentice in 1658 that is not in the listing, for he was recorded in Joiners' Co records as "Master of the Apprentices" in both 1650 and 1653.

I have been critical of Charles Haward's workmanship, which could reflect the possible insufficiency of his patrimonial training. But he and John-the-elder, alone, have left us with examples of their work. For the others, we have no birth or death dates and no record of Joiners' Co heirs. Today, they are just incorporeal names. Because of this, in my view, their relationship value to us today is slight. What is important is that all five can be considered to be directly connected to the notable John-the-elder and sadly, all had to have made keyboard instruments that have entirely disappeared. At least, here in this thesis, they are being named.

Two Parallel 17th Century Lines - Summary

In the 17thC there appear to have been two parallel instrument-making lines begun by contemporaries, Thomas White and John Haward.

While the number of apprentices trained by Haward and his family members is far greater than those trained directly or indirectly by White, several White-dynasty names are well known to us today because of their surviving instruments, whereas none of the Hawards are. There are no known surviving virginals by any Haward family or dynasty makers but 16 virginals can be tied to makers trained in the White school.

Two Parallel 17th Century Lines - Text

In the 17thC, there were evidently two parallel string keyboard instrument-making lines headed by patriarchs Thomas White I and John Haward-the-elder. Both were apparently born in the 1590s and both took on their first apprentices at about the same time. They had to have known each other and they could even have been trained together, but we have no evidence for this. The number of apprentices trained and, particularly, the number granted their freedom, is far greater for John Haward's line than for Thomas White's; yet, several of White's are well-known to us today through their virginals whereas none of Haward's are.

Today, all nine London makers of surviving named English virginals have a probable or certain Thomas White stamp, and as a group they account for 16 of the 19 surviving named virginals. There are no virginals from the Haward line – just six spinets, a harpsichord, and quite possibly the shell of a second harpsichord (see the appendix section).

Haward Virginals? – Summary

There could have been a harpsichord-making bent by the Haward dynasty that was only marginally in direct competition with the White dynasty and its virginals. But the evidence is, unfortunately, scant, and, in part, contradictory.

Haward Virginals? – Text

One might ask: Was the virginal of much importance to the Hawards? We know John Haward-the-elder was the attributed inventor of the 'Pedal' – a pedal-operated harpsichord that seems to have nearly doubled the price of a standard hand-operated harpsichord. It was a harpsichord "made for Mrs The" that Pepys saw at the maker's premises on Bishopsgate Street in 1661 (26 Feb). It was a "small harpsichon" that he intended to buy when he went first to a "harpsichon-maker" on Bishopsgate Street, and then when he found he was no longer there, to Charles Haward's in 1668 (4 April). When he purchased his spinet three months later (13 July), there was a playable harpsichord there in Charles Haward's shop at the time. The survival rate of 17thC English harpsichords is close to nil, but evidently many were made. Could it be that the Hawards and some of their apprentices could make a living making and selling these senior instruments while leaving most of the virginals to others?

Running counter to such a conclusion is the reference to Charles Haward "that makes virginals" in Pepys' diary (4 April 1668) and Keene's 1671 description of himself as a "Maker of Harpsichons and Virginals".

The Haward Apprentices – Summary

For three quarters of the 17thC, 21 apprentices were assigned to the Hawards. At least 11, perhaps 15, were assigned to John Haward-the-elder. Of the 21, only eight failed to become free.

For nearly a quarter of a century, John Haward-the-elder oversaw at least two apprentices at the same time – and three in at least five of those years. One year was 1622, the year the Knole harpsichord was made.

Working back from the year of freedom of his two earliest recorded apprentices, we can determine John-the-elder must have been born in 1593 or before and was at least 74 in 1667 – the year of his death.

There is a hard-to-understand 6-year apprenticeship hiatus that coincided with a junior John Haward's apprentice-training in the 1640s suggesting the two John Hawards were working together but were unassisted by any outsiders.

A Thomas Howard, or Haward, is named on Joiners' Co records as "Master of Apprentices". Nevertheless, he evidently had just three apprentices in the 14 years beginning in 1650. Two of these became free, however, after seven years.

Charles Haward took on his first apprentice in 1670. Since this apprentice never became free, he may not have remained long. At some point in the 1680s, Charles Haward took on his second apprentice, John Sandles, who had started under Thomas Hill in 1680. He became free in 1689 – the year of Charles Haward's death. Sandles could have been the one that brought an innovative spinet design to Charles Haward, but that suggests the unlikelihood of its design

coming from Hill. Someone new to the shop, however, was possibly responsible for the Haward design-change and Sandles is the only workman we know of.

Despite their large extended family and their many freed apprentices, the entire Haward line came to an early, quiet end – undoubtedly before the end of the 17thC.

The Haward Apprentices – Text

Over three-quarters of the 17thC, there were 21 apprentices assigned to a John Haward - probably three Johns, and probably two Thomas Hawards (from c.1617 to 1689). Of these, at least 11, and perhaps as many as 15 could have been assigned to the senior John Haward. Of this Haward total of 21 apprentices, only eight failed to become free – a better-than 60-percent success rate.

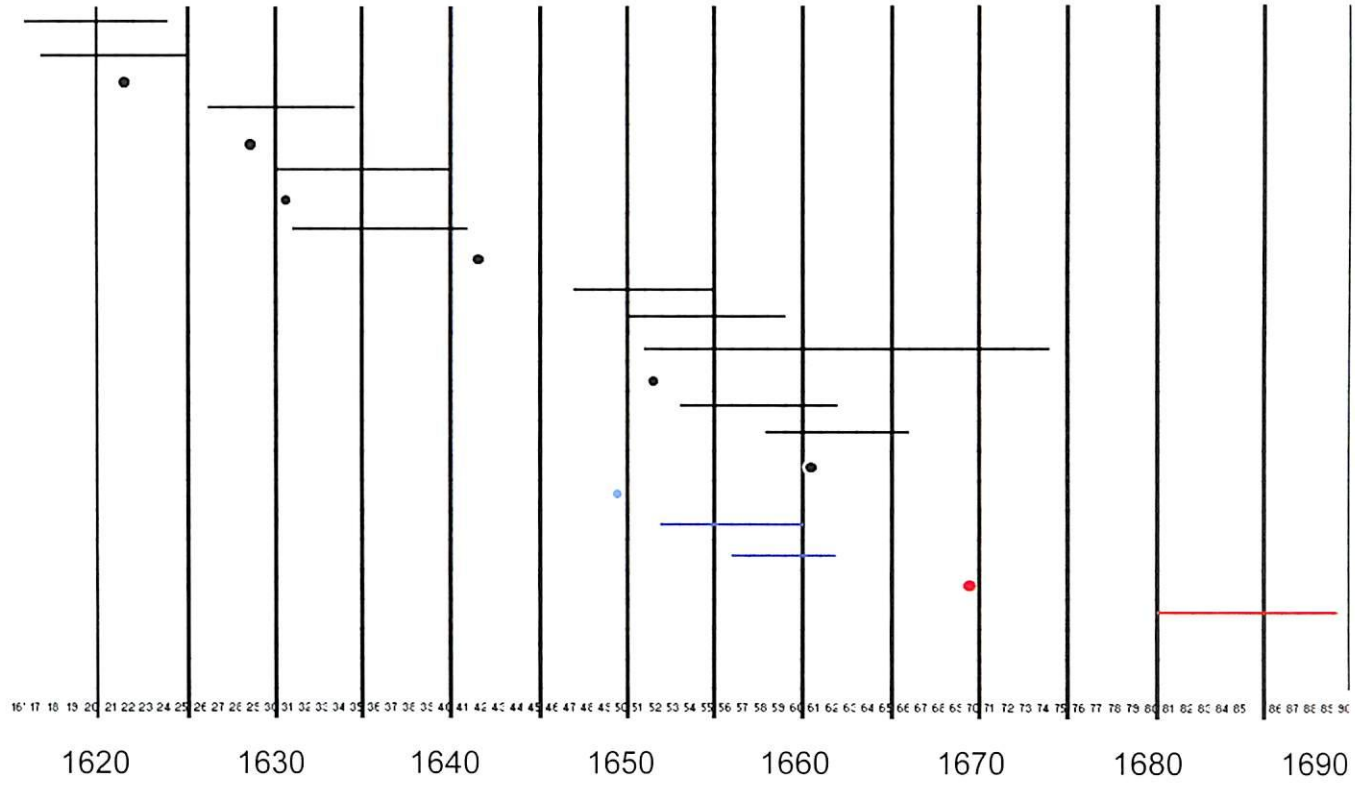
HAWARD APPRENTICES - A CHRONOLOGICAL LISTING	
JOHN HAWARD MASTER	
≤ 1617 – 1624	W. Dutton
≤ 1618 – 1625	J. Cooke
1622 – X	O. Edwardes
1627 – 1635	B. Dawson
1629 – X	T. Forcer
– 1640	A. Norton
1631 – X	J. Hudson
1632 – 1642	E. Poole
1642 – X	J. Bate
1648 – 1655	T. Greene
1651 – 1659	W. Barfoot
1652 – 1672	H. Avery
1652 – X	T. Thorne
1653 – 1663	J. Howard
1658 – 1667	C. Barres
1661 – X	B. Frawlins
THOMAS HAWARD MASTER	
1650 – X	H. Brome

1653 – 1660	P. Elliot
1656 – 1663	J. Crosse (Howard)
CHARLES HAWARD MASTER	
1670 – X	J. Robinson
1680's – 1689	J. Sandles (from Hill)

Table 4.1. Haward Apprentices.

From the late teens to the early '40s, John Haward-the-elder had at least two apprentices in his shop in all but a couple of those years and he had three working with him in at least five of those years. In 1622, the year of the semi-extant Knole harpsichord: William Dutton, John Cooke, and Orlando Edwardes were all working with him that year. If John Haward-the-elder had to be at least 24 when he took on his first apprentice (Martin 2003:13) in 1617 or before, he must have been born in 1593 at the latest, and he was at least 74 in 1667 – the year of his death.

The hiatus from 1642 to 1648, exactly corresponds with the apprenticeship of a second John, who would have worked at John-the-elder's shop from 1641 or before to 1648, when he became free.[29] But can it be that John (2) was John-the-elder's only assistant for six years?



Legend: Red = Chas Howard; Blue = Thos Howard. Black = John Howard.

[29] A third John, clearly not a brother of John (2) became free by patrimony in 1657.

Figure 4.1. Haward Apprentices Timeline.

In the pre-hiatus years of the 1640s, the chart suggests a pattern of John Haward's of bringing on a new apprentice each year. Then later, in every one of the post-hiatus years from 1651 to 1662, it seems either three or four apprentices per year were assigned to the undifferentiated John Hawards. Remarkably, five of these seven apprentices became free.

Before taking his first apprentice, John Robinson, in 1670, Charles Haward was apparently working alone.[30] Since Robinson never became free, he would have left before 1677 – perhaps several years before. Sometime in the 1680s Charles took over Joseph1 Sandles, who had begun under Thomas Hill in 1680.

If it could be shown that it was Sandles who was the one who brought fresh ideas about spinet-making to Charles Haward's shop in the mid – late- '80s, this would have been a particularly auspicious transfer. The problem is that Hill, his former master, had been an apprentice of John Player's in the 1660s where he undoubtedly never made or even saw a spinet. Also, Haward's two late spinets appear to have several features that were in advance of anything made by his Player and Keene rivals before the end of the 17thC. Sandles was freed in 1689 – the year of Charles Haward's death. While Sandles and Charles Haward would have worked together to the end, did Haward's innovative ideas come from a third, and unknown, source?

There was a Thomas Haward named in Joiners' Co records as "Master of Apprentices" in 1650 and 1657. However, the Joiners' Co records show he had just three apprentices: Hugh Brome in 1650, Peter Elliot in 1653, and, assuming "Thomas Howard" was Thomas Haward, John Crosse in 1656. These last two became free after seven years.

In contrast to the Thomas White line, which continued through Keene and the Hitchcocks to the late 18thC, the Haward line, family and apprentices, despite their large numbers, seem to have come to a quiet end – undoubtedly before the close of the 17thC.

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[30] On 4 April 1668, Pepys wrote in his diary, "called upon one Hayward".

CHAPTER 5 GENESIS AND DECLINE

A. The Spinet's Genesis

Summary

The view that the spinet was introduced to England in 1660 "or shortly before" is erroneous.

But we do know one was finished and sold in 1668.

Based largely on music publication evidence, there was an apparent 10 – 15-year hiatus in spinet-making from the solitary instrument completed for Pepys in 1668 to the early 1680s.

Its bizarre, unfamiliar form may have delayed its acceptance.

The Spinet's Genesis - Text

Martin expressed the view that the English spinet was introduced, "via France, probably at the time of the Restoration (1660) or shortly beforehand" (2003:226). Mole used the 1660 year as the initial date of his "period under study": (2009:1).

To sanction this c.1660 date, we would have to ask, who would have introduced it to England, given that Gerolamo Zenti's year at the London court was three years later and even his period at the French court was after this early year.[31]

We do know from his diary that a spinet was finished and then sold to Samuel Pepys in 1668. Following the completion of this spinet, however, there is an unexpected lack of evidence of any commercial production of another such instrument for more than a decade – by anyone. If Charles Haward had made any within a short period after 1668, then his two major competitors, John Player and Stephen Keene, would surely have done so, too. If they had, music publications would have reflected that. Until some time after 1678, though, they evidently never did. Some of these dated keyboard publications are revealing:

1663 ***Musick's Hand-Maide****: Presenting New and Pleasant Lessons for Virginals or Harpsycon.* (Printed for John Playford (1623-86) (A virginal is pictured).

1669 In the second book of John Playford's ***Select Ayres and Dialogues:*** *If any person desire to be furnished with good new virginals and Harpsichons, If they send to Mr Playford's shop, they may be furnished at reasonable rates to their content.*[32]

1671 In the sixth edition of John Playford's ***Introduction to the skill of music:*** *Mr Stephen Keene, Maker of Harpsichone and Virginals, dwelleth now in Threadneedle street at the sign of the Virginal, who maketh them exactly good, both for sound and substance.*[33]

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[31]Although Zenti is the acknowledged spinet inventor, no English or French Zenti spinets are known to have survived. Also, it should be noted: at this time, no extant French spinet is believed to pre-date 1680.

[32] Source: Rimbault 1860:84.

[33] Source: *The Harpsichord*, v.5, #3, 1972:14.

1678 ***Musicks Hand-Maid:*** *New Lessons and Instructions for the Virginals or Harpsychord.* (Note the term now, 'Harpsychord'. A virginal is pictured with a bowed instrument held at the chin of a performer as well as a third hand-held instrument. 'Maid' had lost its terminal 'e').[34]

1689 ***The Second Part of Musick's Hand-Maid:*** *Containing the Newest Lessons, Grounds, Sarabands, Minuets and Jiggs set for the Virginals, Harpsichord, and Spinet.* (The virginal is still the instrument pictured. 'Virginals' remained plural but not the 'harpsichord' or 'spinet'. Twenty-one years after Pepys' diary entries, there was no longer an initial 'e' or double-'t' plus 'e' in 'spinet'. By this time both 'harpsichord' and 'spinet' both had their modern spellings. Even at this date, however, 'virginals' was listed first; 'spinet', last).

1696 Purcell's posthumous ***A Choice Collection of Lessons for the Harpsichord or Spinet*** (sold by Henry, son of John Playford). (By this late date, Charles Haward had been dead for seven years and his major competitors, Keene and Player, had been making spinets for at least a decade. If many virginals remained in use, publishers evidently no longer viewed their owners as a significant source of music sales).

What seems clear is this: The unfinished spinet seen by Pepys in April 1668 had to have been anomalous. Charles Haward was certainly not turning them out "speculatively" and there is nothing to suggest Pepys was given his choice of several. Today, fully seven of the 20 known surviving English virginals are dated 1668 and after – the latest, 1684. The virginal market seems to have remained strong into the 1680s, and until then, the new spinet-form must have appeared puzzling to potential customers.[35]

B. The Spinet's Decline

Summary

The spinet's decline beginning at the close of the third quarter of the 18thC strikingly resembles that of virginals precisely a century earlier.

However, from 1766, there was continuity in square-piano making in contrast to the apparent 10 – 15-year gap after 1668 in commercial spinet making. Also, in contrast to both virginals and spinets, until about 1780, early pianos were built, perhaps solely, by immigrant makers.

While Kirkman, who had earlier made spinets, began to market Beyer square pianos in 1772, his rival firm, Shudi-Broadwood, only began to make them in 1780.

Over the 1775-85 decade, the spinet was slowly becoming seen as dated – for both ocular and tonal reasons.

A lustrum-grouping of dated English spinets shows an apparent survival pickup around 1760 followed by a decline beginning in the late 1770s. A third of the dated English spinets listed in BM3 were from the George III-era – the post-Hitchcock years.

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[34] Source: MT 1 Oct 1904:633.

[35] My grandmother (1877 – 1974) was no stranger to the keyboard, having played Beethoven in the original Carnegie Hall in the 1890s and later having taught piano lessons. When I showed her a picture of my first spinet shortly before her death, her reaction was, "My, that's certainly a peculiar-looking instrument". Virginal purchasers 300 years before could have related similarly to that skewed keyboard.

The Spinet's Decline - Text

Following a late rise from about 1760 to 1775, the decline in surviving dated spinets in the 1780s seems to be strikingly similar to the rise and then decline in surviving dated virginals exactly a century before.

THE FIRST KNOWN SPINET: 1668		
1650's	Surviving Dated Virginals	4
1660's	Surviving Dated Virginals	5
1670's	Surviving Dated Virginals	5
1680's	Surviving Dated Virginals	1

Table 5.1. The Virginal's Decline.

THE FIRST KNOWN SQUARE PIANO: 1766		
1750's	Surviving Dated Spinets	10
1760's	Surviving Dated Spinets	24
1770's	Surviving Dated Spinets	26
1780's	Surviving Dated Spinets	12

Table 5.2. The Spinet's Decline.

In both cases, after the introduction of the new instrument, there was no evidence of a sales decline for the established instrument for well over a decade. However, whereas there was no apparent spinet-making activity until about 1680 or so, surviving pianos of the 1770s are not uncommon today.[36] It is worth noting the last known dated London spinet is a 1787 Harrison and the last known dated English spinet is a 1789 Argent – made in Cambridge. The latest surviving dated English [37] virginal was made a century earlier in 1684 by Thomas Bolton.

One major difference in these two similar supersessions is this: In 1680 or so, there were just three major virginal makers who moved cautiously into spinet making. In contrast, by 1780, a

[36] One piece of evidence of a probable spinet-making slowdown in the mid-1780s is in a Longman & Broderip, Culliford-signed spinet of mine dated 1785; the back of the soundboard is pencil-dated '1783'. This could reflect either a low production rate or a manufacture of parts in batches – or both.

[37] We can thank Darryl Martin for the important clarification of its maker.

large number of German-immigrant makers, often referred to as "The 12 Apostles" (Deval 1991), were making and successfully selling square pianos.[38]

It is worth noting that as early as 1772, pianos marketed by Jacob Kirkman, under his name, were believed to have been made by Adam Beyer (Cole 1995:99). This is nine years after the latest extent tentatively-dated spinet.[39]

Kirkman's rival firm, Shudi-Broadwood, which had evidently never made spinets, only began to make their first square pianos eight years later. According to Alastair Laurence (1998:25), Broadwood's square piano production escalated sharply each year after its beginnings in 1780. In the first five years, their production of about one a week rose to three a week in the late '80s and to eight a week in the early- '90s. By the end of 1795, Broadwood had made 3000 square pianos in the preceding 15 years. This is, perhaps, about half of England's estimated spinet total over a century.[40]

Over the decade 1775-85, the spinet was apparently only slowly becoming seen as dated. It had become somewhat suggestive in appearance to the harpsichord, and then to the early grand piano. With a typically, more central string plucking- point around C2, it was tonally more piano-compatible than many of its predecessors. Evidently, late spinet buyers, while appreciating the rich appearance of the harpsichord, seem to have been less enamoured of its bright sound. This could reflect a different market, however.

In the 1780s, the piano's escapements, "additional keys", and "French stands" were still to come, but 1780s pianos with enlarged case sizes,[41] adding greater tonal sonority to their existing tonal control; with their light, usually painted, sycamore (satinwood in the '90s) faceboards; and their light, less-intrusive, furniture-compatible forms - were the new norm. In the 1780s, floral-painted white-dial clocks were, likewise, pushing aside their brass, composite-dial predecessors. In this era, the new emphasis was on lightness. Delicacy was in the air – in visual arts as well as in music.[42]

There were 132 specifically-dated English spinets listed in BM3. That number is slightly less than half of the spinet total and dated examples were skewed to the later spinets. Spinets from the first half of the 18thC and before, often undated, were under-represented: for example, just four of the c.50 Hitchcocks were dated. However, the following chart shows a possibly meaningful pickup in surviving spinets from the early 1760s to the late 1770s. The lustrum-grouping shows this more clearly than a decade grouping would.

This high proportion from 1760 – 75 could reflect a high survival rate for late spinets, generally. This is a tentative conclusion that will be addressed in the following chapter. The 43 dated surviving spinets from this 15-year era are a third of the total number of dated spinets from all periods of the spinet century.

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[38] Also see Badura-Skoda (GSJ 2004:231-33).

[39] The seven extant Kirkman spinets (1748 – 1755(A)) are believed to have been made in the Kirkman workshop in Kirkman's early years.

[40] According to Laurence (1998:23) there are two surviving 1780-dated pianos from this shop – both uniquely and interestingly bearing the combined Shudi-Broadwood names.

[41] Coincidentally, both spinets and square pianos began with wall-lengths just over four feet. Morris discusses the spinet-length – date correlation in his dissertation.

[42] The late Chris Bannister, a harpsichord-making friend, once (PC) described Empire – Early Victorian design as "the reaction to good taste"!

CHAPTER 6 SURVIVAL RATE

A. Three Estimate Sources

Summary

We have dates or date-ranges plus serial numbers for:

Hitchcock spinets

Baker Harris spinets

Shudi / Broadwood harpsichords

Three Estimate Sources - Text

For our use in estimating English spinet survival, we are fortunate in having serial numbers and, at least, date estimates from Morris, Mole, and Hackett, for all extant Hitchcock spinets.

We are also fortunate in having both serial numbers and dates from BM3 for 10 Baker Harris spinets.

Beyond these two, there is a dearth of spinet-making data. However, we have both serial numbers and dates for Shudi and Shudi / Broadwood harpsichords which we can examine for possible relevance.

Hitchcock Estimate - Summary

Using B2 counts and assuming a single number series, Morris estimated a 2-percent survival rate for all Hitchcock spinets.

Determining a "Thomas-Free 1701" and finding three number series, Mole refined this analysis. Assuming 43 Hitchcock survivors and a minimum output of 825 spinets, Mole estimated the survival rate to be just over 4-percent. By allowing for a "surprising" output of 1200, though, his survival estimate would drop to just 3-percent.

Using my count of 52 surviving Hitchcock spinets and an output of c.1000, the survival rate would rise to 5-percent – still lamentably low for these soundly-constructed spinets.

Hitchcock Estimate - Text

Using B2 counts and assuming a single number series, Morris estimated a survival rate of 2-percent for all Hitchcock spinets (1986:71). Broken down, he estimated Thomas Hitchcock's production to be about:

1708-22	60/year
1722-25	30/year
'by 1729'	45/year
'by 1733'	40/year
'by 1750'	10/year

Plus, John Hitchcock's production of c.25 per year (from #1520 on).

To come up with 2-percent, he must have taken the B2 count of about 40 survivors and assumed an immense production of about 2000.

Mole refined this analysis: first, by determining there was a "Thomas-Free 1701" (2009:49)[43] and second, by determining there were three Hitchcock number systems (2009:373). [44] Assuming a probable total of survivors of 43, and a "likely minimum output" of 824, Mole's survival rate would be just over 5-percent. Nevertheless, Mole did allow for a conceivable but "surprising production run" of as many as 1200 spinets (2009:374). In this case, his Hitchcock-survival rate would be reduced from just over 5-percent to just over 3-1/2-percent.

Assuming (my count) 52 surviving Hitchcock-family spinets and a total production of c.1000, the Hitchcock family survival rate would rise to a reasonable, I believe, 5-percent – still low for these soundly-constructed spinets by a leading family of spinet makers.

Baker Harris Estimate - Summary

We have 10 dates and serial numbers for Baker Harris spinets made from 1761 to 1777.

We can observe a production up-tick after the first five years that lasted to the end. We can assume a single series of over 200 spinets made over a span of 17 years. Assuming 20 surviving spinets (about half bearing name-batten numbers) and a production of 225, the survival rate could be a high 9-percent. This unusually high proportion for these late, elegant instruments, while not unreasonable in isolation, is well over the Hitchcock proportion.

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[43] Whose instrument-making was questioned by David Hackett (FSP:2017)

[44] Reduced by Hackett to two (FSP:2017)

Baker Harris Estimate - Text

The first recorded Baker Harris serial number is '1' and this spinet's date is believed to be 1761. The 10th serial number is '222' on a 1777 – dated spinet. If this is a single series, and it appears through graphing that it is so, a credible Baker Harris production of about 225 over 17 years implies a reasonable production average of about 13 spinets a year.[45]

[45] The dates and numbers on many of these spinets was reliably supplied to Charles Mould by Heinrich Broeckman of Hubbard Harpsichords.

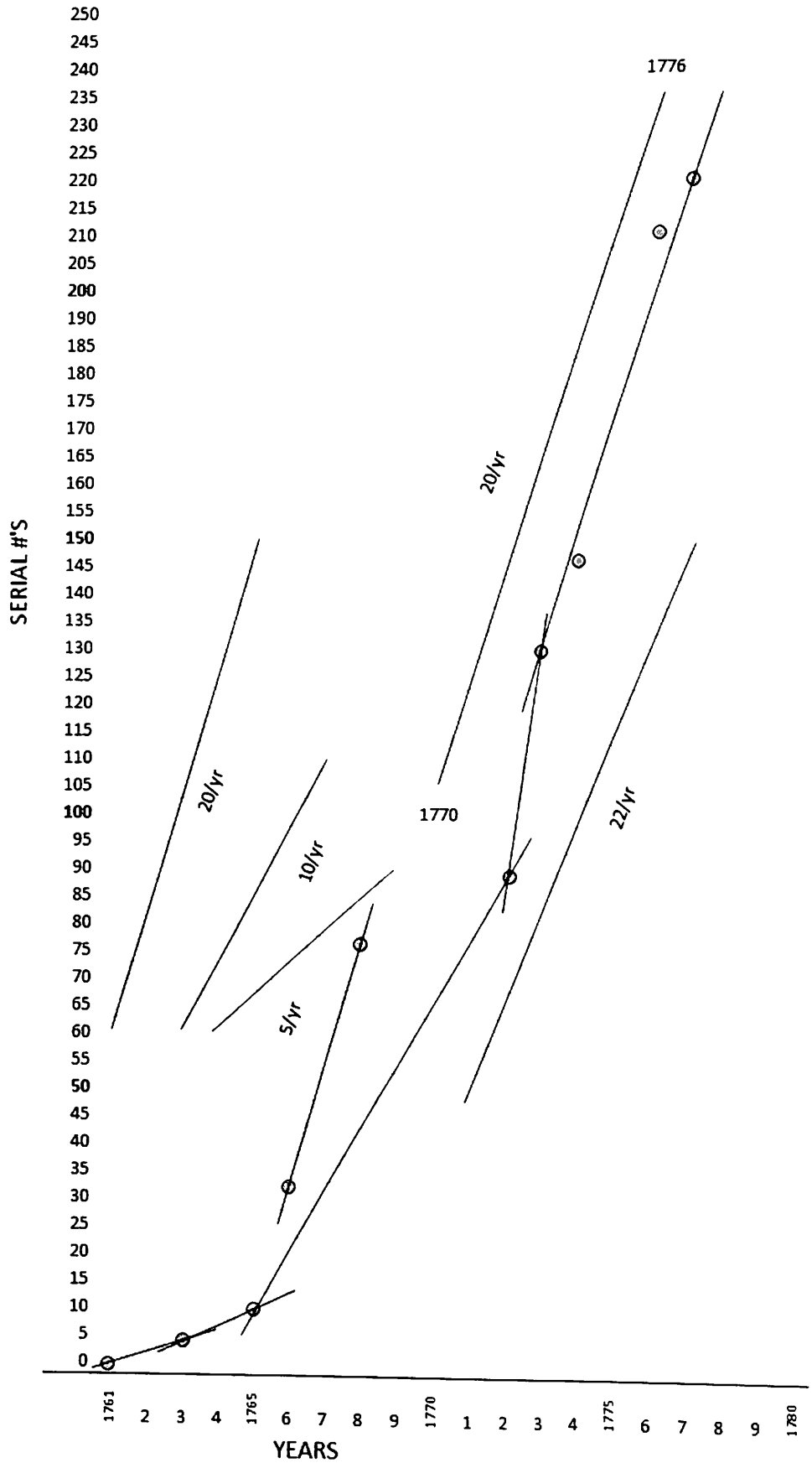

Figure 6.1. Baker Harris Serial Numbers by Year.

Based on the lowest three numbers, the production rate was lower in the first five years – perhaps an average of just five spinets made each year. Beginning in 1765, however, production may have reached 22 a year for three or four years, levelling off at just over 20 a year for the final decade. But based on the last recorded five numbers, there was no production downturn right up to the last surviving Baker Harris spinet dated 1777.

Known Baker Harris spinets could be as high as 22 or as few as 18. Assuming 20 survivors and a production total of 225, the Baker Harris survival rate appears to be close to 10-percent. This high apparent rate is not implausible. Even as non-functioning art objects, a few of these imposing late Baker Harris spinets (see the photograph on the cover sheet) with their book-matched veneers and their sophisticated composite trestles could still have been valued by their obdurate owners. Unlike harpsichords, they would have had little value stripped for parts and they would have occupied less space.

Shudi – Shudi / Broadwood Harpsichord Estimate – Summary

Since we are choosing to look at harpsichords made by this firm which never made spinets, their inclusion would seem to be outside the scope of this paper. But with two examined spinet-makers that show a wide survival disparity, we need any conformational data we can find. Here we have instrument serial numbers together with dates.

BM3 data shows that this firm made c.1100 harpsichords over a 65-year (1729 – 93) period of which 46 survive. This suggests an overall rate of just 4-percent.

Survival rates of these instruments, however, differ by decade.

In the period 1770 – 93, the firm made 550 harpsichords of which 28 have survived – for a late survival rate of 5-percent.

While a 5-percent rate is in line with Hitchcock's it is clearly well below Baker Harris'.

Shudi – Shudi / Broadwood Harpsichord Estimate – Text

Neither Shudi nor Shudi / Broadwood are believed to have made spinets. Nevertheless, while a consideration of this company's harpsichords would seem to be outside of the scope of this paper, it is the only other company where we have serial numbers and corresponding dates for plucked keyboard instruments, and there is a wide disparity in the estimated survival percentages of the other two.

Assume a Shudi single number series beginning with '1' and assume Shudi – Shudi / Broadwood made c.1100 harpsichords over 65 years. Of these, 46 were counted in 1995 (BM3:613) suggesting a Hitchcock-like survival rate of about 4-percent. From 1770[46] to 1793, the company's final harpsichord year, the company seems to have made about 500 harpsichords (1100 – 600). Twenty-eight of these have survived, suggesting an enhanced survival rate of 5-1/2-percent for their 23 last harpsichord-making years. While such rates are in line with Hitchcock's, they are clearly well-below that of the Baker Harris spinets. It is interesting

[46] In that year the series may have leaped upward by about 25.

to note that if Kirkman's survival rate were as low as Shudi's, perhaps 3000 or so Kirkmans could have been made over the 65 years: 1744 – 1809.[47]

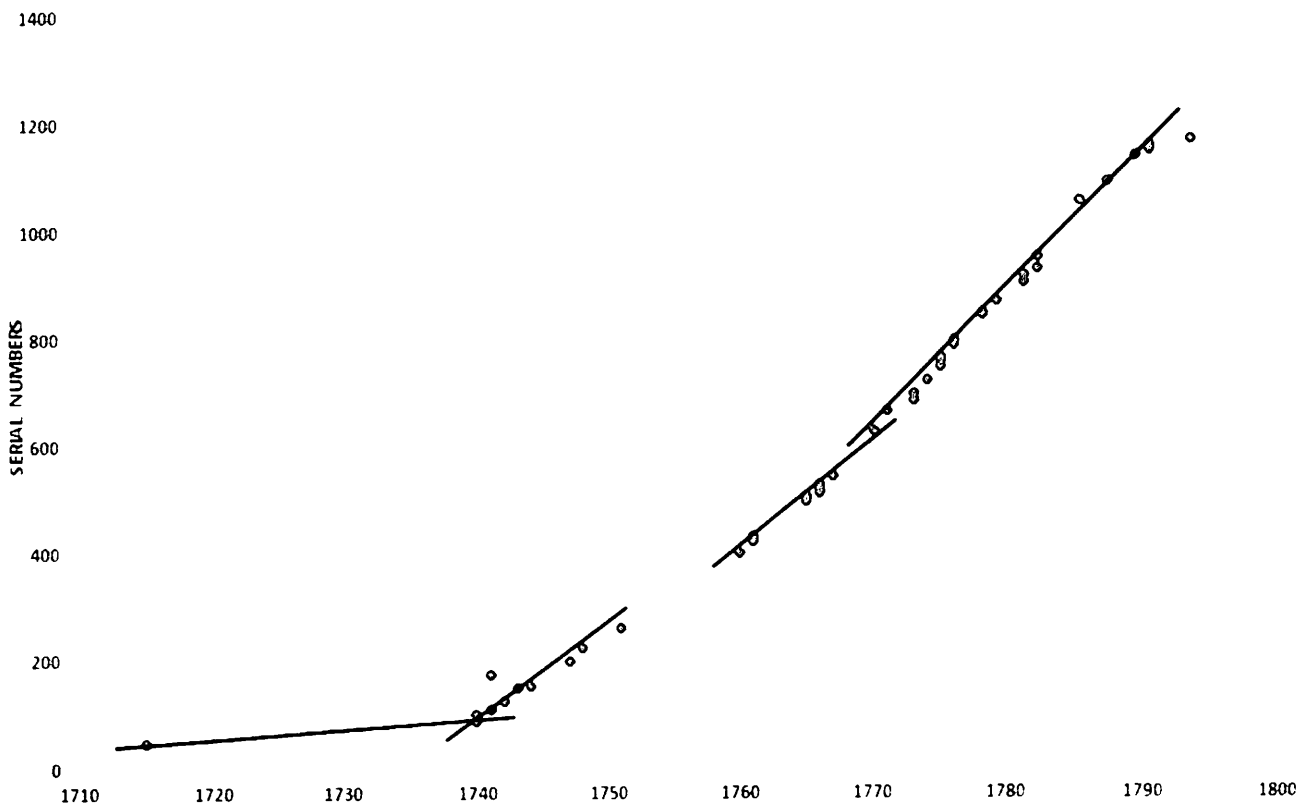

Figure 6.2 Shudi's Production.

Shudi's serial numbers plotted against time show a complex picture. Initially, Shudi's production, understandably, was low – about 4-1/2 harpsichords a year from 1729 – 40. Then, it rose to just under 15 a year to 1751, and to 17 a year to 1760. From there to 1790 – over three decades – it remained a very constant 25 harpsichords a year, based on a single-number

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[47] Before dropping the seemingly unrelated issue of Shudi's and Kirkman's harpsichords, I should like to report the following, for it might conceivably relate to the wide disparity in Hitchcock and Harris survival rates: Rimbault (1860:89) quoted Burney (without indicating his source) "His (Shudi's) work was extremely neat and his tone and touch refined and delicate, while his instruments were new; but neither so full nor durable as those of Kirkman. Snetzler, who added horizontal organs to many of his harpsichords, used to account for his instruments soon losing their perfection, by his working in a very hot room, and keeping them there, in order to give the tone the brilliancy of old instruments; but as soon as they were removed to a cold or damp room the wood swelled so much, as to warp, crack the bellies, and disorder all the movements; accidents which we never remember to have happened to the excellent instruments of his worthy son-in-law and successor, Broadwood". Zumpe, who had worked in Shudi's shop must have been aware of this for his first pianos were given laminated soundboards. (This could have been of benefit to spinets). There could be something to this report. While surviving Kirkmans outnumber Shudis four-to-one in the 1760s, this proportion drops to two-to-one in the 1770s. Dealing with just these two decades: while the decade-by-decade count of surviving Kirkmans remained the same (41-42), the number of Shudis and Shudi / Broadwoods doubled from 10 in the '60s to 20 in the '70s., although it unaccountably dropped in the '80s. Broadwood became a partner in 1770 and Shudi died three years later.

series. There may have been a second series beginning in, or just before 1770 that raised the sequence by about 25, but this, just like the start of their initial count that I believe started with 50, should have had only a one-time effect. There is a comparatively straight line of sequential numbers from 1760 – 90 and yet an unaccounted-for plunge in the number of surviving Shudi / Broadwood harpsichords from about 1-1/2 per year in the '70s to about one per year in the '80s with no evident drop in output. Perhaps this reflects a growing export business – harpsichords shipped to remote locations such as India, where few if any would have survived. It is very unlikely to represent a fudging of the numbers, for when graphed, the surviving harpsichords made in the '80s follow along a substantially straight line.

If their grand pianos had been sharing the same series with their harpsichords, we would have a ready explanation: a combined total of, perhaps, 240 senior instruments made in this decade compared to only surviving harpsichords. But Laurence (1998:28) wrote that the earliest surviving Broadwood grand, dated 1787, has the low serial number of '69' and he believes that series would have probably started with '1' in c.1785. A 1785 harpsichord would have had a number over 1000.

Over 65 years this firm made 1100 harpsichords with a survival rate, today, of about 4-percent - evidently below Hitchcock's and well below Baker Harris'. Over the last 23 Broadwood-involved years, they made about half (550) of their harpsichords with only a slightly better survival rate of 5-percent. A harpsichord, however, when later out of fashion, would still occupy a large space and continue to require periodic professional maintenance, only to produce an ill-favoured sound. Disassembled and stripped, though, a Shudi harpsichord, would have been an inexpensive source of fine veneers and core woods for any Regency-era cabinetmaker.

B. Conclusion – Significance

A Tentative Conclusion Summary

The only overall spinet survival rate assumption that can be made is that a rate close to 5-percent is reasonable. But only for spinets of the George I and George II years. Earlier Stuart-period spinets would be lower – perhaps 3-percent. Later George III spinets are believed to share the high Baker Harris rate of close to 10-percent, but only a statement by Burney (Chapter 1) could be used to support this.

If c.300 English spinets are thought to have survived, an overall survival percentage of 5-percent would suggest that about 6000 were made over the spinet century – an estimate earlier proposed in Chapter 2.

A Tentative Conclusion - Text

The only spinet survival rate assumption that can, perhaps, be drawn from the two spinet examinations is that a rate close to 5-percent is reasonable – but only for spinets for much of the first half of the 18thC. The few survivors from the 17thC through the reign of Queen Anne, with their truncated ranges and, typically, more fallible 'bottom-first' constructions are certainly lower, but how much lower is open to question. Also open to question is whether the high c.10-percent rate of Baker Harris spinets is an anomaly or, instead, reflective of other late spinets. Burney, who was uniquely qualified to comment on keyboard instruments within his lifetime (1726-1814) wrote later that "We believe that very few (spinets) have been made since the

middle of the last century" (see Chapter 1). However, seventy-two of today's 128 recorded, dated spinets – well over half – are from the 40 years: 1750 - 1789[48] . The exceptional spinets from late makers such as the Harrises, Kirkman, Argent, Crang, and Culliford, are all from this era, and there is no reason why they and other contemporary makers would not share Baker Harris' high rate.

While the Hitchcock – Baker Harris disparity leaves us without a realistic survival rate for spinets as a whole, we can employ a 5-percent estimate for early Georgian spinets, perhaps 10-percent for those from mid-century on, and possibly a high, 3-percent, for the few from the Stuart era.

If we apply a 5-percent rate across the board and accept a rounded survival total of 300 surviving English spinets, we can estimate that about 6000 spinets were made in the spinet century. This is the estimate I used in Chapter 2.

Survival Significance – Summary

Every spinet we are able to examine or play on has to be seen as a stand-in for at least nine others that are no longer with us. Every perceived anomaly could have been more widespread. Every listed spinet-maker must have been responsible for making, at least, a few.

Survival Significance – Text

Whatever rates we choose to employ, they will all represent just a small percentage of spinets that were once made. Every spinet we examine or play has to be seen as a stand-in for a very minimum of nine others no longer with us and every attribute that we regard as a singularity could have been more widespread. Most of the 40 makers leaving us with just one or two spinets each would have made many more, and every recorded maker must have made at least a few.

The Kirkman Spinets - Summary

The seven known extant Jacob Kirkman spinets – particularly well-designed instruments – form an interesting subset to the late spinet grouping and suggest that this singularly-important maker undoubtedly designed and probably made at least 70 spinets in his early years.

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[48] For the three George III decades, 62, or 48-percent (see Chapter 2)

The Kirkman Spinets - Text

BM3 lists six known Kirkman spinets a number that can be raised to seven today – an exceptionally-important group. Some, or all, had to be of his design and he was probably their maker.[49] Kirkman's surviving spinets date from 1748 to 1763(A) – the early years of his instrument-making. The harpsichord-like layout of his post-1748 long-scale spinets results in a bright, pronounced, first-overtone, harpsichord-like treble quality and the rich bass is harpsichord-like as well. The treble sound is rare among late, largely-more central-plucking, overtone-suppressing spinets.

There are two survivors that are dated '1750'. One, property of the author, is pencil-dated '5' in two places. The two sets of bottom boards are each chiseled '11' and the trestle is chiseled '111' in two places. We can infer a production run of at least five, but probably little more. We certainly cannot claim a high survival-rate estimate of 40-percent (2 / 5), for the single, earlier extant Kirkman spinet is dated '1748', and except for another, dated '1750", the next survivor in line, chronologically, is dated '1755'. We may never learn any more about Kirkman's spinet-making activity. But assuming Baker Harris' survival rate applies, Jacob Kirkman must have made at least 70.7 Today, we are much the poorer that more haven't survived in playing condition.[50] [51]

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[49] Kirkman labelled and sold his early square pianos that are believed to have been made by Adam Beyer (Cole/GSJ:1995). It could be assumed he might have labelled someone else's spinets as well. But unlike these spinets, there is nothing suggestive of Kirkman's work or thinking in the Beyer-identified design and there is no known spinet-maker whose signed-work resembles the design-work on these spinets. Although Frederick Krickhof comes closest, his death in 1747 would rule him out as the maker.

[50] I have examined both my 1750 and the 1755 spinets. Both exhibit the Kirkman's solitary near-fatal flaw: the tendency of the curved oak bentside to straighten over time. Since the liners are well above the bottom, the resulting pivotting from this point pulls out the bottom and compresses the top. With the harpsichord, it results in the well-described 'reverse circumflex' or 'English disease'. With the spinets it causes a compression to the soundboard at the bend. Consequently, both spinets show large soundboard cracks between the bridge and the hitch-pin rail. Fortunately for both harpsichords and spinets, this flaw is cosmetic – not usually immobilizing. On the harpsichord, it is suggestive of a Rolls Royce with a flat front tire.

[51] The Kirkman plucking-point graph shows the 1750 Kirkman spinet has plucking-point percentages midway between the two unison harpsichord strings for the top two-thirds of these instruments. It strongly suggests there are two reasons the English placed their 8' jacks together. First, unlike the French, they wanted to pluck close to the 'dead' half-way point only at the top-most notes of the back-8'; and second, they must have regarded the spinet plucking point as optimal, and wanted both unisons to be as close to that point as possible. Through the 1760s, Shudi's plucking points (except for their lutes) were the same as Kirkman's. In 1770, John Broadwood straightened the in-curved nut which placed the front-8 to the back-8 position (just in the middle of the instrument) and the back-8 farther back still, more like the French back-8. Given Broadwood's frequent use of leather plectra on just one set of jacks, he was clearly focused on solo-, rather than ensemble- sound, for the sound of quill and leather together is disappointing. The Kirkmans never used any plectra except quill and maintained the same plucking points for six decades.

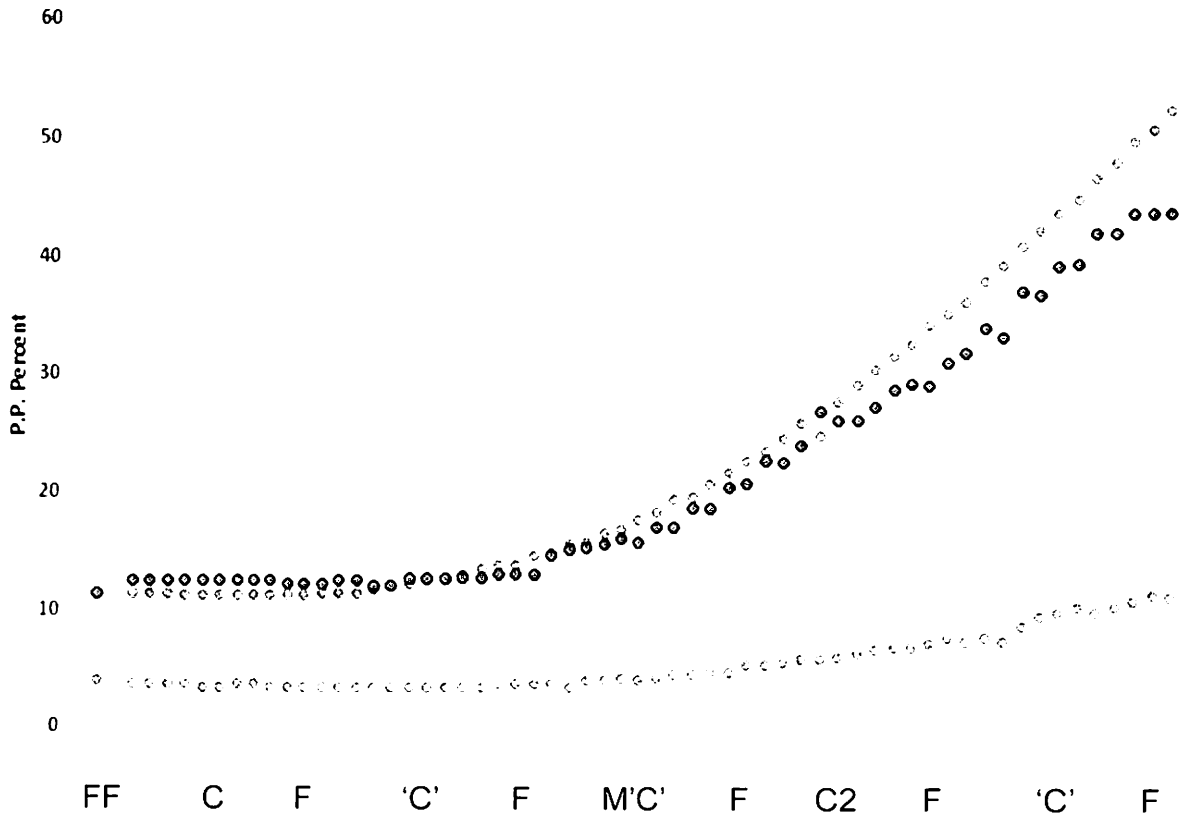

Figure 6.3. Kirkman Plucking Points. ***(red = 1750 Kirkman spinet)***

CHAPTER 7 CONSOLIDATION

Summary

This chapter's main purpose is to confirm an early-1680s start to English spinet production by the three major early makers, an average survival rate of 3-percent for their spinets, and a production estimate of one spinet every three weeks for each shop.

The chapter's secondary purpose is to be a bridge to the next, Haward spinet, section, and also to the third section's final chapter where English spinets are divided into four groups.

We can conclude that the estimated starting period, the conjectured survival percentage, and the Mole production estimate are all essentially correct.

Consolidation - Text

A. Purpose

The primary purpose of this chapter is to confirm the early-1680's outset to commercial spinet production claimed in Chapters 3 and 5, and, therefore, confirm a 10 – 15-year hiatus from 1668, the year that Pepys bought his spinet. These conclusions are arrived at through music-publishers' evidence cited in Chapter 5. At the same time, this chapter tests the 3-percent early spinet survival estimate proposed in Chapter 6 and also tests whether Mole's "one spinet every three weeks" production estimate for Keene's later years (2009:102) can be assumed for Haward and Player in their spinet-production years as well.

The chapters also act as a bridge both to the next, Haward spinet section, and to the final chapter of the third section. This final chapter defines the proposed four chronological groupings of England's spinets. The three major early makers: Haward, Player, and Keene, together with the apprentices: Aston, Blunt, Brackley, and Barton, are responsible for essentially all the spinets of the first two of these groupings. Nevertheless, it excludes the more covert Benjamin Sison, who, although semi-dismissed in Boalch as "chiefly a furniture maker", has left us with three spinets.

B. Three Early Makers

Before testing the estimated survival rate and the assumed production rates for the three early makers, we should examine the evidence we have for each maker's termination date and the count of his surviving spinets.

Haward:

Charles Haward, born c.1639, was admitted to the Joiners' Co by patrimony in 1660 (BM3:84). Citing "Nat'l Archive, London, prob/11/396" (2009:94), Mole confirmed Haward's death date of 1689. In that final year, Charles Haward rebuilt and re-dated an early spinet of his make that will be discussed in the next section.

All three editions of Boalch list 13 Charles Haward spinets – a number that has been soundly reduced by Morris, primarily through duplication, to seven (1986:2). In the next section, I will further reduce this count to six. For the calculations here, I am excluding the Haward spinet

'**16XX**' for it will be shown to have been largely made, and then finished, well before Haward's production period, and am considering just five spinets dated from 1683 to 1689 as his production-period spinets. His 1683 spinet is, I believe, England's earliest surviving dated spinet.

Player:

John Player, born 1636, was bound to Gabriel Townsend in 1650 and became free in 1658. 1707 is a clear terminal date for Player, since we know he died 16 June that year and according to Mole (2009:84) his premises were occupied by Edward Blunt (a former Player apprentice) the following year. At that time Player's last two apprentices were turned over to Cawton Aston, who had been a Player apprentice earlier (Mole 2009:95).

The growth in known Player spinets is in contrast to the cut in acknowledged Hawards and known Keenes. B1 listed just four, B2 added three more, and BM3 added another three. To these ten, I will add the two that were subsequently sold at two Bonham auctions more recently, plus Raymond Russell's "TA"-marked and Finchcock's "CA"-marked spinets – both evidently made in the Player shop. This will bring his surviving production total up to 14.

As I believe no Player spinet was ever dated, we may assume Player's production period began close to Haward's.

Keene:

Stephen Keene, born about 1640, was bound initially to Gabriel Townsend in 1655, and became free in 1662. Later he became a master of the Joiners' Co in 1704/5. Although Mole has re-established his death date, pulling it back from 1719 to December 1712 (2009:79) owing to the evidence of his will, his shop can be considered to be on-going, and three notable apprentices-turned-journeymen: Edward Blunt, Charles Brackley, and Thomas Barton, carried on his prescient design. Hence, a 1712 cutoff can be reasonably extended to 1718.

Mole has defined four Keene groupings and clearly laid them out in his table 509 (2009:171). His first two groups list the 12 known Keene-labelled spinets plus one attribution and three others combined, or labelled solely by Blunt. His third group lists two – one combined and the other labelled solely by Brackley. (Mole's fourth group consists of two by Barton made years later and will be disregarded). For the calculation here, I will consider, first, the 18 spinets of Mole's groups 1 through 3, dated to 1718, and test this against the 15 spinets of his groups 1 and 2, dated to 1712.

Unlike Haward's and Player's, Keene's spinets may be markedly under-counted, for the 31 (plus 2) listed in Boalch and in Mole's table 501 have been cut essentially in half to 14 (plus 2) in Mole's tables 503 and 509. While at least two of those removed are spurious and still others may have been double-counted, perhaps the bulk are still out there – somewhere. In my view, most of the spinets that managed to survive to the late 19thC, were then respected and should be with us today.

Mole has assigned date-estimates of c.1682 and c.1683-5 for the two spinets in his first grouping. This seems reasonable. While the earlier of the two could have been experimental, Boalch has listed two different spinets bearing dates of '1685'. Although not picked up by Mole, these dated spinets appear certain – one confirming the dating- legitimacy of the other.

C. Conclusions

The Tests:

Here is a simple procedure: Begin with two 'givens' or assumptions: each maker's final year and the number of his known surviving spinets. Then divide the number of these known spinets by an estimated survival-rate percent to arrive at the estimated total number made. Record the estimated number made per year. Then divide the calculated number made by this estimated number made per year to give the number of years of production. Subtract this calculated number of years of production from the final production year to give the estimated initial year for each maker.

For the three makers: Haward, Player, and Keene, we have made an initial assumption of a 3-percent survival rate and a 17/year production estimate for each:

HAWARD, PLAYER, AND KEENE SPINET STATISTICS

	HAWARD	PLAYER	KEENE
Final Year	1689	1707	1718
Known Spinets	5	14	18
Survival Rate	3%	3%	3%
Number Made	167	467	600
Production Rate	17	17	17
Years Produced	10	27	35
Initial Year	1679	1680	1683

Table 7.1. Haward, Player, and Keene Spinet Survival Rates.

These production starting dates look reasonable and they follow a tight, logical order: Haward first, then Player, and finally Keene – all starting within a few years of each other.

1677 1674 1676

The resulting mid-'70's beginning is too early based on music publication evidence, and Haward would, in this case, be mistakenly, I believe, the latest of the three – coming in a full three years after Player.

If we went the other way and raised the rate to 3-1/2-percent, the three initial years would rise to:

1681 1683 1688

This 3-1/2-percent rate would be uncomfortably close to Hitchcock's, the spread in dates is clearly excessive, but more important, the Keene starting date would fall three years after the dates on two of his spinets.

A Conclusion:

The 3-percent survival rate we started with would appear to be optimal across the board.

Accepting 3-percent, if we were to lower the average yearly production from 17 to 16 for all three, the starting years would become:

1680 1681 1685

While the order would appear to be satisfactory, the five-year spread would seem unreasonable.

Mole's estimate for Keene's shop of a spinet every three weeks (17-1/3 a year) may be a little on the high side, but plausible once production got underway. It should be pointed out that it took Charles Haward over three months just to finish the unfamiliar, incomplete spinet seen by Pepys in April 1668. The 17 per year production rate we assumed initially appears to be sound, however, for commercial production.

A Final Test:

Assuming that both the 3-percent survival and the 17 per year production we began with are approximately correct, let us move back Keene's terminating date from 1718, the end of Mole's group 3, to 1712, the year of Keene's death, and remove the three spinets listed for these six years. This change would result in no change to our initially-assumed starting dates. They would remain:

1679 1680 1683

Chapter Conclusions

This exercise would seem to confirm:

A 10 – 15-year spinet-making hiatus from 1668.

A probable c.1680 beginning for Haward and Player and an early-'80s beginning for Keene.

An early spinet survival rate very close to 3-percent for the three makers.

The Mole production estimate of about 17 spinets a year for Keene would seem to be essentially correct.

This Keene rate would seem to be reasonably applicable to all three.

SECTION II THE HAWARD SPINETS

CHAPTER 8 COUNT AND DESIGNATION

Summary

MORRIS (1986) described five Charles Haward spinets – two of which were erroneously attributed to Haward.

MOLE (2009) established the year of Charles Haward's death (1689), but had essentially nothing to say about this maker or any of his spinets.

MARTIN (2003) Described the Haward spinet of 1687, the instrument with a wholly reconstructed interior.

BOALCH (B2) in 1974, listed twelve Haward spinets and the 1683 harpsichord, but questioned the virginal that he, nevertheless, included in his listing.

MORRIS cut the count of Haward spinets from twelve to nine; however, he accepted the virginal.

BOALCH (BM3) in 1995, reassigned the virginal but added the recently-discovered 1689- dated Haward spinet.

GROVES (online) claims "at least" eleven spinets left by Charles Haward and accepts the virginal.

Currently, after deducting four spinets because of double-counting plus two more that are specious, we are left with six known surviving spinets, four dated, that we will identify as **1683**, **1684**, **1687**, **1689**, plus, **c.1685**, and **16XX**.

Count and Designation - Text

A. Prior Thesis Examination

MORRIS (1986). In four sections of his thesis devoted to the workshops of Haward, Player, Keene and Hitchcock, Morris began with Charles Haward (1986: 1-20). His Haward section contained brief descriptions of five spinets – two of which, however, were erroneously attributed to Haward. He provided concise specification sheets for seven (which included the two that were specious) and photographs of three. What little was known about Charles Haward at the time was summed up in just over a page.

MOLE (2009). Mole's thesis, written 23 years later, focused on the schools of Keene and Hitchcock. Although he cogently established the year of Charles Haward's death (2009: 10), Mole had essentially nothing to say about Charles Haward or his spinets. He concluded his thesis with three suggestions for future research which he termed "opportunities". The last reads, "In the choice of the scope for this research, which is the first comprehensive study of the English spinet, one major maker, Charles Haward, did not receive any significant attention. A research project directed to Haward's instruments would be valuable, though there are some practical difficulties inherent in this since the instruments are widely spread geographically".

MARTIN (2003). In Chapter 6 of his English virginal thesis, "The Decline of the Virginal", Martin described one spinet from each of the three early makers. The Haward spinet selected, however, was the Univ. of Leipzig spinet of 1687 (2003: 237-39) with a wholly reconstructed interior.

Haward Spinets | Count and Designation

B1	B2	BMS	Owner Location - BMS	Designation
1	1	1683 • 1	Harpsichord Hov. Hall - Yorkshire	
2	2	1683 • 2	Earl of Haddington - Scotland	1683
3	3	1684	Met. Museum - NYC	1684
4	4	1687 • 1	Boddington Coll. - Manchester	1687
5	5	1687 • 2	Leipzig University - Germany	1687
6	6	ND • 1	GD (1940) Coventry (1946)	16XX
7	7		Virginal Warrington Museum	Virginal
8	8	ND • 2	Inv. Exhibit 1885 Vienna 1892 Rev. L. K. Hilton	C. 1685
9	9	+12 Haward (A)	RNCM Manchester Watson Coll.	RNCM
10	10	ND • 3	CA Legg. - Cirencester H. Phillips - London	16XX
11	11	1685 (A)	Partridge, NY (1951) Cummer Museum - Jacksonville	C 1685
12	12		= 9	
13	13	ND • 4	Formerly Wm Dale in DEF	16XX
-	14	Haward (A) 1685 (A)	RV Cooke - Dorset (1965)	No. 14
-	-	1689	Tony Bingham - NMM South Dakota	1689

B. Count

BOALCH, B1 and B2: In contrast with the major growth of discovered Player and Keene spinets in the late 20th century, the count of known Hawards declined. In 1956, Boalch listed eleven spinets plus the 1683 harpsichord (B1,#1) and a virginal that he, nevertheless, questioned (B1,'#7?'). He listed as Hawards the RNCM-owned (from 1976) spinet (B1,#9) and one other (B1,#12). In 1974, in B2, the entries for these instruments were repeated and another spinet was added (B2,#14).

MORRIS: Based on duplications, Morris (1986) cut the number of Haward spinets down from twelve to nine. However, he accepted the virginal, believing its maker, Thomas Bolton, who had signed the bottom jack, had to have been a Haward apprentice. He recognized that B2 Nos: 6, 10, and 13 were the same spinet (the spinet pictured in Groves and B1, and owned at various times by Dale, Brazil, Legg, Phillips, and the author). He also connected B2 Nos: 4 and 5 (the 1687-dated spinet at Leipzig Univ.). But he failed to combine B2 Nos: 8 and 11 (the undated '**c.1685**' Haward now in Jacksonville, Florida). He accepted as Haward's the RNCM spinet and connected its B2 Nos: 9 and 12, although he acknowledged it had been "seriously altered" (1986:2). Finally, he also accepted B2: No 14, but pointed out that its design, "appears to be a one off for Haward".

BOALCH, BM3: In BM3 (1995), the virginal was reassigned to Thomas Bolton on the basis of, "research recently carried out by Martin". The 1689-dated Haward spinet, owned then, by Tony Bingham, was added. Left uncoupled, however, were B2 Nos: 4 and 5 as well as B2 Nos: 6, 10, and 13; but Nos: 9 and 12, the RNCM spinet, were combined.

GROVES (online): This music dictionary currently states, under the heading, "Haward", "Charles Haward left at least 11 bentside spinets". This assertion is supported by the counts found in all three Boalch editions. Four of these Boalch-listed spinets can be disregarded because of double-counting, but this still leaves an apparent total of eight. Rather than acceding to an unexplained reduction from eight down to six, we should examine a pair of Haward-attributed spinets listed in all three Boalch editions and acknowledged by Morris. Also, because the virginal, listed among the Haward instruments in B1 and B2 was accepted as a Haward by Morris; this, too, warrants an examination. Since all three Boalch editions concluded that Queen Anne's Haward instrument was a virginal, this examination has particular significance.

Three Non-Hawards

HAWARD No. 14: An unsigned, undated spinet, attributed to Charles Haward (B2: No.14) was described by Morris (1986:4) and drawn by him to scale. Morris may have discovered what could be a date: "1699", "printed on soundboard". Although it has a rose, a compound-curved bentside, and a mitred nut, there is little else about this spinet, in form or in dimension, that would suggest Charles Haward, and if (very possibly) it was made in 1699, it would have been at least ten years too late. While it has an early divided register and a short bass scale, it has a marquetried face board and pierced brass hinges. Although these are found on the two late Hawards, the short bass scale is not.

The RH side of the case directly relates to Keene's RCM-owned spinet with a rose, a compound-curved bentside, and a slightly-curved bridge in the bass. It also has a mitred nut, seen, also, on the RCM Keene. Its interior is veneered in "oyster", which is found, also, on the Keene face board. Its LH side, however, seems to have been copied from Player's Sizergh Castle spinet – even the 22-1/2-degree keyboard/spine angle corresponds. I believe this spinet

was more-than-likely made by Keene, although possibly by Player. In any case, Haward can be ruled out.

HAWARD No.9 and 12: This spinet, with a Haward attribution going back to the 1880s, is an anonymous, marquetry-decorated instrument, located since 1976 at the Royal Northern College of Music (RNCM). It is pictured and comprehensively described by Mole (2009: 399-405, App. 4), who wrote that its attribution to Haward "is almost certainly erroneous" (2009: 400). Unlike No.14, there is nothing at all about this spinet that could suggest Charles Haward except for its attributed mid-1680s date, which is possibly a few years too early. Like No.14, it has a hybrid form. It has Keene-type short RH and LH faces and yet a standard Player-type LH tail. Like Player and Keene and unlike Haward, it has vertical rear mouldings hiding the case-sides-to-spine nail heads. As far back as 1885, A J Hipkins suggested Keene could have been the maker. But as Mole wrote, "This could only be a tentative attribution" (2009: 405).

Currently its range is GG/BB-f3 (55 notes, short scale) and it has no key blocks. Its particularly short 3-octave span of 468 mm (6-1/8" octave), which must be original, is substantially shorter than any of Haward's, but it is found on Keene's RCM and the anonymous Keene-attributed '1708' also at RCM. It was reported in Boalch that it was formerly a part of the Henry Watson collection in Manchester. Mole wrote that this provenance is erroneous: It was originally part of the Boddington collection (2009: 400) and it appears in the Boddington & Pyne catalogue of 1888.

It was evidently examined by Bevan and Martin in 1992 (BM3: 380). They reported that "any attribution to Haward was highly suspect and that it most closely resembled a Player spinet". Mole also inspected it and concluded, as did Hipkins many years before (1885: 94) that it tied most closely to Keene, despite its Player-suggestive LH tail.

The Virginal

Although Boalch assigned No.7 to this virginal in B1 and B2, this number was combined with a question mark. It was pointed out that the face board, which must have borne an inscription, was missing. There was no mention in these editions of Thomas Bolton's signature found on the first jack. In his virginal thesis, Martin wrote, "Nothing biographical is known about Thomas Bolton, but several characteristic working methods (discussed below) clearly show he did his apprenticeship or worked as a journeyman, with Stephen Keene" (2004:134). He then described two "particularly distinctive features" that "unquestionably show a relationship to Keene" (2004:135). On the basis of Martin's earlier research findings, BM3 omitted this virginal from the Haward listing and transferred it to a new entry for Thomas Bolton.

With acceptance of Darryl Martin's credible conclusion, we not only know the name of another virginal maker, but have a new entry for this nascent maker in BM3. Except for what resembles the initials 'CH' with a backwards 'C' seen in the instrument, there would appear to be nothing to tie this Bolton virginal to Charles Haward. We can conclude there are no known surviving virginals from any member of the Haward family and no 19th century reference to one has yet been found.

C. Haward Designations

We are left with six known surviving Haward spinets after deducting four from the Boalch totals as a result of double counting plus two others that must be considered spurious. Since Haward has specifically dated four of the six spinets, we can use his dates: **1683, 1684, 1687,** and **1689** when referring to these four.

John Watson has assigned a 'c.1685' date to the undated Haward now in the Cummer Art Gallery. While this is probably two years or so early, it is clear, unambiguous, and not inaccurate when preceded with 'C' (circa).

Despite my determination of a 1668 date for the remaining spinet, it has had four 'circa' dates assigned to it in the past: 'c.1650', 'c.1660', 'c.1668', and 'c.1680'. Therefore, I am referring to it as **'16XX'** throughout.

D. Form

With the six Haward spinets identified and then designated, each can be posted to a common form. Since similar forms have been used by all prior researchers and museums, such an arrangement is expected. Here, I have chosen those traits that I consider to be the most meaningful for spinets and placed them into three groups: First, identification; Second, critical detail relevant to spinets; Third, known history of ownership. Since a discussion of each spinet's importance, unusual traits, originality, and past restoration work will differ with each spinet, I have not included them on these forms.

Type: English Spinet - 17th C **Desig:** 16XX

Inscription: Carolus Haward Fecit
Found on: Faceboard

No:

B1: 6/10/2013 **B2:** 6/10/2013 **BM3:** ND • 1, ND • 3, ND • 4

Case

Bentside: Serpentine
LH Tail: 1-Pc rear-facing 32°
LH-RH Faces: Both Broad
KB/Spine Angle: 17°

Major Dimenstions Inches (millimetres)

Spine Length: 53.25 (1353) **Max Length:** 58.375 (1483)
Case Depth: 22 (559) **Total Facewidth:** 40 (1016)

Keys

Naturals: Snakewood **Sharps:** Ivory Block
Keyfronts: Parchment Tre-foil
Key Span 3 Octave: 19.5 (495) **1 Octave:** 6.5 (165)

Jack Register: Divided **Rack Over-rail?** Yes - Boxed ends
S/B Grain Parallel to: Spine **Bridge/Nut Wires:** +MPR

Notes Inches (millimetres)

Compass: GG/BB - C3 **Note Count:** 50 **1st Octave:** Short
c3 Length: 5.5 (141) **c2 Equivalent:** 11 (282)
c2 Length: 10.75 (273) **C2PP:** 21.50%
MC Length: 19 7/8 (506) **c2 Equivalent:** 10 (253)
CC Length: 48.5 (1231) **c2 Equivalent:** 6.1 (154)
Lowest: GG. **Length:** 49 3/8 (1255) **C2 Equivalent:** 4.6 (117)
CS: Short **Fs, Gs:** Long

Ownership Provenance:

Wm Dale - London	Before 1882 - After 1904
Edmund Legg - Cirencester	After 1904 - c1925
DR W. H. Brazil - Coventry	c1925 - 1947
C. Allen Legg - Cirencester	1947 - 1966
Howard Phillips - London	1966-2008
C. W. Wilson - Pennsylvania	2008-

Type: English Spinet 17th C. Desig: 1683

Inscription: Carolus Haward Fecit 1683
Found on: Faceboard

No:

B1: 2 B2: 2 BM3: 1683-2

Case

Bentside: Serpentine
LH Tail: 1Pc Rear-facing 42°
LH-RH Faces: Both - Broad
KB/Spine Angle: 17°

Major Dimenstions Inches (millimetres)

Spine Length: 53 1/4 (1353) Max Length: 60 (1524)
Case Depth: 21 3/4 (552) Tctal Face width: 41 (1041)

Keys

Naturals: Ebony Sharps: Ivory Block
Keyfronts: Parchment - Tre-foil
Key Span 3 Octave: 19 5/8 (498) 1 Octave: 6 9/16 (167)

Jack Register: Divided Rack Over-rail?
S/B Grain Parallel to: Spine Bridge/Nut Wires: Both

Notes Inches (millimetres)

Compass: GG/BB - D3 Note Count: 52 1st Octave: Short
c3 Length: 5 3/4 (146) c2 Equivalent: 11 1/2 (292)
c2 Length: 11 1/8 (282) C2PP: 25%
MC Length: 19 3/4 (502) c2 Equivalent: 9 7/8 (251)
CC Length: 46 3/4 (1187) c2 Equivalent: 5 7/8 (149)
Lowest: GG/BB - D3 Length: 48 1/4 (1226) C2 Equivalent: 4.5 (114)
CS: Short Fs, Gs: Long

Ownership Provenance:

Mellerstain House - Berwickshire	Before c1700 - c1886
Thos. Wm Taphouse - Oxford	c1886 - after 1890
Mellerstain House	Before 1905-

Type: English Spinet 17th C. Desig: 1684

Inscription: Carolus Haward 1684
Found on: Faceboard

No:

B1: 3 B2: 3 BM3: 1684

Case

Bentside: Serpentine
LH Tail: 1 Pc - Rearfacing 34°
LH-RH Faces: Both Broad
KB/Spine Angle: 17°

Major Dimenstions Inches (millimetres)

Spine Length: 54 5/8 (1387) Max Length: 60 3/8 (1534)
Case Depth: 22 7/8 (591) Total Face width: 41 1/2 (1054)

Keys

Naturals: Ebony Sharps: Ivory Block
Keyfronts:
Key Span 3 Octave: 19 5/8 (498) 1 Octave: 6 9/16 (167)

Jack Register: Divided Rack Over-rail? Yes
S/B Grain Parallel to: Spine Bridge/Nut Wires: Both

Notes Inches (millimetres)

Compass: GG/BB-D3 Note Count: 52 1st Octave: Short
c3 Length: 6 3/8 (162) c2 Equivalent: 12 3/4 (324)
c2 Length: 11 1/4 (287) C2PP: 25%
MC Length: 18 3/4 (476) c2 Equivalent: 9 3/8 (286)
CC Length: 48 3/8 (1228) c2 Equivalent: 6. (152)
Lowest: GG Length: 50 1/8 (1273) C2 Equivalent: 4 3/4 (121)
CS: Short Fs, Gs: Long

Ownership Provenance:

Jos. Wm Drexel - NYC	After 1876 - (On Loan)
Lucy Wharton Drexel (Mrs. J.M. Drexel)	1889
Metropolitan Museum of Art - NYC	1889-

Type: English Spinet - 17th C. Desig: C1685

Inscription: Carolus Haward
Found on: Jackrail

No:

B1: 11 B2: 11 BM3: 1685 (A)

Case

Bentside: Serpentine
LH Tail: 1 Pc - Rearfacing 25°
LH-RH Faces: Both - Broad
KB/Spine Angle: 20°

Major Dimenstions Inches (millimetres)

Spine Length: 62 3/8 (1584) Max Length: 65 3/4 (1670)
Case Depth: 23 3/4 (603) Total Face width: 41 3/4 (1060)

Keys

Naturals: Ebony Sharps: Ivory Block
Keyfronts: Wood Semi-rounded
Key Span 3 Octave: 19 1/4 (489) 1 Octave: 6 3/8 (162)

Jack Register: Divided Rack Over-rail?
S/B Grain Parallel to: Spine Bridge/Nut Wires: Both

Notes Inches (millimetres)

Compass: GG/BB-D3 Note Count: 53 1st Octave: 1 - Broken
c3 Length: 6 (152) c2 Equivalent: 12 (305)
c2 Length: 11 9/16 (294) C2PP: 24%
MC Length: 21 7/16 (545) c2 Equivalent: 10 3/4 (273)
CC Length: 54 1/16 (1373) c2 Equivalent: 6 3/4 (171)
Lowest: GG/BB-D3 Length: 54 7/8 (1394) C2 Equivalent: 5 1/8 (130)
CS: Short Fs, Gs: Long

Ownership Provenance:

Rev. L. K. Hilton - Shaftsbury	Before 1885 - After 1888
Chash. St. John Hornby - Chelsea	1892 - After 1913
Hurstmonceaux Castle - Sussex	After 1913 - c1948
A Dealer	c1948 - 1949
Frank Partridge - NYC	1949 - 1950
Ninah May Holden Cummer	1950-1958
Cummer Gallery of Art	1958-

Type: English Spinet - 17th C. Desig: 1687

Inscription: Carolus Haward Fecit 1687
Found on: Jackrail

No:

B1: 4.5 B2: 4.5 BM3: 1687-1, 1687-2

Case

Bentside: Serpentine
LH Tail: 1 Pc - Rearfacing 32°
LH-RH Faces: Both - Broad
KB/Spine Angle: 20°

Major Dimenstions Inches (millimetres)

Spine Length: 57 1/4 (1454) Max Length: 62 (1575)
Case Depth: 24 3/8 (619) Total Face width: 41 1/2 (1054)

Keys

Naturals: Ebony Sharps: Skunktail
Keyfronts: Wood - Semirounded
Key Span 3 Octave: 19 3/8 (492) 1 Octave: 6 3/8 (162)

Jack Register: Rack Over-rail? No
S/B Grain Parallel to: Bridge/Nut Wires:

Notes Inches (millimetres)

Compass: GG/BB - D3 Note Count: 53 1st Octave: 1-BR
c3 Length: c2 Equivalent:
c2 Length: C2PP:
MC Length: c2 Equivalent:
CC Length: c2 Equivalent:
Lowest: Length: C2 Equivalent:
CS: Fs, Gs:

Ownership Provenance:

J. Kendrick Pyne - Manchester	Before 1885
Henry Slater Boddington - Cheshire	Before 1885 - 1901
Unknown	1901-1911
Wilhelm Heyer - Cologne	1911-1913
WMHeyer Museum of Musical History	1913-1926
Leidsig Univ. Museum of Musical Instruments	1926-

Type: English Spinet - 17th C. Desig: 1689

Inscription: Carolus Haward Fecit 1689
Found on: Faceboard

No:

B1: B2: BM3: 1689

Case

Bentside: Serpentine
LH Tail: 1 Pc - Rearfacing 37°
LH-RH Faces: Both - Broad
KB/Spine Angle: 16°

Major Dimenstions Inches (millimetres)

Spine Length: 50 1/2 (1283) Max Length: 57 1/2 (1461)
Case Depth: 22 (559) Total Face width: 40 1/8 (1019)

Keys

Naturals: Ebony Sharps: Ivory Block
Keyfronts: Parchment - Tre-foil
Key Span 3 Octave: 19 1/4 (489) 1 Octave: 6 3/8 (162)

Jack Register: Divided Rack Over-rail? No
S/B Grain Parallel to: Spine Bridge/Nut Wires: Yes

Notes Inches (millimetres)

Compass: GG/BB - C3 Note Count: 51 1st Octave: Broken
c3 Length: 5 1/2 (139) c2 Equivalent: 11
c2 Length: 11 3/8 (289) C2PP: 26%
MC Length: 21 (533) c2 Equivalent: 10 1/2 (267)
CC Length: 48 (1218) c2 Equivalent: 6 (152)
Lowest: GG/BB - C3 Length: 48 1/8 (1222) C2 Equivalent: 4 1/2 (114)
CS: Short Fs, Gs: Long

Ownership Provenance:

Auction in Either brighton or Hove Late 1980's
Tony Bingham - London Late 1980's-2004
National Music Museum - South Dakota 2004-

E. The Five Following Chapters

The next chapter focuses on provenance. Then, the following chapters begin with an examination of the salient points of all Hawards, followed by a more detailed breakdown of each. From this, a major Haward design division and two minor divisions is described. Finally, a Keene spinet is shown to be possibly copied from Haward's earlier design and, in turn, appears to be responsible for his later design update.

Haward's spinet **16XX** requires a separate and lengthy chapter. It will be shown to be dated prior to the series from the 1680s. Both direct and circumstantial evidence will prove:

1. It was begun by a different and more skilled builder than Charles Haward can be seen to have been.
2. It was finished by Charles Haward, whose name is on the face board. Much of his work on it can be identified.
3. The initial builder can be shown to have been a 'J H-….' – marked in two places.
4. This 'J H…' has to be John Haward-the-elder, who died in 1667.
5. This spinet was the incomplete instrument Samuel Pepys saw in Charles Haward's shop in April 1668.
6. It was the spinet that was finished and sold to Pepys three months later. While it had been speculatively built, it was a stand-alone spinet, probably experimental, and not one of a series.
7. It was an unfamiliar instrument to Pepys and, undoubtedly to Charles Haward, its finisher.
8. After he bought it, it can be shown to have been used by Pepys solely for its intended purpose: his "finding out of chords". Pepys was not a keyboard player.
9. The letters and numbers found on it can be shown to be in Pepys' writing style.

Some of these observations are mutually supportive. Working backwards, if this is the spinet owned by Pepys, then we know its date. Knowing its date, we can make a credible John Haward-the-elder connection. With this connection, we can explain the surprisingly accomplished work found on it – not found on the other five Hawards.

The subject of the final chapter of Section II is Queen Anne's Haward spinet. Beginning with eight accounts concerning this instrument, it will be shown to have been a spinet, and not a virginal, and possible reasons for its apparent importance to her will be considered. It will be argued that it is still with us – one of three of the six Hawards we are examining, and a case will be made for each of the likely claimants.

CHAPTER 9 PROVENANCE

Summary

1689	Tony Bingham National Music Museum
1683	Thomas Wm Taphouse Mellerstain House ? 11th Earl of Haddington ? 12th Earl of Haddington ? 13th Earl of Haddington
1684	Joseph Wm Drexel Mrs Lucy Wharton Drexel Metropolitan Museum
c.1685	Rev'd L K Hilton Chas Henry St John Hornby Herstmonceux Castle ? Col. Claude Lowther ? Reginald Lawson ? Sir Paul Latham Unknown Dealer Frank Partridge Mrs Ninah May Holden Cummer Cummer Museum
1687	James Kendrick Pyne Henry Slater Boddington (Unknown) Wm Heyer Cologne Musical Instrument Museum Leipzig Musical Museum (Grossi)
16XX	William Dale Edmund C Legg W H Brazil, MD C Allen Legg Chas W Wilson

We can trace the ownership of five of the six Haward spinets back to the early 1880s – but not contiguously before, with any certainty. Many of the past known owners were remarkably accomplished in a variety of vocational fields. The majority seem to have considered their spinets not as playing or even playable instruments but as important links to England's musical past. They seem to have considered themselves as custodians of that tradition – which in the 1880s extended back 200 years. Just one of them, a late 20th century owner, may have viewed his spinet (**16XX**) primarily as a playable musical instrument rather than an artifact of aesthetic curiosity. Today, while all five Haward spinets that were known in the 1880s are still accounted for, none of the six survivors remain in England today.

Provenance - Text

1689

A very early spinet made by Charles Haward and restored by him shortly before his death was auctioned either in Brighton or Hove[52] in the late 1980s. It was bought by **Tony Bingham**, a dealer, who reportedly began to be involved in musical instruments in the 1960s; **1689** was one of many instruments he bought and sold.

With a crack in its wrestplank, **1689** was taken to Miles Hellon for a major restoration.[53] Hellon made noteworthy scale drawings of this instrument and because of them, at least one accurate reproduction spinet has been made. By blowing up his transmitted drawings to half and to full scale, I have been able to obtain more precise and reliable measurements from them than if I had hastily taken these measurements from this spinet myself.

In 2004, **1689** was sold to the **National Music Museum** in South Dakota, where it has been extensively photographed and comprehensively described by the organologist, John Koster. Some of his valued photographs can be seen in Appendix A.

1683

Thomas William Taphouse (1838 – 1905) is the first verified owner of spinet **1683.** His name, as its restorer in 1886, appears on a label glued to the wrestplank. It is pictured in Appendix A.

At the age of four, Taphouse's family moved from Hampshire to Oxford, where he would become a life-long resident. Just a year before his death, he was unanimously elected Oxford's mayor. He, his father, and then his son, were music dealers. Their music shop, located at 3 Magdalene Street, remained in business at the same location until 1982.

Taphouse left school at age 14 to work with his father in cabinetmaking. Four years later, he spent a year in London learning piano tuning, finally returning to Oxford in 1859 to assist his father as a music seller. Over the years, he acquired a number of keyboard instruments in addition to spinet **1683**. The American publication, *Music Trade Review,* [54] in an article headed, 'Ancient key-board instruments at Oxford University' reported that A J Hipkins gave a lecture on 'Old Claviers' before the Oxford University Music Club. There, they reported, Hipkins played on nine instruments, "most of them owned by Mr. T W Taphouse". Spinet **1683** was briefly described in the article. The *Musical Times* (1 Dec 1890 p.719) was more specific: The lecture was held on 25 November 1890, and we learn that Hipkins performed works by Byrd, Bull, and Gibbons on this Haward.

Taphouse's first early instrument purchase was a 5-1/2-octave Shudi-Broadwood harpsichord that he bought in London at auction in 1857 for £2/10s. He sold it to Henry Fowler Broadwood,

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[52] Miles Hellon - PC

[53] Photographs taken of **1689** in Hellon's shop can be seen in Appendix A

[54] 1890 – month unknown. p.334

probably later that year, for £15, sextupling his investment. Earlier, in 1810, the son of that harpsichord's original owner had let it go for 13s at a country sale.[55]

In 1886, when Taphouse restored **1683**, it is likely he began his work shortly after he bought it, for he apparently did not own it the year before. At the 1885 Loan Exhibition, he showed a harpsichord – another Shudi-Broadwood that he had acquired, but not the spinet. Since his spinet was in Oxford in 1890, he had to have been its owner and not just its restorer, and he probably still owned it till his death in 1905.

Spinet **1683** is currently at **Mellerstain House** in Berwickshire, Scotland, and it may have been brought there as early as the turn of the 20th century. It was probably brought there by:

The 11th Earl of Haddington (1827 – 1911),

Or the 12th Earl of Haddington (1894 – 1986),

Or the 13th Earl of Haddington (1941 – 2012),

all of whom lived at Mellerstain in their later years. Photographs in Appendix A show **1683** has been consistently well cared for, and today, it is in close to playing condition.

Mellerstain House, built in 1627, has been in the same family, the Baillie family, since 1642. In 1725, it was reconstructed: Two wings were built by William Adam and 45 years later, they were joined by a central block designed by Robert Adam, William's son. Today, it is a unique surviving Adam family architectural achievement.

In 1691, a George Baillie married Grisell Hume and they came to live at Mellerstain House. Lady Grisell (Grizel) kept a diary, or household book, for many years. We learn that there was a spinet there in Mellerstain House around the turn of the 18thC. In an entry written in 1707, Lady Grisell wrote that one of her daughters, age 14, played the spinet for perhaps an hour or so each morning. Mole (2009:62) quotes a lengthy partial-sentence from her household book. It would be tempting to suppose **1683** was that spinet. Its evidence of good care and yet, well-used, cupped keys could suggest this. But its much later location as far away as Oxford combined with its near-certain Taphouse ownership would seem to rule this out – unless it was, somehow, re-acquired. I am suggesting that **1683** could be one of three surviving Haward spinets that could have been the one owned by Queen Anne. If **1683**, however, always had a Mellerstain House connection, it would have to be ruled out.

1684

Joseph William Drexel (1833 – 1888) is the first known owner of **1684**. An American banker, he retired in 1876 and devoted his last twelve years to philanthropic activities. He is reported to have been a passionate collector of music, and at some point, he was both the president of the New York Philharmonic Orchestra and the director of the Metropolitan Opera, among a number of other non-vocational activities.

After his death, his widow, **Lucy Wharton Drexel** (1841 – 1912), gave the **Metropolitan Museum**, where her husband had been a trustee, six categories of collectables, the third of

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[55] As the current owner of this harpsichord, I have investigated its fascinating ownership history; but, except for my citing its escalating values, because this reflects the 19thC upsurge of interest in early keyboard instruments, this subject is irrelevant here.

which was "ancient musical instruments". Haward spinet **1684,** one of 44 musical instruments, had been on loan there for several years prior to its formal donation in January 1889, however.

Since its replaced trestle stylistically suggests a mid-century (c.1850 +/-) date, a wood determination might suggest whether **1684** had been still in England shortly before Drexel's ownership.

1685

The Rev'd L K Hilton is the first known owner of the undated Haward spinet which I am referring to as "**c.1685**". The remains of a paper label attached to the spine attests to his ownership.[56] Hilton is known to have earned an MA degree from Magdalene College, Oxford, and afterwards he was the rector of St Leonard's church in Semley, Dorset.[57]

In the appendix to the 1st edition of Groves Dictionary (1888: 796), A J Hipkins wrote, perceptively, "The Haward spinet belonging to the Rev. L K Hilton of Semley, Shaftsbury is nearly like a Hitchcock, which proves that Haward did not remain with the model figured 655a" (the spinet, **16XX**). From this we know of Hilton's ownership in c.1887 – the year prior to the publication of the appendix. Since records show Hilton displayed his spinet at the 1885 Loan Exhibition, we can back-date his known ownership another two years to 1885.

The Hilton label, a portion of a shipping label, confirms that this spinet was taken to the Loan Exhibition held in Vienna in 1892. In the *Musical Times* of 1 Sept 1892, Hipkins wrote of the Austro – Hungarian and German contributions documented in a catalogue installment. Unfortunately, the British section, which was to come later, evidently never appeared. In an era of growing nationalism, at this exhibition, English instruments were there, in part, to show-case England's organological past. But except for Haward's **c.1685**, we do not know, at this time, the other English instruments that were exhibited there.

We know more about the next owner of **c.1685** than we know about Hilton. **Charles Harry St John Hornby** (1867 – 1946), the son of Rev'd Charles Edward Hornby, was educated at Harrow and New College, Oxford, where he earned a BA degree in Classics. Choosing to enter business, he became involved in book selling and publishing. In 1892, he became a founding patron of W H Smith, booksellers, and three years later he founded the Ashendene Press, which was in operation for 40 years. He collaborated with a couple of individuals in devising two new type faces: A second label found on **c.1685**, showing a particularly interesting design (pictured in Appendix A) probably shows one of these fonts. He had homes in Chelsea, London, and Chantmarle, Dorset, where he probably met Hilton, and from whom he probably bought **c.1685.**

Herstmonceux Castle in Sussex is the next known site where **c.1685** was taken, but the year it was brought there is unknown. This mid-15th century castle had been gutted, de-roofed, and, presumably, stripped for parts in 1777. For many decades, only the outside walls survived. Beginning in 1912, however, a succession of three owners: **Col. Claude Lowther** (1870 – 1929), **Reginald Lawson (? -** 1932), and **Sir Paul Latham** (1905 – 55) all committed themselves to the castle's restoration along with the gradual acquisition of appropriate furnishings as available space grew. **c.1685** was clearly among those furnishings, but the time of acquisition is uncertain. Lowther, who bought the castle ruin in 1911, began its restoration a

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[56] It is pictured in Appendix A.

[57] A village three miles from Shaftsbury, Dorset.

year later. Before his death in 1929, he had allegedly stocked portions of it with works of art, but at his death, his assembled collection was apparently sold off before the sale of the castle. This, however, may have been limited to his art artifacts and not to his furnishings. Lawson, the castle's next owner, owned it for only three years and was presumably living there when he died in 1932. Nevertheless, he could have been the one who brought **c.1685** to the castle. Finally, Latham, the third owner, completed its restoration in 1933, the year of his purchase. In the 13 years of Latham's ownership, he too could have been the one who acquired **c.1685** directly or indirectly from Hornby and taken it to the castle.[58]

In 1946 the castle was sold to the Admiralty which relocated the Royal Observatory to its grounds. Spinet **c.1685** must have remained there for a couple of years before it was sold to an unknown dealer. In 1949 it was sold to a second dealer, **Frank Partridge** of New York City, who, in 1950, sold it to **Mrs Ninah May Holden Cummer** (1877 – 1958) of Jacksonville, Florida, who placed it in the oak-panelled "Tudor Room" of her half-timbered-design 1902 mansion.[59] She was the widow of Arthur Gerrish Cummer (1873 – 1943), a second-generation timber merchant who harvested trees from central Florida and shipped this wood north from Jacksonville. She and her husband conceived of a Cummer Gallery of Art, and in the 15 years following her husband's death, Mrs Cummer apparently acquired 60 items, including **c.1685.** These items became the nucleus of the museum's collection. After her death in 1958, the mansion was torn down and a new museum building was erected on the same spot. Reportedly, the only thing that was spared from the mansion was the Tudor room. It was incorporated into the museum and the spinet continued to be displayed there before it was placed in storage several years ago.

1687

A **James Kendrick Pyne** (three contiguous Pyne generations – all musicians – shared this name) [60] was the first recorded owner of **1687**. At the 1885 Loan Exhibition in London, one of the two Pynes then living, lent seven keyboard instruments – three of them English spinets: the attributed Keene, dated '1708', a Joseph Harris, and a Longman & Broderip. Since **1687** was not included, it must have been sold before then.[61]

If the youngest Pyne was **1687**'s earliest recorded owner, he had to have acquired it after 1875, for that year he returned to England from several years in Philadelphia to accept a position as organist of Manchester Cathedral.[62] We know of the Pyne ownership because A J Hipkins wrote, "Mr. Kendrick Pyne acquired a Haward spinet (now in Mr. Boddington's collection) either dated 1687 or number 1687, that has sharps like the Hitchcocks with a strip of the colour of the naturals let in, in this instance black" (1888:796). In that same year in the appendix to the 1st

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[58] The castle was pictured and described in *Country Life* 18 May 1929. This was four years prior to the completion of its restoration.

[59] Jacksonville is in north-east Florida.

[60] (1788 – 1857), (1810 – 1893) , and (1852 – 1938)

[61] An interesting account of this talented three-generation musical family can be found in *Musical Times* (1 Oct 1908: 636-41). An obituary for the youngest Pyne appeared thirty years later (MT Oct 1938:787). It mentioned he had been given an honorary degree of Doctor of Music by London University in 1901 and it pointed out, "his hobby was the collecting of rare instruments".

[62] He won this appointment over 65 other applicants.

edition of Groves Dictionary[63] he failed to mention the Pyne ownership, but he again wrote, "In Mr. Boddington's collection there is a Haward spinet dated or numbered 1687". He referred to its keys once more, now describing, "White sharps, the latter with a strip of black in them. Even the great London harpsichord maker Shudi showed his approval of this fashion by adopting it in the harpsichords he made in 1766 for Frederick the Great's New Palaces at Potsdam...." (1888 GD App:72). These two Hipkins accounts must have been written in 1887, the year before publication.

The timing of this pre-1888 ownership transfer is problematic, for in 1908, *Musical Times* noted, "He (Pyne) formerly had a valuable collection of old instruments, of which an illustrated catalogue was published in 1888. These, becoming too bulky for a private house passed into the possession of Mr. Henry Boddington of Pownall Hall, Winslow, Cheshire, but they were disbursed when sold in 1903" (actually, 1901) (MT 1 Oct 1908:640). Two conclusions might be drawn. First ,**1687** was probably acquired by the youngest Pyne and not his elderly father (although the latter was still active after more than 50 years as a church organist in the Bath Abbey Church). Second, it was owned by one of these Pynes perhaps from as early as the late 1870s to 1888 or shortly before when it was sold to Henry Boddington.

Henry Slater Boddington (1849 – 1925)[64] was the son of another Henry Boddington, who had moved from Oxford to Manchester and there, established a brewery. At the age of 23, in 1872, the son began to manage the business. He was successful – evidently increasing the family's share of his father's brewery enterprise six-fold over two decades. In this same era, he was the director of the Manchester Ship Canal, served as a Manchester city councilor, participated in local politics, and was chairman of an art committee which commissioned the painting of murals in the Manchester town hall.

In 1886, the year of his father's death, he purchased an estate, Pownall Hall, outside the city. Leaving its 1830 exterior unaltered, he, nevertheless, spent a considerable sum of money furnishing and redesigning its interior. Whether it is from these extravagances or from business set-backs, in 1891, the bank foreclosed on some of his assets; although, evidently excepting the Hall.

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[63] Under 'Pianoforte'.

[64] Not to be confused with Henry John Boddington, a painter (1811 – 65) or his son, Edwin Henry Boddington, also a painter (1836 – 1905).

In Sept 1901, *Connoisseur* wrote of an auction of "Interesting old musical instruments from the collection of Mr. Henry Boddington of Pownall Hall, Winslow" that was held 24 July that year by Puttick & Simpson. Of the seven auctioned instruments, two were English: the 1664 White virginal and Haward spinet **1687.** The Haward sold for just £8/5s whereas the other six sold for between £15/10 and £40.[65]

Whoever bought **1687** at the 1901 auction is unknown and its ownership over the following decade or so is uncertain. At some point its interior was gutted and it is probable that it was done in this period and not before. It may have been carried out by a non-musicological local buyer – perhaps by a local dealer to enhance its salability by making it more useful.[66]

At some point, **1687** was taken to Germany and according to the information supplied by its current owner, the Leipzig University Musical Instrument Museum, it had been "since 1910/12 in the Heyer Collection, Cologne" (trans.).

William Heyer (1849 – 1913), founded a paper company in Cologne in 1885. In 1904, his collecting interest turned from coins and stamps to musical instruments, when, in that year, he bought the instrument collection of Baron Alessandro Kraus of Florence. Two years later, he bought the collection of the Dutch cellist, Paul De Wit, and at some point, he acquired pianos and organs from the firm of Ibach. Spinet **1687** was evidently a separate purchase and not a part of any of these three collections.

In 1906, Heyer established a music history museum in Cologne that survived past his death in 1913; it grew to include a reported 2600 instruments. In 1926, his collection was acquired by Leipzig University which established a music history museum. From 1929, that music history museum has been one of three museums under the umbrella organization, The Grossi Museum.

The replaced interior of **1687** must have been carried out in Germany – possibly by Heyer, but probably by the Leipzig University Museum at an unknown date.

16XX

William Dale (c.1858 – 1925) is the earliest known, certain, recent owner of spinet **16XX.** Given his substantial musical activity for more than a third of a century and a very active avocational life, it is surprising that so little has been recorded about him. His parentage,

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[65] The £40 instrument was a 1614 Ruckers Flemish double, one of two known today with an English 'ravalement'. Its lid painting was attributed until recently to Van Der Meulen. The keyboards had been remade, aligned, and extended, but the decorated soundboard had been left intact. This work was probably done in the second quarter of the 18thC. In c.1790, Broadwood's records show they were the ones that elegantly veneered the outer case and added the brass drop-rings. I am personally familiar with this harpsichord. In 1952 I cycled down from Exeter to Dartington Hall to see and hear it. Its 'personality', its bright treble, its sonorous bass, were unforgettable. Then, in late 2004, just before it was auctioned at Sothebys, I flew to London just to see it again. Although it had probably been restored more recently, probably on the Continent, I was not disappointed. The restorer's cross-ribbing would have served to protect the valued soundboard from checking and it hardly compromised the bass. (John Challis (PC) once observed that the Germans tend to carry their cross-ribbing too far down in the bass – stiffening the soundboard and dampening its bass potential at the lower frequencies). At the sale (10 Nov 2004), it brought £98,560. Disregarding inflation, this is a gain of close to 2500 times over 103 years. The buyer, however, now owns one of the most exceptional musical instruments of any type. This harpsichord may have always remained in playable condition. In 1888, A J Hipkins publicly performed two works of Purcell on it. It was then owned by a General Hopkinson.

[66] My first keyboard instrument was a Longman & Broderip square piano, bought in 1953 from an Exeter antique dealer, who had intended to turn it into a desk.

education, and even his birth year or location are all unknown. Most important, we have no knowledge about how or when he was first drawn to early keyboard instruments or how or when he first met his friend and collaborator, A J Hipkins. We do have a probable insight into his musical background, however.

A "W Dale" is listed among the names of past children of the Chapel Royal. This is almost certainly William Dale. While more than one name can be assumed for, say, 'J' or 'R', William is the only name ordinarily associated with 'W'. He was listed as a chorister in 1872. Assuming he was between the ages of 11 and 16 that year, his birth year would have been between 1856 and 1861, or c.1858. This means he was in his early 20s when Groves first pictured his spinet.

Today, Dale is best remembered as the author of the book, *Tshudi, the Harpsichord Maker*, written in 1913. In a lengthy and laudatory review of his book (MT 1Aug1913:523-24) the *Musical Times* wrote, "This is a delightful book to see and still more to read". It then mentioned its "attractive style". But there is nothing in this review about its author.

In 1887, club records show he became a member of the Hampshire Field Club and in the following year, he became its honorary secretary – a position he held for 37 years. According to Beth Taylor, author of *100 Years of the Hampshire Field Club*[67], Dale had contributed 29 papers to the Proceedings over the years. She wrote, he had been a Fellow of the Geological Society as well, and the Society of Antiquities. He had been a member of the Council of British Numismatic Society, an official lecturer at the British Museum, and had been a 'non-conformist' (i.e.: non- Anglican) deacon. He died 18 April 1925.

At the Society of Antiquarians in 1904,[68] Dale claimed, "In 1885 I arranged a large Loan Collection of old keyboard instruments at the Albert Hall, and compiled the catalogue. I have also spent a good deal of time in collecting particulars of such instruments from every available source". Before 1884, the year Dale moved to Hampshire,[69] he lived in Shudi's old premises (dating from 1742) at 33 Great Pulteney Street, London.[70]

This will explain a portion of his expanded autobiographical account found in the preface of his book: "The author claims no special fitness for this task save that the early years of his life were spent in the house in which Burkat Shudi lived and carried on his trade more than a hundred years earlier. At the time also of the compilation of Grove's Dictionary of Music and Musicians he was associated with the late A J Hipkins, F.S.A. in the preparation of some of the articles, and gathered together a good deal of the material supplied by that writer. To obtain this he made careful search for old business books of the eighteenth century in Shudi's house, and collected a mass of information, some of which is published for the first time in the following pages. The author also did much honorary work in the Exhibition of Ancient Musical Instruments held at Albert Hall in connection with the Music and Inventions Exhibition of the year 1885. He arranged all the keyboard instruments and wrote a descriptive catalogue of the same, receiving the award of a silver medal for his services.[71]

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[67] *Proceeds of the Hampshire Field Club and Archaeological Society* 41, 1985, pp 5-20.

[68] Proceedings of the Society of Antiquarians 16 June 1904:148.

[69] His address there from 1884 to 1911 or after was, The Lawn, Archer Road, Southampton.

[70] In 1884, A J Hipkins moved there and lived there at least until 1901. He died in 1903 at his daughter's house in Kensington, however.

[71] Hipkins received the gold medal.

Dale was perhaps too young to have been a participant in the 1872 Musical instruments Exhibition, but based on his claims, he certainly had come a long way over the next 13 years. At the 1885 Loan Exhibition, where he was so active, he lent eight keyboard instruments of his own: a Shudi-Broadwood harpsichord, an Antwerp virginal, and five spinets. In addition to **16XX,** his other spinets on loan were a Keene, a Haxby, a Barton, and a Hitchcock.[72]

Of Dale's many keyboard instruments, **16XX** may have been his favourite. He appeared to have owned it till shortly before his death. He managed to have woodcuts of it made (see Appendix A), and he was able to have it pictured and described in *Grove's Dictionary,* the *Encyclopaedia Britannica,* Rockstro's *History,* and it was he who arranged with MacQuaid and Edwards to have it pictured in their *Dictionary of English Furniture.* He played it publicly in 1888 and 1904, and at about the time of its sale, it was on loan to the V&A Museum.

Thanks to William Dale, beginning in 1883,[73] **16XX** abruptly shifted from closeted obscurity to sweeping recognition.

PICTURED

Grove's Dictionary	1883 - 1960 (97 years)
Encyclopaedia Brittanica	1880s - c.1920s (perhaps 40 years)
Rockstro's "General History of Music"	1886
Dictionary of English Furniture (the "DEF")	1924 - 1927 - 1954 (rev.)
Antiques Magazine (art packers/movers ad)	Sept 1927 - Jan 1928
The Antiquarian (art packers/movers ad)	Sept - Oct 1927
Connoisseur 87 (pp 39-40)	Jan 1931
The Antique Collector	1937
Boalch's "Makers of the Harpsichord & Clavichord"	1956
Shorter Dictionary of English Furniture	1964

PLACES SHOWN

1885, Oct 21 & 23	Historic Loan Collection, Int'l Inventions Exhibition, London	
1888, April 18	Hampshire Literary & Philosphical Society	PLAYED
1904, June 16	Society of Antiquities, London	PLAYED
c.1932, "Some years"	V & A Museum, London	
1951, August 7-30	Lent to the Galpin Society	
1951, August 23	Shown on National Television (BBC)	
c.1962, "Short period"	Museum in Bath.	

The Dale Accounts. Dale spoke about his spinet and played on it at a meeting of 'The Hampshire Literary and Philosophical Society and the Hampshire Field Club' held 18 April 1888.[74] Dale brought four instruments to the meeting, presumably all were his own, including "a spinet by Charles Haward (circa 1650) similar to that described by Samuel Pepys in his diary".[75] Dale's account then disclosed that "Haward's spinet was being carted away from an old hall in Suffolk as almost worthless, but was rescued by a dealer". Sixteen years later, before the Society of Antiquaries of London, on 16 June 1904, he was more specific: "The musical instrument I exhibit this evening is a spinet of English manufacture and, as far as I know, is one

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[72] From sometime before 1913 to the time of his death in 1925, he also owned a 1793 Broadwood grand piano – in 1971, owned by F H Miller, Dorking, Surrey. There may have been other instruments he had owned as well.

[73] Grove's was released over several years. S through Z was issued in 1883.

[74] Reported in '*The Actuary*' vol. xvii, Jan – June 1888.

[75] He based his remark on a misreading of "triangle virginal" (a term Pepys had used in 1661) as "triangles" and, then erroneously concluded, "He meant a 3-legged stand to put the instrument on", as found on his Haward.

of the earliest made in this country". Then he went on, "The Haward spinet I show tonight came from Bildeston Hall in Suffolk. It has had as little restoration as possible. One or two pieces of ironwork ornamentation have been supplied and a new jack rail. The wire is the same gauge as that originally used, and it is quilled from bundles of crow quills 120 years old found by me in the loft of a harpsichord maker's house in Soho. It is very English in its extreme plainness, but the sounding board shows that Haward had an Italian model before him. In it is a beautiful rose-hole and there is also a simple decoration in India ink. The rose-hole was afterwards abandoned by spinet makers, and retained only by Kirckmann, a harpsichord maker who was an apprentice to the famous house of Ruckers. The decoration is a survival of the more elaborate forms of ornament which characterized the instruments made in Italy and the Netherlands. It was the painting and decoration of these instruments which gave the Ruckers of Antwerp an entry into the Guild of St Luke, the painters' guild. Near the tuning pins is put the sacred monogram, I.H.S., a custom adopted by the Italian violin makers. The name board bears the inscription, 'Carolus Haward Fecit' and over each key the name of the note is written...".[76]

Before this paragraph, Dale said, "...I should like to say how much the nation is indebted to the late Carl Engel, who rescued this interesting instrument from oblivion, spending his summer holidays in hunting up specimens as well as enriching the collection in other ways...". Taken in isolation, "this interesting instrument", "rescued...from oblivion", would appear to be his Haward, and Engel had to be either the "dealer" or at least the middle-man – and there almost certainly was a middle-man. If, indeed, Engel was spending his summers roaming the countryside, we would have a ready explanation of how he stumbled upon this spinet. But Engel's "specimens" were largely ethnological instruments, found in Continental Europe or beyond – not in rural England. Between his two quoted statements were two paragraphs. The first dealt with jacks and plectra instruments generally; spinets, in particular. The second dealt with clavichords. The passage above was the end of the last sentence of a three-sentence paragraph about clavichords that I believe is important for me to quote here in full:

> "The spinet is not the oldest stringed instrument to which the keyboard was applied. That honour belongs to the clavichord, the earliest instrument with strings in which the sound was unlocked by a clavis or key. Clavichords have but little in common with spinets, and it is not my business to speak of them now; but as I have occasion to refer to the collection at South Kensington (he didn't – at least, here) I should like to say how much...".

Despite his early years as a pianist, piano composer, and piano instructor, Carl Engel left few keyboard instruments. Nevertheless, he did own four clavichords – three of which he sold to the V&A Museum.[77] These three are what Dale may have had in mind and I will assume, "this interesting instrument" is not Dale's Haward – singular, but clavichords – plural. Without other evidence, I cannot consider Carl Engel to be a one-time owner of Haward's **16XX.**

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[76] Proceedings of the Society of Antiquaries of London – Second series vol. xx 26 Nov 1903 to 29 June 1905.

[77] These were among the 201 instruments he sold then, probably in 1881 – 82.

From Dale's accounts:

1. **16XX** was being "carted away". It was seen as "almost worthless".
2. It was being removed from "an old hall in Suffolk".
3. This old hall in Suffolk was "Bildeston Hall".
4. It was given "as little restoration as possible".
5. It was given "one or two pieces of iron-work".
6. It was given "a new jack rail".
7. It was assigned (in 1888) the date-estimate of "c.1650".

However, Dale never appeared to name the person he bought it from and never mentioned where or when he bought it. Except for No. 5, all of his other observations are problematic.

His account of **16XX**'s restoration is puzzling. Appendix A shows that his spinet had been restored in an unusually careful and costly manner – possibly in the 2d quarter of the 19thC, but most likely in the 3d quarter, shortly before he acquired it. Dale was correct about the replaced iron-work, but he either had been misinformed or had mis-perceived its then, two-century-old, burl-elm veneered jack rail.

For some reason he seems to have overlooked the nearly new, specially-made, atypical-quality jacks (although he quilled them). Also, the 19th century lock, the appropriately-aged lock batten, the similarly-patinated 3-inch top wood of the spine, and a new trestle foot. These were major restorations and would scarcely have been carried out, at least in this manner, on a derelict instrument. This spinet had been played remarkably little and had been treated with particular care over the years. The wood replacement was worm-related and not the result of neglect or abuse.

More important: an investigation has shown that Dale's account of **1688**'s having come from Bildeston Hall is troublesome as well. Appendix G consists of correspondence that bears on this matter.

Bildeston Hall- When this manor house was built is unclear, but Sue Andrews, in her monograph, *Bildeston Hall: Manorial Residence* (1990) lists lords of the Bildeston Manor going back to 1066. When, in 1705, William Revett, the last of four generations of Revett occupants, sold Bildeston Hall to Bartholomew Beale (confusingly, one of several living Barth. Beales), the hall had been emptied of all of its contents. The Beale family, the last family to occupy the hall, lived there just 22 years. Barth. Beale died there in 1724. Two daughters had married and had moved elsewhere to their husband's estates a short time before, and Bartholomew's widow died there in 1726. Upon her death, a probate inventory was taken of its 26 rooms. All rooms except for one of four garret rooms, used for the storage of lumber, were inventoried. In addition to furniture, there were curtains, a looking glass, a clock, a barometer, and 22 prints, for example. There was nothing we might regard as cultural, however, in this inventory, and no musical instruments were listed. If one of the Beale daughters had played the spinet and had taken her instrument with her when she moved away, this would not explain how **16XX** could have then returned and been "rescued" from the hall about 140 years later.

In 1762 the next owners offered to strip and sell the now-empty hall's saleable parts: Flooring, wainscot, doors, marble hearths, sashes, timber, brick, and tile were mentioned in their ad; but there was no mention of a spinet. We can establish that what remained of the hall was finally demolished between 1851 and 1861 (see Appendix G). This would have been perhaps a decade or so before **16XX** was allegedly "carted away" from there.

Given the 1726 inventory, the nearly century-and-a-half time-lag, the date-range of the final demolition, and the unlikelihood of its ever have been transported there, we can eliminate the manor house as being "Bildeston Hall", the "old hall in Suffolk".

In the village of Bildeston, there were two farmhouses, each of which were referred to as Bildeston Hall at various times – at least from the mid-1880s or so. One, formerly the 'Newbury Farm, farmhouse' at 22 High Street, is, today, split into two private residences and is now known as "Bildeston House".[78] Another, formerly "The Farm House to Street Farm" at the western end of Duke Street, has been consistently known as "Bildeston Hall" since the 1880s and, perhaps, earlier. While this half-timbered dwelling is believed to date from the 16th or 17th century, it was reportedly enlarged in the 19th century – probably with bits and pieces salvaged from the manor house at the time of its final demolition, or perhaps before.

Could either of these farmhouses have been described as "an old hall in Suffolk" by Dale? If so, how can we account for **16XX**'s expensive transport, by land, from London 63 miles away to a farmhouse at an earlier unknown period – and why? In any farmhouse, space would be limited, and therefore, actively employed. Because of this, how can we account for **16XX**'s past, gentle care?

The Dale Concerns: Dale evidently owned **16XX** for more than 40 years. In that time, he gave this spinet particular acclaim, and it repaid him with organological recognition. What is incomprehensible is how little scrutiny it received from him over those years. Dale claimed on specious grounds a Pepys relationship, and yet, he overlooked evidence signaling a connection. He seems to have accepted what he was told about its restoration without even superficial examination conformation. He seems to have accepted what he was told about its discovery and its presumed worth at the time, although this was at variance with the well-preserved, expensively-restored spinet that he bought. Finally, he remained strangely silent about the seller and the circumstances and the date of his acquisition.

Edmund C Legg of Cirencester, an antique dealer, appears to have been this spinet's next owner, probably dating from shortly before Dale's death in 1925. **16XX** had been on loan to the V&A Museum when Legg bought it. He sold it a short time later to Dr Brazil.

W H Brazil, M.D. of Coventry (? – 1947) was listed as its owner in the *Dictionary of English Furniture* (DEF) in 1924.[79] Brazil must have bought it soon after Legg acquired it. We know the year of Brazil's death because of an auction where **16XX** was sold, perhaps about 25 years after he bought it. Brazil, a medical doctor, was a member of a masonic lodge: St Michaels, No.163 and was lodge master in 1918. Perhaps, owing to its possible location away from the centre of town, **16XX** was spared in the Coventry blitz of November 1940.

C Allen Legg, the son of Edmund Legg, bought **16XX** at the London auction in 1947 and kept it for 19 years.

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[78] It had earlier been referred to as "Bildeston Hall at some point.

[79] Like Groves Dictionary, the DEF was released alphabetically: the first two volumes came out in 1924 and the third (M – Z) was published in 1927. **16XX** can be found under 'Haward' in vol.ii:374.

Edmund C. Legg & Son,

Antiques

29 Castle Street, Cirencester.

Telephone 3512

31st May 1966

Dear Mr. & Mrs. Phillips,

I have pleasure in giving you the history of the Charles Haward Spinet as far as I know it.

It came to my Fathers notice first in the early nineteen thirties through the good offices of G.J. Morley when it was on loan to the V and A. I dont know quite how long we had it, not long I think, when we sold it to Dr. Brazil. The doctor died soon after the war and I bought it in an auction of his effects held in London - 1948 I believe. The instrument is not dated but I believe it to be 1668. It is illustrated in Groves Dictionary of Music and Musicians, 1898 edition (and possibly other editions)and described at fair length, and there is a fine illustration, with comments under the makers name, in Donald Boalch's 'Makers of the Harpsichord and Clavichord' 1440-1840 which was published in 1956. In 1951 I lent it to the Galpin Society for their exhibition by arrangement with the Arts Council of Great Britian Aug. 7 - 30 and it was shewn on television and described on the radio about the 23rd Aug. Again I lent it to a Museum in Bath for a short period about four years ago.

This is about all I can think of, but there may be other details I could supply should there be anything that puzzles.

Thanking you for your Saturday visit.

Yours sincerely,

Legg appeared to have resumed the Dale practice of giving it national exposure, lending it to the Galpin Society in 1951 and to an unnamed museum in Bath in c.1962. It was also shown on television and described on the radio in 1951 according to the Legg letter.

Figure 9.1. Legg letter to the Phillips.

Howard Phillips of London (? – 2008) was the penultimate owner of **16XX.** He owned it 42 years from 1966, when he bought it from Legg, to the time of his death in 2008, after which it was auctioned at Bonhams.[80] Phillips, "The leading London-based dealer in fine antique glass"[81] dismantled a medieval hall and reassembled it by his home to be used as a concert hall. According to Ferguson Hoey of Norwich, **16XX** was the only keyboard instrument regularly there, although a modern piano was sometimes brought in. In 1975, Hoey voiced **16XX** and "did it up" for Phillips to use in his concerts.

It is interesting that out of all the many owners of the six Haward spinets, Phillips is, perhaps, the only one who valued his Haward as a playing instrument. Perhaps this is a reflection of the change in musical taste – away from yesterday's viscid, thick-textures in favour of today's lucid clarity of line. But Hipkins and Dale, both at the early instrument forefront, found early keyboard instruments, although visually exciting, aurally unfulfilling. Hipkins in 1885, at a lecture held at the International Inventions Exhibition said, "obsolete keyboard instruments at their best have little fetching power...their evanescent tone and its small energy tell against them". Dale, at his 1888 Hampshire Literary and Philosophical Society presentation played three of his instruments only after "warning" his audience that "the tone of these instruments was rather weak and feeble" and "the people who heard them would be able to form an exact idea of what sort of instrument Pepys had in 1668 to help and confirm him in his musical notions which he hoped would come to some good. Any feeling of commiseration they might have with their ancestors who played these instruments would be entirely thrown away as they were satisfied with what they had to play upon for the same reason that they did not want to send messages by telephone nor to ride in express trains".

The order, here, of the five Haward spinets of the 1680s is, essentially, chronological. **1689,** prior to its rebuilding and redating is clearly the earliest and **c.1685** and **1687,** exemplify an updated design. Because it falls out of the series and because it is being given inordinate attention, **16XX** is last.

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[80] The sale date was 10 March 2008. The auction was described and the instrument discussed in an article, "Bonhams sells earliest surviving English spinet" in *The Gramophone* 11 March 2008.

[81] Bonhams – 2009 (Google).

CHAPTER 10 THE HAWARD SPINETS

Summary

Salient traits of all six Haward spinets are shown under three headings: the case, the interior, and the keyboard. Two tables list the most important descriptive observations and measurement data found in Appendix B.

The six can be divided into two major groups: four 'Preliminary' and two 'Successive'. The preliminary can be further sub-divided: the 'Cognate' pair: **1683 – 1684**; the 'Reinscribed' **1689**; and the 'Progenitor' **16XX.** Characteristics of both major groups are separately described.

Major singularities of each of the six are described, each one adding to our understanding of the entire group.

Two fundamental considerations are described that have bearing on the Haward spinets – particularly spinet **16XX:** plucking points and C2-equivalent string lengths. String graphing is shown on semi-log plus c2-equivalent grids for five of the Hawards. C2-equivalent graphing is described in greater detail in a later chapter in section 3.

A very early Keene spinet with a particularly important relationship to Charles Haward's spinets is pictured and described. Its linkage to both Haward's preliminary and successive spinets is examined in detail.

The Haward Spinets – Text

A. Haward Salient Points

Salient traits for all six Haward spinets are listed here under three headings: the case, the interior, and the keyboard. These three listings should be regarded as a selective extraction from the material found in Appendixes A and B. Appendix A contains 150 pictures along with explanatory notes for each of the Haward spinets and Appendix B consists of detailed measurement data. In the three listings, design attributes (visible characteristics derived from Appendix A) head each listing and numerical attributes (measurements abstracted from Appendix B) follow.

Similar but more abbreviated examinations of Player and Keene spinets of a standard design can be found in Section 3. It is important to keep in mind that there is a chronological disparity: The surviving Player and Keene spinets are predominantly those of their mature, standardized design years beginning about 1690 and continuing for close to two decades. In contrast, all of the six Hawards were made before 1690, and four were made in the short four-year span, 1683 – 87.[82] In addition, only two late Hawards can be regarded as spinets of a mature design that can be related to the standard Players and Keenes described in Section 3.

Since these listed Haward characteristics are shared by all, or nearly all, of the six, they could prove useful in the future for possible identification of any newly discovered unlabelled spinet thought to be by Haward.

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[82] In Section 1, Chapter 7, I assigned introductory spinet-making dates: Haward 1679-80, Player 1680-81, Keene 1683-85. Given the low survival rates of all spinets of these makers (see Chapter 6) the earliest surviving spinets of Player and Keene could be expected to be even lower than their overall low survival averages. This was not only because of their experimental designs, but more specifically, because their more limited ranges would have lessened their later desirability.

THE CASE – Design Attributions:

1. Bentside: 1-piece, ogival (compound) curved.
2. LH Tail: Truncated, rear-facing.
3. Maximum length greater than spine length.
4. LH / RH faces: both broad, asymmetrical in breadth.
5. Lid: three boards pieced.
6. Keyboard cover: 1-piece.
7. Case wood: European walnut – thin, but solid, not veneered.
8. Case sides: horizontal grain.
9. Exposed nail-heads on all vertical butt-joints.
10. No vertical nail-hiding moulding at rear of sides.
11. 'Bottom-first' construction.
12. Visible cross-grain plane marks – case and lid (one exception).
13. Long, straight total face length (LH face, face board, RH face).
14. Case height: moderately tall.
15. Spine: A single, unpieced board.

THE CASE – Numerical Attributions:

1. LH Faces: 5-5/8" – 6-1/2" (137-165).
2. RH Faces: 3-5/8" – 4-1/8" (92-105).
3. Total face widths: 40"- 41-3/4" (1016-1060).
4. Case heights: 7-3/16" – 7-1/2" (183-191) (one exception).
5. Spine lengths to max. lengths: 88% to 95%.

THE INTERIOR – Design Attributions:

1. Inscription: 'Carolus' (Latin for Charles) always used.
2. Inscription: dates on four, 'Fecit' on four, 'Londini' found only on the 1683 harpsichord.
3. Soundboard: grain is parallel to the spine in the usual harpsichord manner.
4. Soundboard: two pieced boards – close-grained in the treble, wide-grained towards the spine.
5. Soundboard: continuous, unpieced – continues past the jacks and wrestpins.
6. Soundboard: four to five ribs slightly fanned, all parallel to, and to the left of the bridge. The second visible through the rose.
7. Rose: centred in soundboard, Gothic design, two tan colours: parchment and wood. Never gilded. Supported by the second soundboard rib.
8. Bridge: cane shaped. Always straight towards the bass. never curved (one is mitred).

9. Bridge and nut: always crested with a brass wire at the top – dulcimer-fashion. Wire held in place with strings – no staples.
10. Nut: mitred for the last three bass notes, parallel to the LH tail.
11. Registers: divided, 2-piece. Leather-covered, suggestive of 18thC French harpsichords. Upper, a soundboard extension.
12. Interior woods: veneered.
13. Wrestpins: arrayed in a straight line – not staggered. Lower four parallel to the LH tail.
14. Jackrail: horizontally removeable to the rear on the left side.
15. Key blocks: width of a natural key. Flat-topped (one exception).
16. No decorative Italian-type cheek pieces.
17. Wrestplanks: beech, or a beech-like wood.
18. Key lever pivot rails: oak.

THE INTERIOR – Numerical Attributions:

1. Bass strings at a slight angle (c.1-3 degrees) to the spine (2 exceptions).
2. C2 string length: 11-1/8" – 11-1/2" (282-294)) (one exception).
3. Maximum c2-equivalent length: 11.8" – 12.9" (300-343) (one exception).
4. C2 plucking point: 22% – 26% (one exception).
5. Wrestplank height: 1-3/4" – 1-7/8" (44-48).

THE KEYBOARD – Design Attributions:

1. Key Levers: unequal width, wide 'D's, narrow sharps.
2. Key lever distal ends: wooden tongues for slitted wood-rack insertion.
3. Key lever marking: numbered. No Keene-type diagonal scribed top line.
4. Bass note: one key below C: GG/BB.
5. Broken bass octave: used by 1687. A single split sharp as on the 1700 Tisseran harpsichord.
6. Top note: raised from c3 to d3 by 1683.
7. Naturals: ebony (1 exception). Never pieced.
8. Naturals: two scribed lines plus the break.
9. Naturals: unfinished, saw-cut fronts (1 exception).
10. Sharps: tapered. Never ivory-topped.

THE KEYBOARD – Numerical Attributions:

1. Octave spans: wide (early) c.6-1/2" (c.495+)
2. Key lever widths: 'D's 5/8" (16), 'C's 9/16" (14), Sharps 7/16" (11).
3. Key lever lengths: middle 'c': 11-3/4" – 12" (298-305).
4. Sharps: tapered (front to back) 1/8" (3).
5. Natural touch plates: 7/8" across x 1-1/4" deep (22x32).

B. Haward Spinets: Four Early – Two Late

Haward's spinets fall into two distinct groups. The first might well be described as 'Preliminary': Spinets **1683**, **1684**, **1689,** and **16XX**. The second might best be described as 'Successive': Spinets **c.1685** and **1687**.

As noted, since Player and Keene (together with Keene's apprentices) made spinets well into the first decade of the 18th century, almost all of their surviving instruments can be described as standard in their design. In the case of Charles Haward, who died in 1689, however, there are just the two late extant spinets – too few to be classed as 'standard', or even 'mature' – terms that would be appropriate if more had survived.[83] Consequently, characteristics of the standard Player and Keene spinets found in section 3 should fairly be compared only with these two successive Hawards and not with his preliminary group.

Haward's preliminary group of four spinets can be further divided into three with the cognate pair: **1683** and **1684** forming one sub-division, spinet **1689** another, and **16XX** a third. The table in this chapter listing twelve characteristics of each of the spinets, shows the rationale for this second breakdown. Note the similarity of spinets **1683** and **1684** as well as **c.1685** and **1687**.

There are major case-length differences between spinets in the two major groups. Design differences, however, although tonally of small importance, are visually prominent. Some of the most noteworthy are:

[83] As noted elsewhere, there is no evidence that Haward's successive design predated 1687 and it would have terminated at his death in 1689.

THE FOUR PRELIMINARY SPINETS:

1. Lid and keyboard cover: flush with sides – arcuate edge.
2. Vertical case joints – all four joints butted.
3. Exterior wood – entirely walnut.
4. Square decorative washers – found.
5. Hinges – solid. Unpieced, pointed ends.
6. Faceboard – cedar, inscribed, no marquetry.
7. Case cap moulding – flat, moulded edge.
8. Jackrail – two moulded edges, no inscription.
9. Jackrail LH support – plain, minimal size.
10. Sharps – solid ivory blocks.
11. Keyfronts – parchment, triple-arcade design.
12. Soundboard – ink decorated (1 exception).
13. Soundboard rose surround – bevelled (1 exception).

THE TWO SUCCESSIVE SPINETS:

1. Lid and KB cover – overhanging with applied moulding.
2. Vertical case joints – two front, mitred.
3. Exterior wood – walnut, rosewood trim.
4. Square decorative washers – not found.
5. Hinges – pierced, square outline.
1. Faceboard – rosewood, marquetry panel, no inscription.
2. Case cap moulding – arcuate shape.
3. Jackrail – no moulded edges, boxwood inscribed panel.
4. Jackrail LH support – wide, elaborate shape.
5. Sharps – skunktail, white-black-white.
6. Key fronts – wood, semi-circle design.
7. Soundboard – no ink decoration.
8. Soundboard rose surround – arcuate rim, incised line.

C. Major Singularities of Each Haward Spinet

Two charts list some of the most significant features and measurements of each Haward spinet, abstracted from Appendixes A and B.

	1683	1684	c.1685	1687	1689	16XX

Key Count	52	52	53	53	51	50
Bass Octave	Short	Short	Broken	Broken	Broken	Short
Top Note	D	D	D	D	C	C
Rack Rail		[redacted]			X	[redacted]
Front Rail		X	[redacted]	[redacted]	[redacted]	[redacted]
Sharps	Ivory	Ivory	Skunk Tail	Skunk Tail	Ivory	Ivory
Naturals	Ebony	Ebony	Ebony	Ebony	Ebony	Snake Wood
Key Fronts	Parchment		Wood	Wood	Parchment	Parchment
Dated	[redacted]	[redacted]	X	[redacted]	[redacted]	X
"Fecit"	X	X	X	[redacted]	[redacted]	[redacted]
Marquetry	X	X	[redacted]	[redacted]	X	X
Inscription	Face Board	Face Board	Side Rail	Side Rail	Face Board	Face Board
Key Block	Flat	Flat	Flat	Flat	Corbel	Flat
Square Decor Washers	3	3	X	X	0(1)	5(3?)
Hardware	Brass	Brass	Brass	Brass	Brass	Iron
Bridge-Nut Wires	Both	Both	Both		Both	Both
Hitch Pin Rail Wire	X	X	X		X	[redacted]
Bridge-Nut Wood	Walnut	Walnut	Walnut		Walnut	Walnut
Pivot Rail Wood	Oak	Oak	Oak	Oak	Oak	Oak
Nut Shape	Mitered	Mitered	Straight		Straight	Mitered

GG/BB Length	48.2	50.1	54.1		48.1	49.4
Case Height		7.5	7.2	7.2	7.4	7.0
KB/Spine Angle	17°	17°	20°	20°	16°	17°
Bass String/ Spine Angle						
Key Lever Numbers		Top	Side	Top	Top	Top
C2 Length (L/S)	11.1 S	11.2 S	11.6 S		11.5 S	10.8 S
C2 PP %	24%	25%			26%	22%

Table 10.1 Features of the Haward Spinets.

HAWARD SPINET MEASUREMENTS

Six Hawards	KB Spine Angle	Max. Length	Spine Length	# Keys	Top Note	Split D#	C2 Length	C2 PP	CC Length	CC PP	Octave Span	Standard Measure 3 Octave Span
		58-3/8	53-1/4				10-3/4		48-1/2			
16XX	17°			50	C	X		21-1/2%		13-1/2%	6.5	495
		1483	1353				273		1231			
		57-1/2	50-1/2				11-3/8		48			
1689	16°			51	C	[redacted]		26%		12%	6.4	489
		1411	1283				289		1218			
		60	53-1/4				11-1/8		46-3/4			
1683	17°			52	D	X		24%		11%	6.54	498
		1524	1353				282		1187			
		60-3/8	54-5/8				11-1/4		48-3/4			
1684	17°			52	D	X		25%		11%	6.54	498
		1534	1387				287		1228			
		65-3/4	62-3/8				11-9/16		54-1/16			
c.1685	20°			53	D	[redacted]		24%			6.4	489
		1670	1584				294		1373			
		62	57-1/4									

1687	20°		53	D	[redacted]	6.45	492
		1575	1454				

Table 10.2. Haward Spinet Measurements.

The descriptions that follow have a two-fold intent: first, to describe some of each spinet's singularities – the traits that characterize each one; and second, to allow us to focus on those traits that contribute to our understanding of the group. The order of the six spinets in this sub-chapter is based, broadly, on their increasing descriptive complexity. The early cognate pair, **1693** and **1694**; then the early restored, reinscribed, and re-dated **1689**; and finally, the non-dated **16XX**, the Haward progenitor.

In many ways **16XX** is the most unusual of the Hawards. A large number of its singularities point to both an exceptionally early date and a level of craftsmanship not found on any of the others. Evidence for these two conclusions is presented in the following chapter, which is devoted to this spinet. There are three aberrant traits about **16XX**, however, neither time nor skill related, that are described here: The hitchpin rail (HPR) crest wire, the jackrail, and the keyfront-to-fulcrum distance. These three anomalies follow a brief description of this spinet that corresponds to the descriptions for each of the other five.

Three considerations fundamental to the overall design of a spinet are included here. They are plucking points, c2 treble string lengths, and design notes – together, forming a sub-chapter.

An examination of an important Keene spinet that would appear to be a link to Haward's two major periods follows and concludes this chapter.

CAROLUS HAWARD Fecit 1683

Inscribed in black ink on the cedar-veneered faceboard, the 'C', 'H', and 'F' are highly decorated. The date is highly stylized: the '6' with a gigantic circle, the '8' and '3', both flat-crested. The inscription resembles that on **16XX** but with less careful letter spacing.

This 52-note spinet is, I believe, England's earliest dated, extent spinet. It is the earliest Haward with a d3 top note and confirms Charles Haward was terminating at least some of his spinets with this note at, or perhaps even before, this year. Its original trestle is, likewise, important because it is a specifically dated example of a spiral-turned form with a box-like top and a low-mounted decorative double-Y stretcher that can be tied to other undated pieces of period English furniture. Spinet **1683** is one of just two Hawards with original trestles. Its brass, chrysanthemum-shaped lockplate may be an early spinet form. Today, there may be no other surviving examples – at least, on spinets. Its parchment key fronts are more elaborate than those on **16XX** and **1689** with decorated spandrels and blackened raised borders on their gold grounds. Its fixed lock batten is original and its brass nut and bridge crest wires may be original, as those on **16XX** are believed to be.

Although the rose has been replaced, the remains of the original should be inside its case, assuming the soundboard was never removed. Its replacement was evidently attached from below, but above the second soundboard rib, which could imply a soundboard removal at some point, however. An 1886 restoration by a pioneer collector and organologist, T W Taphouse, is documented on the wrestplank. This spinet shows evidence of substantial, yet careful, past use. It is the most original of the six Hawards. Today, it is in playing – or, near-playing – condition.

Spinet **1683** is unique among the six in having a highly unusual three-ribbed design moulding profile that is used exclusively in this case. This particular design can be found on a short, surviving fragment of moulding at the right of the wrestplank of the 1622 Knole harpsichord.

CAROLUS HAWARD 1684

Inscribed in gold on the cedar-veneered faceboard. 'Fecit' is omitted, leaving an unexplained gap between 'Haward' and the date. The inscribed letters resemble those on **16XX** and **1683** but are severely worn.

This 52-note spinet, closely related to **1683**, is, today, in very dissimilar condition. This is surprising. It was presumably never out of the Metropolitan Museum, where it is today, for close to 150 years except, perhaps, for a reported restoration in New York City in 1909. The extent of that restoration is conjectural. Given the condition of the jacks, it cannot have then been restored to playing condition.

Eight of the jacks had to have been made by Charles Haward. The evidence for this is the style of numbering found on these jacks which corresponds to the numbering style found on Charles Haward's key levers. The survival of these jacks is valuable: Their inconsistent, crude workmanship explains why five of the six Hawards now have replacement jacks. Nevertheless, when new, they had to have functioned – somehow. There are photographs of some of these jacks in Appendix A.

Several individuals have measured the lengths and angles of this spinet in the past and they have all come up with slightly different results. In testing them, I have found that none have closed. By blowing up top-down photographs to a half scale, measuring a keyboard / spine angle of 17 degrees, a spine length of 54-5/8" (1387) and ten other lengths and angles, I have been able to close the case. If I had personally measured this spinet, my measurements would have added an additional set with a result that was no more accurate than those that went before. I have found that more careful measurement can be done on paper than by using a tape measure on the instruments, themselves.

Since **1684** was made just a year later than **1683**, it would be expected to share many measurements. However, it does not. There is no lineal dimension that agrees and only a minority of angles correspond. One wonders how Charles Haward laid out spinet **1683** before he began to make it and then, why he would alter his template when he made **1684** the following year. These two spinets, as expected, however, are visually and dimensionally more alike than either is to spinet **1689**.

Since the rose on this spinet is identical to the rose in **1689**, the original rose in **1683** would, more than likely, have shared this design. The soundboard embellishment, reported to be in blue ink, was clearly decorated by the same artist as **16XX** and **1683**. Unlike those, however, it is nearly invisible owing to the soundboard's surface condition. Although there is no lock on this spinet, an apparent economy measure, the spine is reported to be veneered in walnut (probably original) and the faceboard inscription is lettered in gold. As mentioned, the clear key lever numbers, which had to be inscribed by Charles Haward, tie eight of the surviving jacks to him owing to their identical writing style. They confirm that the key levers, although not made by him, were, nevertheless, numbered by him before he finished that instrument.

Carolus : : Haward : : (Spinet c.1685)

Inscribed without 'Fecit' and without a date, the name only is inscribed in black ink on a vertical-sided boxwood plaque set into the front side of the jackrail. This is the simplest of the six Haward inscriptions. The 'C' and 'H' are moderately decorated. The remaining letters are large,

but lower case. Two curious sets of double-dots are within and follow the inscripted name. This plaque has been trimmed at the top to fit the vertical space on the jackrail.

This undated 53-note spinet is one of an extant pair I refer to as 'successive'. There is no reason to believe it pre-dates the similar, but dated, spinet **1687**, however. In fact, owing to its greater length and less-acutely-angled LH tail, it could be the later of the two. But because of Charles Haward's dimensional inconsistencies, found on his earlier spinets, no exact dating determinations should be drawn. We can only conclude; it is unlikely to be as early as 1684 and it cannot post-date 1689. I am referring to it as **c.1685** because this is the date-estimate assigned to it by a restorer, but I would lean towards an estimated date a couple of years later.

Spinet **c.1685** is particularly opulent. It shows an extensive use of rosewood, not only for its case-capping and interior moulding, but on its uninscribed, marquetried faceboard. Together with **1687**, it has a number of features that, based on surviving Keenes, we would expect to find 15 or 20 years later. Some of these are: a marque 'faceboard plaque with astragal (i.e., Palladian-shaped) sides suggestive of those on coeval clock trunks: square profile hinges and lockplates – the hinges pierced; the lockplates scallop-edged; lids and keyboard-covers that overhang the case edges with applied mouldings on the lids; skunktail sharp keys rather than ivory blocks; wood, not parchment, key fronts with semi-circular cut-outs. This style of a sharp and keyfront became popular a generation later.

Its original trestle, replaced in the 20th century, would have been spiral-turned as on **1683**, but probably with a higher, more centrally located stretcher.[84] While not currently in playing order, it was restored in the 1970s and, like **1683**, it is in clean condition and it is markedly original.

Carolus : : Haward : : Fecit : : 1687 : :

Inscribed in brown ink on a boxwood plaque with pointed sides set into the front of the jackrail as on **c.1685,** the letters on the name are identical to those on **c.1685**, but the lower- case letters in 'fecit' are small. The date numbers are conventional. The curious dotting conforms to that on **c.1685**. The plaque appears to have been trimmed along the bottom to enable it to fit the height of the jackrail.

Although this 53-note spinet has been entirely reconstructed internally, it is, nevertheless, indispensable to our understanding of Charles Haward's 'successive' instrument design-style. Spinet **1687** authenticates **c.1685** in every important way and it assigns a specific date to all of its advanced features. In the absence of this spinet, many of **c.1685**'s characteristics could be assumed to be updates from an early 18th century restoration. Despite its ogival bentside, its rose, and its aligned wrestpins, **c.1685**'s Haward origin might even be questioned, based on its dissimilarity to his earlier four.

This instrument was gutted and then internally rebuilt – probably in the beginning of the 20th century. According to university records, it was also damaged in a storage warehouse in 1967. Its restoration, then, is reported to have included a part of the lid, the "decorative board", and the soundboard. University records also claim that the wrestplank was replaced and its replacement was oak. If so, its replacement was probably correct, although this would have required a total disassembly of the instrument. I believe parts of this report are less than totally reliable, however, particularly with regards to its wood identification.

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[84] The replacement composite trestle with its original finish has to have been substituted for the original after the time the case was refinished – perhaps a century ago.

Carolus Haward fecit 1689

Inscribed (almost illegibly) in black ink on the cedar-veneered faceboard, the inscription style is identical to that on **c.1685** and **1687**, Haward's 'successive' pair, but without the dotting. The four inscripted blocks are tightly bunched creating broad LH and RH margins.

The 1689 date on the faceboard of this, evidently early, 51-note spinet would be the date of its restoration. This date is the year of Charles Haward's death. Because of its short case length, its particularly crude construction, and its terminal note of c3, it would seem at first glance to be a very early Charles Haward spinet – made, perhaps, as early as 1679-80 and conceivably even before. Alone of all early surviving spinets, it lacks a lower moulding to hide the nails attaching the sides to the base board. It has no lock. There is evidence of only a single square decorative washer (now missing). Its parchment key fronts share the simple, unembellished design of spinet **16XX.** Its prominent cross-grain plane marks suggest that no attempt was made to dress these on any of its boards. The sole early-origin caveat is its broken lower octave – Haward's single split D-sharp – not found on the far grander spinets, **1683** and **1684**.[85]

If the reason for the activity in 1689 was to add this key, then everything would fall neatly into place: This spinet, in an original 50-note form would then clearly pre-date all other Charles Haward's in his spinet-production period of the 1680s, and it could, perhaps, be accepted as England's earliest surviving production-period spinet. The problem is this: Evidence shows that this spinet always had this additional key. Since close inspection of the key lever tops shows wood in the D-sharp area is identical to wood in the other keys, the entire keyboard would have had to have taken place, the simple, early key fronts notwithstanding. The Keene-type corbel keyboard blocks suggest this as does the narrower octave span, shared with spinets **c.1685** and **1687**. Finally, there is no evidence of any later work to expand the rack or the pivot rail. However, when restoring this spinet, Miles Hellon found two sets of holes – an identical number of 51 for each set. He has shown the locations of every one in his drawing.[86]

Extending the treble from c3 to d3 would have been difficult on any Keene or Haward[87] and this extension was not attempted here. However, by 1689, every new spinet would be expected to have the two additional treble notes for some of the music being composed then would have required it, and all other Haward spinets, from 1683 on, ascend to d3.

Despite the date now on this spinet, it appears it was repaired, and not really updated in 1689. The following two lists record what I believe was replaced and retained that year:

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[85] The 1700-date Tisseran harpsichord also has this curious single-key split. Why the D# rather than the marginally more useful C#.

[86] When Haward removed his 1-piece soundboard cover plate and replaced it with another, he had to create a new set of holes, drilling through the unmarked board. His second set was located perilously close to his original set and came close to creating 'figure-8' hole problems. Why did he not use his discarded board as a template or split his new board as the restorer of **1687** did, or at least, plug the original holes? Hellon had to repair a crack in the wrestplank; these un-staggered, aligned holes could possibly explain why.

[87] But not on a Player, owing to Player's wide key blocks.

Replaced in 1689:

1. The entire soundboard / coverboard – the new board undecorated and an arcuate rim with an incised line surrounding the rose – as on **c.1685**.
2. Re-drilled holes in the wrestplank.
3. Keene-style, corbel-shaped key blocks.
4. An arcuate case-top moulding (like **c.1685** and **1687**).
5. A straight, un-mitred nut (like **c.1685**).
6. A re-engraved faceboard (same style as **c.1685** and **1687**).

Retained – Although somewhat outdated:

1. The soundboard barring (probably).
2. The 51-note keyboard (to c3).
3. The lid edge flush with the case sides.
4. An absence of a lock (like **1684**).
5. The plain cedar faceboard.
6. The rose (identical to **1684**).
7. The simple parchment key fronts.

This spinet, only discovered in the late 20th century, has been examined thoroughly. When it was apart, it was photographed (see the photographs in Appendix A). Miles Hellon made accurate, detailed drawings of all parts of this spinet and, using these drawings as templates, at least one copy has been made of it.

CAROLVS HAWARD Fecit (spinet 16XX)

Inscribed in black ink on the cedar-veneered faceboard, the three blocks are widely and evenly spaced. The lettering style resembles that on the cognate pair, but the letters are more evenly spaced. The faceboard shows two very visible guidelines 5/8 inches (16) apart as on **1683** and **1684**.

Superficially, this 50-note spinet has much in common with the two cognate spinets. These are some of their shared attributes:

1. The lid, flush with the case sides.
2. A cedar inscribed faceboard.
3. The inscription executed by the same artist.
4. Square, decorative case-side washers.
5. A cedar interior.
6. A two-piece soundboard with narrower growth rings in the treble than in the bass (for greater stiffness).
7. The soundboard decorated by the same artist.
8. The nut, mitred in the bass.
9. The bridge, straight, unmitred and cane-shaped.

10. Black walnut bridge, nut, HPR, and internal moulding.

11. A wire-crested bridge and nut.

12. A 'short' (unbroken) bass octave.

Many of these characteristics are shared, also, with spinet **1689**. In addition, we could add the gold parchment key fronts of a simple design found just on these two Hawards. Nevertheless, as it will be shown in the next chapter, **16XX** is not coeval with any other Haward spinet.

Three relatively minor features of this spinet, not time-related, follow:

Hitchpin Rail Wire: On all Haward instruments, there is a brass crest wire, or a groove for one, on the tops of both the bridges and nuts.[88] In common only with the **1683** Haward harpsichord, though, there is a similar wire made of iron on **16XX**, secured with iron staples, on the HPR, as well. Since it runs slightly below the end-wrapping of the wires, it would seem to perform no obvious function. On the bridge and nut, there might be justification for crest-wires, if they were to assure clean and precise termination points at both vibratory ends. But since these wires on Hawards have been found to be located on the over-draught portion of the strings, this function would have to be ruled out. Although undoubtedly not originally intended, a crest wire could straddle a later break in the bridge, postponing the date of its repair.

The Jackrail in **16XX**, richly decorated in burl (burr) elm (ulmus hollandica), is the only one of the Haward four surviving jackrails to have been embellished in any manner. Although William Dale, the spinet's first known recent owner, believed it had been replaced, it is clearly original. The elm veneer is particularly thick, shows expected early patination as well as several large shrinkage cracks. It also has edge moulding such as found on Haward's other jackrails.[89]

Pivot Point location: In spinet **16XX**, there is an unexplained greater distance between the key fronts and the pivot points in the treble than in the bass.[90] This may seem like a very minor point, but it is not only contrary to the other Hawards but to all other spinets I am aware of. The expected front-to-fulcrum lengths of spinets, generally, is sometimes equal, but more commonly, a little less in the treble than in the bass.

D. Three Fundamental Considerations

PLUCKING POINTS: On a plucked string instrument, the plucking point percentage is, perhaps, the most important determinant of its tonal character. This is particularly the case in the instrument's octave-and-a-half above middle-C (MC). The closer the plucking point is to a string's mid-point, the greater the suppression of its overtones, generally. At the top c3 of any treble, however, the plucking point has little audible effect. But at an octave down, at c2, the plucking point's position can define an instrument's distinctive ethos. The guitar-like overtone-suppressing trebles of so many late spinets, results from this convergence of their plucking

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[88] Such a wire can also be found on the bridges and nuts of 19th century dulcimers.

[89] One could argue this jackrail performs an interesting visual function. If the heart of a Haward spinet could be considered to be its soundboard rose, this fulgent jackrail, nevertheless, assigns a subsidiary role to the location where its sound has its origin – the actuation points of its string vibrations.

[90] Treble – 4 inches. Bass – 3-3/4 inches.

points towards the string's mid-point at about c2.[91] The earliest spinets, however, tend to have treble plucking points closer to the nut.[92]

The chart, listing plucking points of four Haward spinets shows an interesting contrast between three dated spinets and **16XX**. While there is a four-spinet similarity in the tenor range – the octave and a half just below MC, **16XX**'s plucking point is noticeably closer to the nut in the top half of the instrument and at the bottom C. The expected effect might be a low bass with less fundamental but a slightly brighter, although possibly thinner, treble.[93] We can conclude that in its plucking points, as in other characteristics described in this and the following chapter, **16XX** stands apart from the group of Charles Haward spinets made in the 1680s. Differences, particularly in the high treble and the low bass, are noteworthy.

In addition to a plucking point's tonal consideration, there is a tactile one: There should be a degree of consistency across the keyboard when the plectra is pulled and then released with strings of varying lengths and diameters. This is one reason for a bass string typically plucked at about an eighth of its length whereas the top string will be plucked close to its mid-point. In the case of spinet **16XX**, the overall length of its low C is about nine times the length of its top c3; yet, its actual nut-to-plectra distance is only about four times as great. With a spinet's, or harpsichord's relatively uniform keyfront-to-pivot distance and the need for key-depth uniformity, tactile consistency has to come almost entirely from the plucking position.

On this chart, the Grove – RCM spinet, described in this chapter, has a markedly close plucking point throughout the instrument. It is undoubtedly the closest of any extant Keene, and, perhaps, any other known spinet. Its plucking point of eleven percent at c2 can be compared to a Shudi and later, Shudi-Broadwood harpsichord lute plucking point of 8 – 11 percent at the c2 pitch.[94] On a harpsichord, a lute stop has an oboe-like overtone-rich sound quality that this Keene could share, albeit at the expense of a rounder, more resonant treble.

PLUCKING POINT PERCENTS

	GG/BB	C	F	C	F	MC	f1	C2	f	c3	d3
1683	9.3	10.9	14.6	14.3	16.0	15.9	20.7	24.3	33.0	34.0	34.6
1684	10.4	11.0	12.0	12.2	14.7	16.0	20.4	24.7	32.6	39.3	41.0
1689		12.0		12.3		17.2		26.0		41.0	--
16XX	12.2	13.5	13.0	13.05	14.1	15.0	18.7	21.5	27.9	26.5	--

[91] The c2 plucking point of a 1785 Longman & Broderip (Culliford make) spinet of the author's with a clarinet-like treble sound is 49% at c2. A c.1795 Rouchead spinet of his is 44% at c2.

[92] A particularly interesting graph showing the plucking points of five early spinets and a virginal can be seen in Mole (2009:310).

[93] The overly precise values noted here, to a tenth of a percent, for computational correctness, are practically unwarranted. The tonal difference of a full percent or so on either side of any value would not be noticed. Because of this, spinets, with their alternating string lengths and plucking positions show no audible incongruity.

[94] With Kirkmans, the lute at c2 is 7 percent.

Grove-RCM Keene	9.0	10.2	8.7	7.0	8.1	9.8	13.0	11.3	22.5	28.3	28.2
1750 Kirkman Spinet	12.5	12.3	12.2	12.6	13.6	15.6	20.1	25.6	30.3	38.3	41.0

Table 10.3. The Haward, Grove-RCM , and/ Kirkman Plucking Point Percents.

The Kirkman spinet of the author's is included here as a possible standard. The graph shows that its various plucking points were found to be located, essentially, between the front- and back-8's of harpsichords by Kirkman (and earlier Shudis), and this Kirkman is much like them in its tonal quality. Up to MC, its plucking positions, surprisingly, seem to correspond with those on **16XX,** but above this point they just as surprisingly seem to correspond with those on the three dated **Hawards**.

Haward Design Note:

In laying out an instrument, a maker must start somewhere with his initial design note – his string-length starting point. It should be possible, using these graphs, or a table of lengths, to determine this note for each Haward spinet. Unfortunately, the evidence for each of the Hawards is unclear. Since **16XX** and **1689** share a length measurement near the top of the treble, we might infer a common design note. But it is at b2 and not the adjacent c3 and it is fractionally greater than six inches (156). The actual length of c3 on **c.1685** is just under six inches (152), but this is the same length as d3, two notes higher, on **1684.** These two spinets have radically different string progressions. Logically, each spinet should have not only a single, recognizable design note, but also a paired note at an octave, exactly half or double its length. But this is seldom found on spinets and not seen on any of these Hawards.

Haward C2 – Equivalent String Lengths:

JUSTIFICATION: Section 3, Chapter 14, introduces and describes a new method of string graphing. By substituting comparative or equivalent string lengths for actual length measurements, this chapter explains how data can be graphed arithmetically along broadly and evenly-spaced horizontal lines rather than on the narrow, diagonal lines, unevenly spaced, of conventional semi-log graphing. This substitution is particularly important for spinets. Because of their acutely-angled high trebles, spinets are difficult for their makers to lay out accurately, typically creating unexpected, anomalous treble string lengths. Spinets also have length-alternating strings and their important 'C's can be either one of the short or the long strings. None of these two potential problems may be apparent on semi-log graphing, but they will clearly show up on an arithmetic equivalent-length grid.

THE GRAPHS: On the c2 – equivalent graphs, if it were not for **1684**, the string length pattern could be explained: **1683, 1689,** and **c.1685** form a group and the stringing on **16XX** is, essentially, parallel with them, but with shorter lengths (except for its c3). The disparity of **1684**, though, is hard to explain: this spinet has its original soundboard and bridge. Stringing swelling is as great on **16XX** as on **1683**, **1689** and **c.1685**, but there is a noticeably less note-to-note irregularity. This suggests a similar method of forming and positioning of the bridge, but a more precise placement of the pins. Since ten of its strings are equal to or above eleven inches (279), it cannot be strung entirely in yellow (70/30) brass and tuned to A=440c/s. At 11.6 inches (295), the top b2 would break, even if tuned to A=415c/s. Also, since six notes are at or close to 11-1/4 inches (286), tuning even to A=415c/s would be precarious on any of these notes.

Stringing graphs for the five Haward spinets with their original layouts follow. Five graphs show all measured strings for each of the five with conventional semi-log formats. By this method, actual lengths can be read off. Five comparative graphs show the calculated c2-equivalent lengths for the treble strings of each spinet. Long and short strings are separated on paired lines. Note that all Haward 'C's are among the short strings of the pairs as they are in all spinets ending in c3 or d3 where the top jack is within the top gap. Highlighted by this revised method of graphing, both the stringing irregularity and the swelling of each line, here, may appear extreme, but for spinets it is not: many spinets show even greater string-to-string

irregularity and such swelling (although with less irregularity) can typically be found on harpsichords and pianos.

A single graph shows the bass-half of spinet **16XX**. Notice that as string lengths increase, the differences between adjacent long and short strings become less significant. Also, note the short equivalent lengths of the lowest string. On spinet **16XX**, for example, if tuned to BB, it would be 5.83 inches (14.8); whereas, if tuned correctly to GG, it is reduced to just 4.62 inches (11.7).

The final two graphs show an overlay of all the five Hawards – the long and short strings on separate graphs.

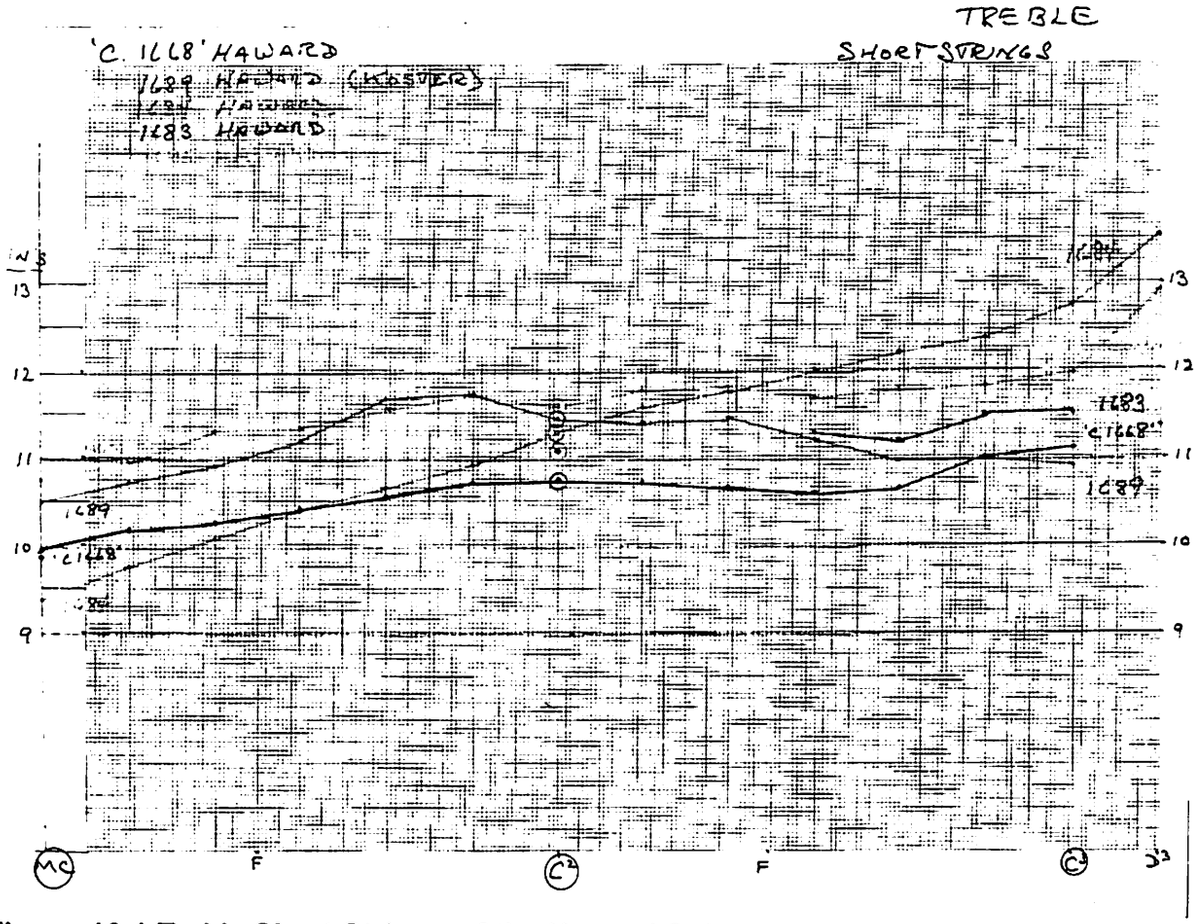

Figure 10.1 Treble Short Strings of the Haward Spinets.

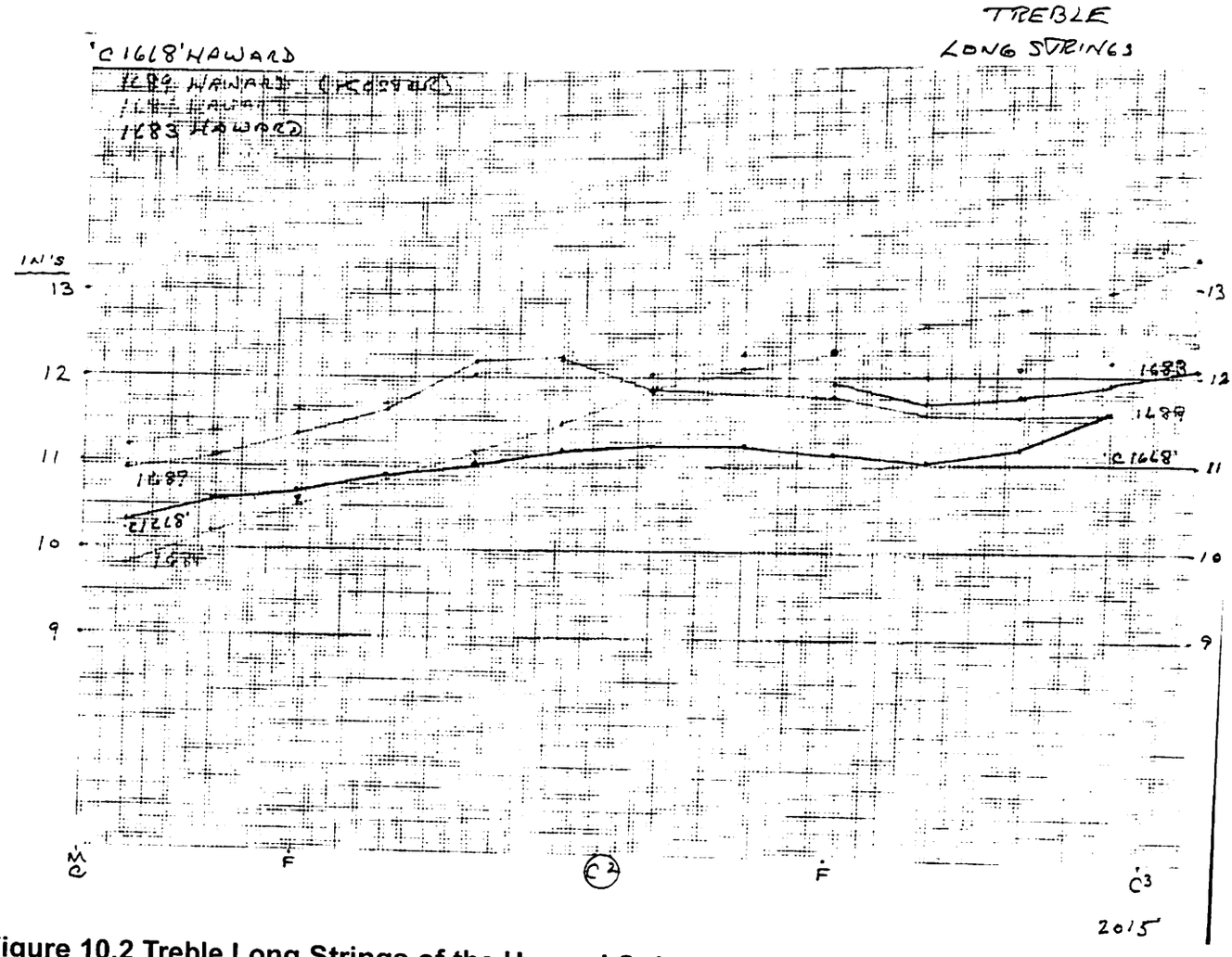

Figure 10.2 Treble Long Strings of the Haward Spinets.

E. The Grove – RCM Keene – Its Connection to Haward

This historically important Keene spinet was bought about 1842 by Sir George Grove, who had it restored by "Old Edwards, the Tuner". It was an early purchase and restoration in England of an antique plucked keyboard instrument. This spinet was restored again by A J Hipkins in 1882 and more recently by John Barnes. The drawing shown, appearing in the first edition of Grove's Music Dictionary under 'Virginal' (v.4 pp304-305), with its located ribbing must have been made by "Old Edwards The Tuner" owing to its well-delineated soundboard barring. According to Sir George Grove, Old Edwards restored it for him in the early 1840's. This spinet is pictured and described in Morris (1986:46-48), Martin (2003:229-232), and Mole (2009:V129-135). There are existing restorer's notes by John Barnes (1975) and it is in RCM's *Museum of Instruments* catalogue Part II (RCM 179, Elizabeth Wells, Editor). In BM3, it was assigned the number '1700A'. Despite this late date estimate in Boalch, the museum catalogue refers to it more realistically, though less conservatively as 'late 17th century'. The initials 'JH' appear on its top key lever. This is undoubtedly John Harris, who was bound to Keene in 1675 and was freed in 1685. Because of this, Mole has assigned an early date-estimate for this spinet of c.1682. Barnes had earlier assigned a c.1685 date (restoration report), but on the basis of several overly-broad and unrelated reasons.

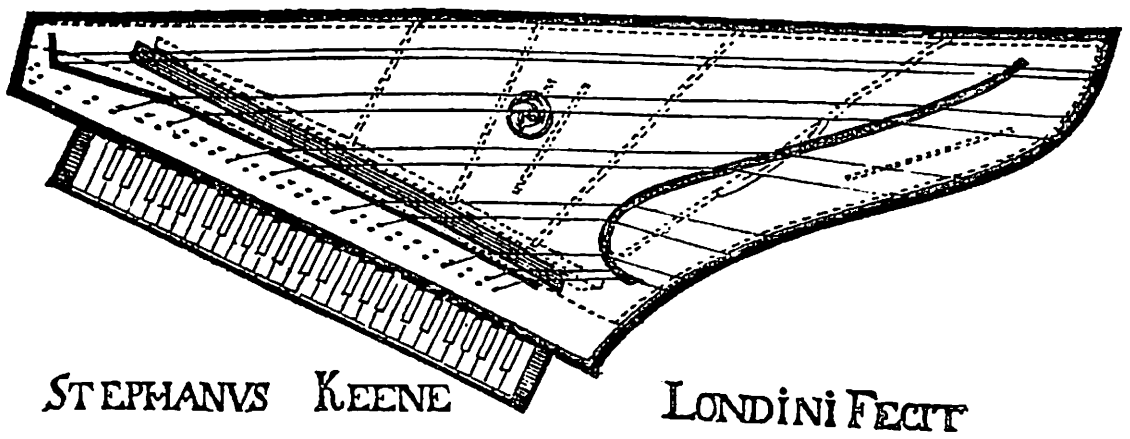

Figure 10.3 Grove's Spinet.

Based on several Haward characteristics found on this Keene and no other Keene, I believe this is the earliest surviving Keene spinet. Because of its 52-note GG/BB – d3 range with a short octave, I believe Keene used Haward's cognate **1683** and **1684** spinets to guide him in making this particular spinet (or, perhaps, this spinet-model). Consequently, I would assign, albeit for different reasons, Barnes' 'c.1685' date estimate for it. I also believe this particular spinet (or spinet-model) is very likely to have been responsible for Haward's successive design update as shown on **c.1685** and **1687.**

It is interesting that although Keene must have inspected a cognate Haward, he never measured it, as all reported measurements on the Grove – RCM Keene are at variance with those on any Haward.

The following three tables list first, those traits found on this Keene found to be in common with Haward's cognate pair; second, the points of disparity of this Keene with Haward spinets, generally; and third, the features found on this Keene that are tied to Haward's successive pair and may have been the influence for Haward's revised design.

Shared Traits: The Grove – RCM Keene and Haward's Cognate Pair: **1683** and **1684**

1. Bentside: one-piece – ogival (compound curved).
2. Soundboard rose.
3. LH Tail: rear facing.
4. Faceboard: no marquetry panel.
5. LH / RH Faceboards: both broad, asymmetric.
6. Soundboard growth rings: parallel to spine.
7. Soundboard: continuous past jacks and wrestpins.
8. Jack Register: divided, leather topped.
9. Bridge Crest: dulcimer-like wire insert.
10. Bass Octave: short (unbroken).
11. Treble terminal note: d3.
12. Top two jacks: between top two strings.
13. Sharps: vertically tapered.
14. Nut: mitred in bass.
15. Spine: walnut (veneered ?) (as on **1684**).

Some Points of Disparity – The Grove – RCM Keene and Haward's Cognate Pair

1. Keene: vertical nail-hiding moulding at side – rear.
2. Keene: shorter case height: 6-3/4 inches (172).
3. Keene: shorter LH tail: 4-1/2 inches (114).
4. Keene: 'Londini' on faceboard.
5. Keene: undecorated soundboard.
6. Keene: staggered wrestpins.
7. Keene: bridge slightly curved towards the bass.
8. Keene: nut slightly curved towards the bass.
9. Keene: RH (not second) major soundboard rib crosses the bridge in two places.
10. Keene: short soundboard rib just under the rose.
11. Keene: unusually close plucking points throughout (16% at c2).
12. Keene: 3 scored lines (plus the break) on ebony keypads (Haward, two).
13. Keene: some pieced keypads.
14. Keene: shorter octave span (6.3 inches (480).
15. Keene: natural key levers, front-to-pivot ½ inches (13) shorter.

Shared Traits – The Grove – RCM Keene and Haward's Successive Pair: **c.1685** and **1687**

1. Greater Spine length.

2. Lid: overhanging the case with applied moulding.
3. Case edge top moulding – arcuate.
4. LH Tail: less pronounced rearward tilt.
5. Front two corners: mitre-joints – no exposed nails.
6. Jackrail inscription (only this Keene).
7. Hinge design: square form – pierced.
8. Skunktail (white-black-white) sharps (only this Keene).
9. Rose surround: beaded (arcuate) edge.
10. Soundboard: undecorated.

CHAPTER 11 HAWARD SPINET 16XX

Summary

A. Late 1660s (c.1668) Determination:
    c.1660, c.1650, c.1680, refuted
    Iron hardware of a particular design
    Snakewood keys
    The trestle examined:
        Evidence of originality
        Oak
        Bobbin turning – pole lathe
        Three-legged
        The major stretcher turned
B. Unexpected Craftsmanship:
    Absence of plane marks
    Carved scroll at bridge end
    Major keyboard assembly differences
    Integer measurements
C. Charles Haward's Probable Work:
    Parchment key fronts – key numbering
    The lid
    The jackrail
D. John Haward Evidence:
    Two markings – wrestplank and key #12
    John Haward – died 1667
    John Haward – inventive builder
    Evidence for John Haward-the-Elder
E. The Layout – Probable Starting Points
    Layout assumptions
    16XX layout explainable
    The other five – not explainable
    The other five – fail to agree

Haward Spinet 16XX - Text

A. A Late-1660s Date Determination

Is the Haward spinet, referred to as **16XX** throughout this thesis an isolated instrument made just prior to a hiatus, or an early survivor connected to an ongoing series? There have been four 'circa' dates assigned to this spinet in the past: c.1650, c.1660, c.1668, and c.1680. The reasons for each of these dates are problematic, but problematic in different ways.

c.1660

The c.1660 date estimate may have originated in 1885, when **16XX** was exhibited at the London Inventions Exhibition that year. Although **16XX** was pictured but not dated in the first two editions of Grove's Dictionary (1882–1927), it was assigned the same estimated date of c.1660 in the third edition (1927-28 on). This date continued until the 'New Grove' of 1980, when, for the first time in close to a century, it was no longer pictured or mentioned. In his *Dictionary of English Furniture* (the 'DEF'),[95] Ralph Edwards also used the c.1660 date and made mention of its "3-legged stand of turned oak". He recognized that the stand was original.[96]

c.1650

William Dale, who had to have been responsible for the 'c.1660' dating of his Haward at the London Inventions Exhibition, moved back this date by ten years in 1888. At a meeting of the Hampshire Literary & Philosophical Society and the Hampshire Field Club held 18 April 1888, Dale showed four of his instruments: a Shudi-Broadwood harpsichord, a spinet "of 1630" by John Hitchcock, "a spinet, by Charles Haward (c.1650) similar to that described by Samuel Pepys in his diary", and a Beck piano of 1776. Clearly, he mistook Hitchcock's serial number for a date, and must have reasoned his Haward, of an earlier design, should, therefore, be back-dated.

c.1680

In 1956, in the first edition of his, *Makers of the Harpsichord and Clavichord*, Donald Boalch pictured **16XX** and advanced its date to c.1680. c.1680 would place **16XX** at the beginning of England's spinet production period. At first glance, this would appear to be reasonable, for superficially, **16XX** shares many of the traits of Haward's dated cognate pair (**1683** and **1684**). Today, by accepting Boalch's estimated date, we would be accepting continuity; we would be spared the difficult explanation of a spinet-making lacuna.

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[95] 1924-27 and 1954 (Rev.).

[96] From 1937 to 1954, Edwards was the Keeper of the Dept. of Woodwork at the Victoria and Albert Museum (the 'V&A').

c.1668

Beginning in c.1888, the Encyclopaedia Britannica pictured spinet **16XX** for about 40 years together with an estimated date of "about 1668". In his *General History of Music from the Infancy of the Greek Drama to the Present Period,* Rockstro also pictured **16XX** (1886:143), and dated it, "c.1668".[97] In several ads appearing on *Antiques Magazine* and *The Antiquarian* in 1927-28, an art packer pictured **16XX** in a woodcut with the same estimated date, "About 1668". This ad is pictured in Appendix A.

Assigning a c.1668 date to spinet **16XX** is not unreasonable. But 1668 happens to be the year Pepys acquired his spinet from Charles Haward. Citing this odd year and preceding it with 'C', would seem to be an attempt to coyly approach the Pepysian ownership line without quite contacting it.

In 1888, at the lecture to the Hampshire Literary & Philosophical Society, William Dale, this spinet's then-owner, after assigning it an improbable date, said, erroneously, "Pepys' reference to his 'Triangles' meant the 3-legged stand to put the instrument on".

In 1896, A J Hipkins wrote in his book, *A Description and History of the Pianoforte,* "To Haward belongs the distinction of having supplied a spinet, on a triangular stand, to the very musical Samuel Pepys" (1896:71). While factual, the statement was misleading: There is nothing about this trestle that ties it specifically to Pepys and there is no evidence that Pepys' spinet specifically had a 'triangular' trestle. Nevertheless, the trestle on **16XX** makes a particularly compelling case for a c.1668 date for this spinet. It is one of three of **1668**'s components whose irregularities point to a late-1660s date; the other two being its hardware and its snakewood keys. These three pieces of evidence are discussed next.

The Hardware:

16XX is the sole surviving spinet with iron, rather than brass hardware. It is also the sole surviving spinet with a virginal-style 'angry lady' (a Morris term) hinge profile. Because iron hardware with this hinge design can be seen on all extant virginals, including those of a later date, it could be argued that the presence of such hardware on this spinet; even though unique, is, at best, a weak indicator of age.

However, in his thesis on English virginals, Darryl Martin has pictured three iron virginal hinges (2003:195). One from the late 16th century is similar; another, dated 1684, is also similar; a third by Stephen Keene, dated 1668, though, is identical to the hinges on this spinet. This has to denote the same blacksmith as well as the same era, and suggests, perhaps, even the same year. The hinge and other hardware, including the square washers on the case and trestle of **16XX** can be seen in Appendix A.

During the second Dutch war of 1665-67,[98] brass, needed for ordnance, was reported to have been in particularly short supply. This shortage affected clock makers. In addition to the war, there were multiple problems limiting domestic brass founding at this time.[99]

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[97] William Smythe (Rackstraw) Rockstro (1823-1895). Born in Surrey, he studied in Leipzig under Mendelssohn. He contributed 240 articles to the first edition of Groves – two of which survive. A musicologist, teacher, pianist, composer, and a proponent of early music, he is best known today as the author of a number of books on musical practice. In his *A General History of Music*, he pictured this spinet in his Chapter 13.

[98] There were three Dutch wars over a twelve-year period: 1652-54, 1665-67, 1672-74.

[99] For a detailed account see: *Domestic Metalwork 1640-1820* by Rupert Gentle and Rachael Field (Antique Collector Club 1975 (1994) p57.

The hardware, uniquely of iron on spinet **16XX,** has to be an indicator of its pre-production period manufacture and its particular iron hinge profile strongly suggests a more limited temporal span of the late-1660s.

The Snakewood Keys

16XX is the sole surviving spinet with snakewood keys. It may also be the only extent English keyboard instrument with such keys. Snakewood (*pitatinera guianensis* – also, *brosimum guianense)* is found only in a tiny area on the north coast of South America: Surinam (today, Suriname) and Guiana, just to the west. After England had established a colony there, snakewood was shipped to London. This highly coveted wood was imported for just over a decade, for, in 1667, the Dutch seized the colony (England having taken New Amsterdam from the Dutch three years before). In 1667, under the terms of the Treaty of Breda, which was signed at the end of the war, the Dutch kept Surinam in exchange for New Amsterdam. English shipping at the time was governed by the Cromwellian Naval Act of 1651 which allowed goods from outside Europe to be transported to England only on English vessels. This restriction affected imports from non-English colonies in the Western Hemisphere.[100]

Because of amber striations, some ebony has been confused with snakewood. But ebony's colouration will follow the grain – not cross it or show it in spots as it does on snakewood. Two people have erroneously reported that Haward spinet **1689** has snakewood keys and Martin reported seeing snakewood on three virginal keyboards – one as late as 1685. His identification may not be mistaken, for a supply of pre-1668 snakewood might have been still available to instrument makers several years later. But the cost would have been high, and for every year out, its availability would have been less and less likely. The unique snakewood keys on **16XX** are an important indicator of its early, pre-production period manufacture and a probable date of the late-1660s.

The Trestle

16XX appears to be the sole surviving English spinet with a 3-legged trestle. This trestle also appears to be uniquely made of white oak. Perhaps, most important to its dating, it is the only surviving trestle with Cromwellian bobbin turnings.

Stylistically, this trestle seems to reflect borrowings from three sources. Its triangular form echoes the 3-legged stands found on certain early Italian harpsichords. Its beaded and angled stretcher suggests Cromwellian bobbin-turned gate-leg tables with their top leaf-supports extended. Most significant, though, it suggests the Cromwellian back-stools made from the late Interregnum into the early Restoration years. Initially made of oak, they were later constructed of walnut. These simple, low, open-back chairs have bobbin-turned, triple-blocked front legs; single, bobbin-turned, front mid-mounted stretchers; and, dual, rectangular stretchers at their sides. They are unusual in this mid-century era in having no carving – just turnings for their decoration.[101]

16XX's Cromwellian bobbin-turned trestle had to have seemed dated in London by the early 1670s.[102] Based on its rotational cutting marks, this trestle's bobbin turnings were evidently

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[100] In 1795, England recaptured Surinam from the Dutch and Snakewood began to reappear for the first time in over 125 years.

[101] The adjective, 'Cromwellian' has been applied to bobbin turning and to chairs with this turning owing to their introduction in the Interregnum.

[102] Since turning is a specialized trade, this lathe-work would undoubtedly not have been carried out in a musical instrument shop where the trestle components would probably have been assembled later.

turned on a slow-operating, reciprocating pole lathe. While this type of lathe would continue to be used in the country, in London it was being replaced by about 1670 by the higher-speed, continuous, rotary lathe required by the new spiral turning design introduced at this time.[103] These turnings, as seen on spinet **1683** had to be guided by a revolving screw. Although spiral turning had been used somewhat earlier on the Continent, it was not seen in London until shortly before 1670. This is possibly because of the new lathe requirement.[104]

16XX's trestle is not only unique in its bobbin turnings, but it may, also, be the only extant stretcher with a turned lateral stretcher. It is one of four turned elements. The nearly full-length turnings on this stretcher were incised from a heavy oak post 32 inches (81) long and 2-1/2 inches (6.4) square. This lengthy post had to be rotated on a long lathe bed.

The three legs, like those on chairs, were each bobbin-turned in two places between three rectangular (2 x 2-1/2 inch) blocks.[105] There is a long, forged iron bolt holding the pair of RH legs to the stretcher with a captive nut, as found on all period English keyboard instruments. This bolt head, however, is framed with an iron square decorative washer, very similar to, but unlike the iron washers on the case. It is interesting that this early stretcher's chair-like central location preceded the fashionable low-mounting in the 1680s, only to return to a mid-position found on essentially all trestles at the end of the century and later. The original spiral-turned stretcher on spinet **1683** has a stretcher of a style expected on tables of that decade.

The trestle on **16XX** is clearly original; it has always supported this spinet. The unoxidized portion of the bottom boards exactly corresponds with the trestle top locations. The four wooden locating blocks are original based on their baseboard-corresponding grain, patina, and tooling marks. Aged, crystalized glue at their edges shows that these blocks are currently in their original positions. The deal top board over the single oak leg shares the same patina and tooling striations found on the bottom boards, which would also seem to show the trestle was assembled, not by the turner, but in a Haward shop.[106]

Although there is nothing about this trestle that could tie it to Samuel Pepys, it is the most compelling indicator of **16XX**'s early manufacture – a decade or more before the earliest spinet production years of the 1680s. For reasons other than its triangular trestle – not mentioned in the diary, this spinet can, nevertheless, be safely 'circa-dated' to c.1668.

B. Unexpected Craftsmanship

There is a level of craftsmanship seen on parts of spinet **16XX** not found on any of the other five. Perhaps the most obvious is the case surface. Cross-grain plane marks can be seen on all the case-parts of the other five – particularly on **1689;** but, except for the lid, not on **16XX.**

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[103] Unlike the pole lathe, the new lathe required an assistant – undoubtedly an apprentice.

[104] The earliest known dated examples in England of this new spiral design can be seen on the hoods of a pair of Joseph Knibb clocks of 1672 and 1673; undated examples would, undoubtedly, have been made several years before. With the new lathe making possible this imported design, bobbin turning in London would have rapidly been viewed as a dated shape reflecting the bye-gone, more austere era.

[105] This trestle's corpulence reflects its fabrication in oak. If it had been made of walnut at a slightly later date, it would, undoubtedly have been trimmer. Oak turnings tended to be bolder than walnut. This could reflect a change either in style or in material cost.

[106] In Appendix A there are several detailed photographs showing this trestle as well as **16XX**'s bottom boards.

Either its case boards were planed in the direction of the grain, or else the boards were dressed afterwards before assembly. Inside the spinet, the bass-termination of the bridge in **16XX** has an exceptionally carved volute scroll; whereas all of the others are simply cut vertically. There is no evidence in any of the other five that Charles Haward ever attempted or was even capable of such work.

There are numerous qualitative differences in the keyboard assembly.

The key levers in **16XX** were cut with the precision found in Keene spinets. The other Hawards, particularly **1689,** show irregular cutting – in both front and back.

Like most other Hawards, there is an over-rail above the slitted wood rack at the rear. What is unexpected is the pair of wooden side supports for this rail creating a box-like enclosure for the backs of the keys. The two outer key lever sides are smoothly chamfered over much of their lengths to allow space for the rail supports. These key levers are pictured in Appendix A.

Alone of the Haward spinets, the pivot-pin openings on the tops of this spinet's key levers are rectangular mortises; all the others are either round or oval. This is significant for it shows there had to be another workman that used a different method of creating these openings. If one were to drill round holes and then rock each key back and forth on a rod so that it could pivot about 4-degrees, the fulcrum would be in the middle and there would be a small degree of scrubbing at the bottom. With the oblong mortise, on the other hand, the fulcrum would be at the bottom.

Across the tops of the deal key levers, there are triple scribed lines rather than the expected two. Two of these three locate the pivot pins and the third marks the balance points – about ½ inches (15) behind the sharps pivot-pin row. This suggests there was an attempt to balance these levers in a precise manner. Unlike Keene, there is no scribed diagonal key-locating line on any Haward.

The pivot pins on this keyboard run precisely along two straight lines. This would seem easy to achieve, but for some unaccountable reason, these pins seem to be irregularly placed on all the other Hawards.

All keys on **16XX** terminate along a straight black line. Every sharp is painted back to this line and every natural tail is precisely and evenly cut to this line. All other Hawards show irregular terminations: Some cuts are angled; others, straight. Some are cut short; others, continue past the pins.

The natural key fronts on this keyboard have been file-finished to a smooth cusp. On other Hawards, they were simply saw-cut vertically and left unfinished. Keene terminated his keypads in this same unfinished manner.

Viewed from the top, the side-bevelling on both sides of the keypads on this keyboard end precisely at the first scribed line. All others end irregularly.

Viewed from the front, each natural key is cut consistently, creating a uniform series of trapezoids. The others mix trapezoids and rectangles, and the trapezoids have varied angles.

This keyboard has a front key limit-rail as well as a backrail. But the existing front rail on this spinet is recent, and may be an addition – not a replacement. For some reason, either the maker or a restorer felt the need for this redundancy.

There is an unusually high proportion of integer and semi-integer measurements as well as uncomplex angles found on the keyboard and case of **16XX** but not on any of the others. This

spinet was evidently laid out differently and I believe we can even determine step-by-step, how this was accomplished. This discovery-observation warrants a final sub-chapter to this chapter.

C. Charles Haward's Work

We have determined the approximate date of the late-1660s for spinet **16XX,** and established that another maker, more skilled than Charles Haward, was involved in much of its fabrication. Since Charles Haward's name, alone, appears on the faceboard, he clearly had to be responsible for the later portion of this work and, arguably, had to be the sole workman for its completion: If there had been a collaboration towards the end, and the collaborator were still living, a second inscribed name would be expected.

I believe we can identify some of Charles Haward's work. Although he was not responsible for cutting and fitting the key levers, he was the one who numbered them. The attachment-irregularity of the gilded parchment key fronts in contrast to the careful key cutting, suggests he was the one responsible for gluing them on. The lid, consisting of two types of walnut: European *(juglans regia)* for its outer boards and Black, Virginia *(juglans nigra)* for its centre board, had to be his, owing to its cross-grain plane marks, such as found on all of his other spinets – particularly **1689**. Since the rest of the case shows no evidence of these distinctive marks, he can be eliminated as the case maker. Because the short mitred bass-portion of the nut is more crudely fashioned than the rest of the lengthy nut, this portion may have been made by Charles Haward. In view of his choice of exotic woods on several other spinets – particularly **c.1685**, he could have been responsible for the jackrail, which is covered in rich burl (burr) elm.

The shorter treble scale of this spinet in contrast to the other Haward spinets is a reflection of its design – not its pinning, and its basic layout was undoubtedly not his. The final pinning, however, could have been done by him as well as the gluing of the soundboard to the case. Finally, he could have assembled the trestle and attached the baseboard locating blocks.

The following table lists the measurements associated with each of the Haward Spinets.

HAWARD SPINETS

	16XX	1683	1684	1689	1687	c.1685
Board Edge Visible						
LH Face – LH Tail	Side Facing	Side Facing	Side Facing	Side Facing	Mitred	Mitred
RH Face – Bent side	Side Facing	Side Facing	Side Facing	Front Facing	Mitred	Mitred
Bent side –	Rear Facing		Rear Facing	Rear Facing	Rear Facing	Rear Facing
LH Tail – Spine	Rear Facing		Rear Facing	Side Facing	Rear Facing	Rear Facing
Wood						
Exterior	European Walnut		European Walnut	European Walnut	European Walnut	European Walnut
Face board Veneer	(Lebanon) Cedar		(Lebanon) Cedar	(Lebanon) Cedar	"Walnut & Maple"	(Braz) Rosewood
Lower Moulding	Black Walnut		Walnut	none		(Braz) Rosewood
Case Capping	Black Walnut		Walnut			(Braz) Rosewood
Spine	(?) Cedar		Walnut Veneer	(?) Cedar		
Shapes						
Case Capping	Flat – Cyma Edge	Flat – 3 Rib Edge	Flat – Cyma Edge	Flat – Moulded Edge	Flat Across	Arcuate
Angled Cheek Capping	Flat – Across	Flat – Across	Flat – Across	Flat Across	Semi-arcuate	Arcuate
Keyboard Blocks	Flat Top Bevelled Corner	Flat Top Rounded Corner	Flat Topped	Complex	Flat Top Rounded Corner	Flat Top Rounded Corner
Square Washers: LH / RH Faces	2 Iron	2 Brass	2 Brass	0	0	0
Square Washers	1 Iron	1 Brass	1 Brass	0	1 – Missing	1 – Brass Elevated

HAWARD SPINET MEASUREMENTS

	16XX	1683	1684	1689	1687	c.1685
Hinges (original)	"Angry Lady" Iron		2 Brass Original	3 (Lid) Replaced		Pierced Brass
Lock Hasp (original)	Not original – Iron		no lock	no lock		"Outstretched Arms"
Moulding Profile	Cyma – Deep Coved	Triple-Ribbed	Cyma	Cyma		Triple Ribbed
Cross Grain Plane Marks						
Case Sides	No			Yes		
Spine	No			Yes		
Lid / Keyboard Cover	No			Yes		Yes
Lid / Keyboard Underside	Yes			Yes		Yes
Lid						
Boards	3	3	3	3		3
Width of Front Board	7" - 9"					
Wood	European and Black Walnut	Walnut	Walnut	Walnut	Walnut	European Walnut
Rear side 3/8" Batten	Yes					
Vertical Edge Moulding	No	Applied	No	No	No	Applied
Keyboard Cover						
Front Edging	Curved			Curved		Cut – 3 Rib
Side Moulding	Thumbnail	Applied		Thumbnail		Applied – 3 Rib
Spine						
Single Board	Original – Yes	Yes		Original – Yes		Yes
Veneered	No	No	Walnut Veneered	No		No
Bottom Edge Moulding	Yes	No	Yes	No	No	No

Table 11.1. Haward Spinets.

D. John Haward's Work – The Evidence

Having determined spinet **16XX** was made in the late-1660s and begun by an accomplished maker, we can now identify this maker, for he has marked this spinet in two places. On the extended soundboard covering the RH side of the wrestplank is a very prominent, surviving, inked mark, that appears to combine a monogram "I H" with the Christogram "I H S", not unlike the manner of the violin maker, J. Guarneri del Gesu, several decades later. An enhanced photograph is pictured; a photograph without the ink-enhancement can be found in Appendix A. Its three knobbed, sculpted pillars (resembling those on the brass movements of long-case clocks) surrounded with decorative dots confirm this mark is not just a serial number. The compound curve serves as both the letter 'S', and the horizontal member of an upper-case Roman letter 'H'. Since there is no 'J' in Latin, the 'I' has traditionally been substituted as it has been here.

Worn, virtually invisible, and never noted before, is a faintly-scratched name on top of the ivory key No.12. This name was placed there on top and not more discretely on the side of a key lever as an apprentice would have done. Pictured is an inked-enhancement of two combined photographs. This key has proven to be very difficult to photograph and the name drifts off unintelligibly. But the 'J' and 'H' are unmistakable and the cross-bar in this script 'H' shares a similar, although reversed, compound curve with the wrestplank's 'H'.

According to the Joiners' Company records, John Haward-the-elder died in 1667. He was born in 1597 or shortly before and would have been a septuagenarian at the time of his death. In Mace's *Musick's Monument* (1676:235-236) he was credited with being the inventor of the 'pedal', a pedal-operated harpsichord that he was able to sell for 50-percent more than a conventional hand-operated harpsichord. Frank Hubbard (1967:147) verified Mace's 17th century claim that with John Haward's pedals, 24 registrations were possible. It is understandable that this inventive builder would want to try his hand making an instrument of an entirely new design and it is highly likely that he began to make this particular spinet, was unable to complete it, and at his death left it to Charles, who finished it the following year. It bears the identification of two Hawards, John and Charles, and it combines the finishing later work of Charles with the earlier, highly accomplished work of John. The tailing off of the name on key 12 may reflect John's deteriorating health shortly before his death, or, possibly, the lack of a hand-support. Sadly, the major part of a spinet and, possibly, the shell of a harpsichord, may be all that remains by this important maker.

There was more than one John Haward, however. Another, the same generation as Charles and probably his brother, was admitted to the Joiners' Co. (as was Charles) by patrimony in 1652. And there was evidently another in 1647-48. Can we be sure that the John Haward, who was first involved with this spinet, was John Haward-the-elder? If the spinet had been largely made by another, living, John Haward, it would be hard to explain why it bore only Charles' name on the faceboard. It would also be hard to explain the reason for its move to Charles' shop after the major work on it had largely been done by a living John Haward. Finally, in the late-1660s, would any of the three younger Hawards have had any motivation to build and try to sell such an unfamiliar instrument?

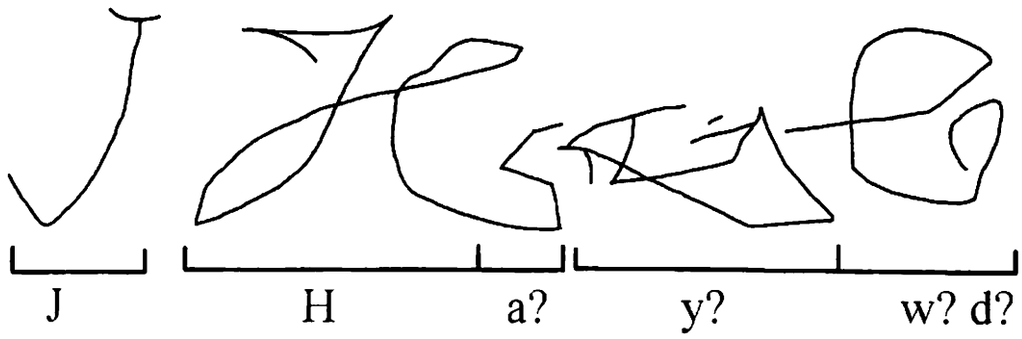

Figure 11.1 Tracing of Inscription on Key Number 12.

E. John Haward's Probable Starting Points – The Evidence

Before building a spinet, Charles Haward, and John before him, must have laid out their design in some manner – perhaps on paper (see the following plan drawing). Their probable starting points can be assumed to be round numbers. Today, by using their measuring tools: an inch-ruler and a 360-degree compass, and looking for integer and semi-integer lengths and uncomplicated angles, we might be able to retrace their thinking.

The first and most important measurement for any spinet has to be the keyboard-to-spine angle: DPR on the drawing. This is the governing angle for the entire spinet. On Haward's two 'successive" spinets, **c.1685** and **1687**, this was a straight-forward and presumably, initially-decided 20-degrees. On the four 'preliminary' spinets of the Haward's earlier design, however, it was a more complex angle of 17-degrees (16-degrees on **1689**). But since this is essentially the same keyboard inclination angle of the 1637 Zenti, it was more than likely the angle chosen by Zenti when he made one or more of his spinets in London in 1663. Assuming this is so, the odd 17-degree angle must have been measured and then used by John Haward. This would seem to be an important piece of evidence linking Zenti's work to the early English spinet.

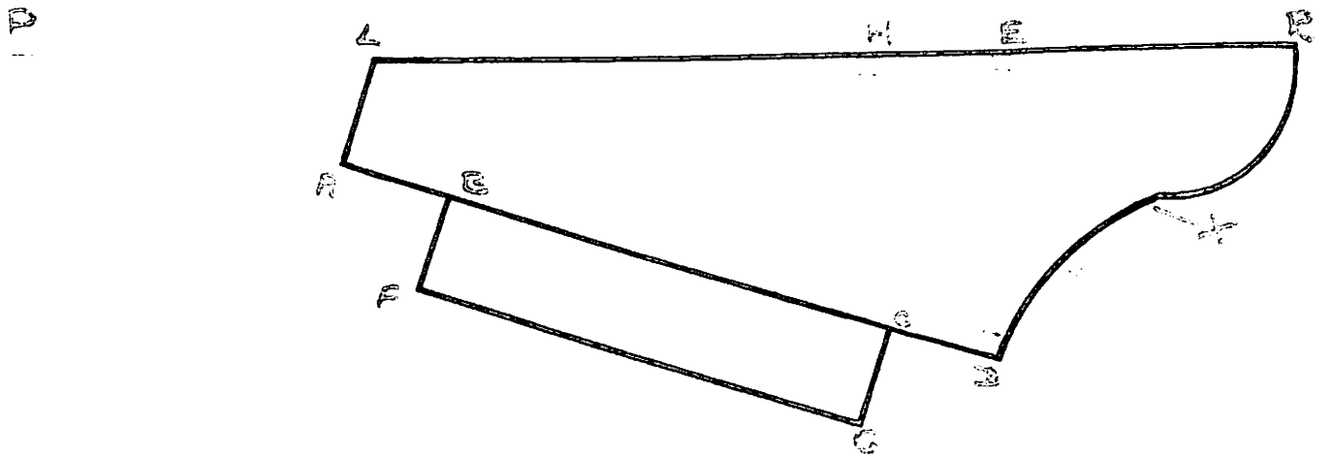

Figure 11.2 A Spinet Plan Drawing.

The Six Hawards

Helping us to tie **16XX** to John, rather than Charles Haward, is the unusually large number of integers and semi-integer lengths (17) found on this spinet: more than double the number found on any of the other five Hawards. There are not only significantly fewer round number lengths on each of the other five, but they differ from spinet to spinet. Consequently, it is very unclear how Charles Haward would have laid out his spinets and why so many of his measurements differ. Lengths and angles for all six spinets can be found in Appendix B.

The 16XX Layout

With **16XX,** we can retrace the probable steps taken by its originator, John Haward. He began by creating a giant 'V' with its legs (P-R and P-D on the drawing) meeting at a 17-degree angle (DPR). Then he created a scalene triangle by boxing in and connecting his two legs with a line (D-R) which would position his bentside. This line was angled exactly 120-degrees off of the leg P-D, which would define his face. It was located an even 66-inches along leg P-D, an even 83-inches along leg P-R, which would define his spine, and it measured an even 27-1/2-inches long.

Next, he created an irregular quadrilateral that would delineate the case of his spinet. He ran a line (A-L) an even 9-inches exactly 75-degrees from leg P-D, connecting it to leg P-R an even 26-inches from his 17-degree angle at P and an even 40-inches from point D.[107] The four sides of his box then measured 9-inches (the LH tail), 40-inches (the face), 27-1/2-inches (the bentside location), and the resulting fractional 53-1/4-inches (the spine). Evidently choosing an even 22-inches for his case depth (G-H), he located his keyboard assembly, an even 30-inches wide, along his 40-inch face. He evidently positioned it to accommodate his bass key lever, 12-inches long.[108] What is most remarkable is his bentside, superimposed over his imaginary, straight, 27-1/2-inch RH line (D-R). The convex rear of his bentside extends out from this line by an even 3-inches and the concave portion in 1-1/2-inches – exactly half that distance. His

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[107] His 75-degrees deviated 15-degrees from the right-angle position found on Zenti's similar 1637 rear-facing tail.

[108] His treble key lever is 11-1/2-inches long, but since it ends well back, away from the spine, its length is not relevant.

bentside, laid over his straight line, meets it at its precise mid-point: 13-3/4-inches from both concave and convex portions. There is nothing such as this, or even similar to this, on any of the other Haward spinet bentsides, all of which seem to have been laid out somewhat randomly.

Although not related to his case outline, his case height is an even 7-inches, whereas case heights on the other five Hawards range from 7-3/16-inches to 7-1/2-inches. Of the various case dimensions, only two lengths and two angles are shared by any two of the five later spinets. Since each spinet closes with the lengths and angles listed in Appendix B, accuracy can be assumed and a six-spinet comparison can be made.

A Caveat

It may be questioned whether case measurements cited here are appropriate. 'Bottom-first' construction, used by the Hawards, after all, has to start with a pre-cut bottom board that can be precisely cut. After that, we would expect that the sides are simply nailed, one-by-one to its edges. Logically, the dimensions of its outer sides should be irrelevant. In this form of construction, it is the baseboard that we can assume has been precisely cut to a plan. Although our focusing on the case's outer dimensions may seem counter-intuitive, there are simply too many compatible round numbers on spinet **16XX**'s outer case that would have to be disregarded if we were to assume John Haward cannot have begun by considering its outer-case outline. It could be assumed, however, that Charles Haward more logically proceeded using his bottom boards as guides; but if so, he seems to have cut every one slightly differently. Because of board-shrinkage and deformation over the[109] years, we cannot measure these 17th century boards today and achieve a meaningful result.

The 16XX Keyboard

Just as he did with his case, John Haward appears to have laid out his keyboard in a manner unlike Charles. On all six spinets, each natural keypad is 7/8-inches across; and yet, the groups of keys for each of the six differ in width. Just as John's case measurements show a high number of integer and semi-integer measurements, his keyboard does too. The one-octave span of **16XX** measures an even 6-1/2-inches, two-octave is 13-inches, three-octave is 19-1/2 (495), and four-octave is 26-inches. His C-G (5 naturals) span is 4-1/2-inches. In contrast, for all of these groups, Charles' keys are all complex fractions. Because of this, it is hard to determine his guiding span. What is interesting is that Charles' spinets fall into two groups. The cognate pair: **1683** and **1684**, have broad spans of 6-9/16-inches (498), whereas **1689**, **c.1685**, and presumably **1687** have narrower spans of about 6-3/8-inches (489). The total keyboard span of **1689** (51 notes) is an even 28-inches; but the overall spans of all the others are fractional.

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[109] In Appendix A, note the unexplainable bad fit of the bottom board to the case side. Can John Haward have nailed together his sides first, and next inserted and nailed in his rather crudely-cut bottom board? This could have ensured evenly-mated joints – more critical than the total connection of all sides to the bottom board in every location.

CHAPTER 12 SAMUEL PEPYS' OWNERSHIP

Summary

Samuel Pepys was at the forefront of the era's discoveries and achievements.

Music was particularly important to Pepys:

Pepys owned and read a number of scholarly music books.
Pepys composed the melodic lines of at least five songs in the 1660s.
Pepys sang and played a variety of musical instruments.
In 1661 he took delivery of a virginal which evidently disappeared two years later.
Pepys never learned to play a keyboard instrument.
From 1664 – 1668, there were no keyboard instruments in Pepys' house.

Pepys' Haward Spinet:

Diary entries – April to July 1668.
From these – 14 determinations.
Four observations:
Reason for the French term, 'Espinette'.
The spinet – clearly a new instrument.
Pepys' spinet – largely finished when first seen in April 1668.
The direct evidence that it still exists.

Direct evidence – the spinet's inscriptions discovered:

Up to this point, evidence of Pepys' ownership is only circumstantial.
A grid and a scale ladder, scratch notations discovered, can be explained.
A non-performer's misunderstanding of the spinet's lowest note (GG / BB).

Further evidence – Pepys' writing style:

A comparison with Pepys' diary characters.
Some similarities reflect the period; others, Pepys.
Some number styles appear to be unique to Pepys.

A concluding review of evidence ties spinet 16XX to Pepys.

Much of this evidence is mutually reinforcing.
Two questions remain:
What did Pepys do with his spinet after it had served his purpose?
Where was it for 200 years?

Samuel Pepys' Ownership - Text

A. Samuel Pepys

In 1999, the American historian, Wendell Garrett (1929-2012), editor of the magazine *Antiques* wrote[110] "It is astonishing to reflect on Britain's achievements under the rule of the Stuarts from 1603 to 1714...Not even in the Renaissance was there such a prodigious outburst of intellectual creativity as in Britain under the Stuarts...There could be no better measure of their accomplishments than the fact that the eighteenth-century Frenchmen came to envy the achievements of seventeenth-century Britain".

Samuel Pepys (1633-1703) lived in 70 of those 111 years – creatively the most important of those years. He knew most of Britain's discoverers and his diary of the 1660s proved that he yearned to delve into many of their discoveries. Three major figures, important to Pepys, deserve special mention: Robert Hooke, Isaac Newton, and William Brouncker. Robert Hooke (1635-1703) was essentially an exact contemporary of Pepys with an exceptional breadth of interests and inventiveness.[111] From 1682-87, this polymath was first, curator, and then secretary of the Royal Society.[112] With his particular interest in vibrations, Hooke explained the correlation of pitch and vibratory frequency to Pepys in 1666 (8 August). Fourteen years later, he demonstrated this to the Society using brass wheels.

Pepys was unanimously elected a Fellow of the Royal Society in 1666 – three years after its founding and he remained a member for 38 years until his death. In 1684 he was elected its president and, two years later as president, he arranged, personally, for the publication of Isaac Newton's *Principia Mathematica*. His name appears with Newton's on the title page along with the date, 'Julii 5, 1686'. Pepys was able to maintain a simultaneous friendship with the two bitter rivals, Hooke and Newton.

No one was as important to Pepys' career as Viscount William Brouncker (1620-84) – who was mentioned frequently throughout the diary. Among many things, he was a mathematician – the devisor of the 'Brouncker Formula'. A founding member of the Royal Society, Brouncker was its first president. In 1664, he was appointed a commissioner of the Royal Navy. Sharing Pepys' interest in music, he owned a 'triangle virginal' in 1661, which he appears to have turned over to Pepys two years later when he is believed to have upgraded it to a harpsichord. He also owned an organ.

Pepys is remembered today for his diary which ran for close to 9-1/2 years from I January 1660 to 30 May 1669. This indefatigable renaissance man was also Secretary of the Admiralty (appointed by the Duke of York in 1673) and in that same year, he became an elected Member of Parliament. Robert Lewis Stevenson wrote in his 1894 eulogy (quoted in full in Appendix H), "He must always be doing something agreeable, and by preference, two agreeable things at once".

John Evelyn's (1620-1706) diary entry for 26 May 1703 reads, "This day died Mr. Samuel Pepys, a very worthy, industrious and curious person...He was universally beloved, hospitable, generous, learned in many things, skilled in music. A very great cherisher of learned men of whom he had the conversation...".

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[110] Antiques June 1999: 867

[111] See *The Man Who Knew Too Much*, - Stephen Inwood, Pan MacMillan, London 2002 one of a number of recent publications about this man.

[112] At the time,' the Royal Society of London for Improving Natural Knowledge'.

B. Samuel Pepys and Music

Few of Pepys' biographers make more than passing reference to Pepys' lifelong attachment to music. Often quoted, however, is "Musick and women I cannot but give way to whatever my business is" (9 March 1666). And more specifically, "Musick is the thing of the world that I love most and all the pleasure I can now take" (30 July 1666). Decades later, in 1700, he wrote of music's "simplicity, perspicuity, and certainty common to all other parts of mathematical knowledge".

From his diary we know Pepys owned and showed familiarity with a number of notable musical references, most dating from the Diary's last two years:

- He bought Alsted's *Encyclopaedia* for £1.8s (27 Oct 60).
- He took Birkkenshaw's translation of Alsted's *Templum Musicum* on a barge *"a ridiculous book"* (4 Mar 67).
- He spent an hour with Morley's *Plaine and Easie Introduction to Practical Musicke:* "Very good but unmethodical" (10 Mar 67).
- He read Playford's *Introduction to Musique* on a barge (23 Feb 67).
- He bought Kercher's *Musurgia Universalis* for £1.15s. "A book I am mighty glad of and expecting to find great satisfaction in it". Two days later he arranged to have it bound (26 Feb 68).
- Unable to buy Mersenne's *l'Harmonie Universelle,* "a man has wrote well of musique", he, nevertheless, ordered it and bought, then, Descartes' *Little Treatise of Musique* in Latin (13 Apr 68).

Pepys was the composer of at least the melodic lines of, perhaps, five songs in the Diary-period:

- Beauty Retire 1666 (?)
- Nulla, Nulla Sit Formido 1662
- It is Decreed nor Shall Thy Fate 1666
- While I Staid for the Barber 1665 (2-part)
- Gaze Not on Swans 1662 (2-part)

He sang baritone. He also learned to play the viols, theorbo, violin, flageolet, and finally the recorder. Nevertheless, despite his possession of a virginal in 1663 and, perhaps before, and his purchase of a spinet in 1668, he never learned to play the keyboard.

Pepys' Virginal

On 14 June 1661, Pepys took delivery of a 'triangle-virginal' for William Brouncker, who had evidently acquired a new organ the year before (15 Nov 60).[113] This instrument, undoubtedly Italian, was probably what we now call a pentagonal virginal; but, perhaps, it was an ottavino, a small octave-playing instrument laid out like a spinet, with its bass string adjacent to the spine.[114]

For five months beginning in March 1663, the Pepys had a house servant, Jane Ashwell, who may have been the only one in the Pepys' household in the diary-period who could play a keyboard instrument. Beginning 18 March 1663, Pepys made ten references to "my triangle" and "the triangle"- five concerning Jane Ashwell's playing. Although he never carried out his resolve, on 21 June 1663, he wrote, "Tried a little upon my triangle, which I understand fully and with a little use I believe could bring myself to do something". On 1 April 1663, he wrote that he bought a "rest" (wrest, a tuning hammer) from a virginal-maker. He took one of the workmen to his home to tune his instrument and to teach him how to do this, "for the time to come". His last diary entry concerning his 'tryangle' was on 1 July 1664 when he wrote of bringing it "...to my chamber below, having a new frame made proper for it to stand on...". It was never mentioned again. Evidently, for the next four years there was no keyboard instrument in Pepys' home and with Jane Ashwell's departure August 1663, there was apparently no one any longer in Pepys' household who could play one.[115] [116]

C. Attribution: Pepys' Haward Spinet

Everything certain about Pepys' spinet and his reasons for acquiring it comes from several of his diary entries in 1668:

> "Here (at the Deane of Westminster's lodgings at the Abbey) I saw the organ, but it is too big for my house, and the fashion do not please me enough; and therefore, will not have it (24 Feb 1668).
>
> ...to Bishopsgate Streete, thinking to have found a Harpsicon-maker that used to live there before the fire, but he is gone; and I have a mind forthwith to have a little Harpsicon made me to confirm and help me in my musique notions which my head is nowadays full of, and I do believe will come to something that is very good (23 Mar 1668).
>
> Up betimes and by coach towards White Hall, and took Aldersgate street in my way, and there called upon one Hayward that makes virginals and did there like of a little espinette, and will have him finish it for me; for I had a mind to a small harpsicon, but this takes up less room and will do my business as to finding out of chords, and I am very well pleased that I have found it (4 Apr 1668).

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[113] In his Appendix 4, Martin (2003) has listed passages from Pepys' diary concerning keyboard instruments.

[114] The majority of these ottavinos, however, were rectangular with diagonally-running strings.

[115] Ashwell was replaced by Tom Edwards, a singer, who had been a chorister in the Chapel Royal.

[116] There is an excellent series of seven articles titled, "Mr. Pepys the Musician" by Francis Hueffer in the *Musical Time & Singing Class Circular* from January through July, 1881. Also, see, "Samuel Pepys, Inquisitive Amateur" by Alice Anderson Hufstader in the *Musical Quarterly,* October 1968.

So home to dinner to Hawards to look upon an Espinette, and I did come near to buying one, but broke off. I have a mind to have one (10 July 1668).

...I to buy my Espinettee which I now agree for; and did at Haywards meet with Mr. Thacker, and heard him play on the harpsicon so as I never heard man before, I think (13 July 1668).

At noon home to dinner, where is brought home the espinette I bought the other day of Haward; costs me £5 (15 July 1668).

...and so home, and took occasion to buy a rest (wrest – a tuning hammer) for my espinette at the ironmonger's by Holborn Conduit..." (20 July 1668).[117]

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[117] For these entries, originally written in code, I am using the Wheatley, 1896 decoding rather than the more recent decoding by Latham and Matthews (1970-83). I believe it is no less accurate, and at least for the entries quoted here, the spellings and punctuation are less confusing. In the Latham and Matthews edition, 'espinettes', while treated as a singular noun, bears a terminal 'S' on 4 April, and 10 July, but not on 13 July. All three are capitalized. Curiously, the phrase in this later edition appears as, "and will have him finish them for me", whereas all earlier editions have used the more clearly singular 'it'. These changes, hastily read, could be responsible for Martin's conclusion that Pepys must have had a choice of several spinets and that spinets were being turned out "speculatively" in 1668.

From these entries we can make 14 determinations:

1. In early 1668, Pepys planned to acquire a keyboard instrument.
2. Because it was intended for his home, it had to be suitably small and stylistically pleasing.
3. There is no indication that it would ever be used as a playing instrument by him or by a member of his household.
4. It was specifically intended to "help me in my musique notions" and to "do my business as to finding out of chords".
5. His interest at this time in a keyboard instrument was because of the "musique notions which my head is now-a-days full of" and he anticipated it would lead to "something that is very good". (We know that while Pepys had composed the melodic lines to several songs, presumably none had yet been harmonized).
6. Travelling first to see a 'harpsicon-maker' on Bishopsgate Street (presumably to John Haward-the-elder's shop located on that street) and finding him no longer there, Pepys went a fortnight later to Charles Haward's shop on Aldersgate Street.
7. Intending to buy a "small harpsicon", he found at Charles Haward's an unfinished "espinette" that would take up "less room" and still fulfill his intended purpose. He arranged to have Charles Haward finish it for him. "I am very well pleased that I have found it", he wrote.
8. Charles Haward was working alone and had just one spinet – the unfinished spinet – in his shop.[118]
9. Three months later, Pepys returned to Charles Haward's shop "to look upon an espinette" and wrote that he "did come close to buying one, but broke off" (suggesting there had been a disagreement). He then wrote, inexplicably, "I have a mind to buy one".
10. Three days later, any difference was evidently resolved and the spinet appeared to be the one that took three months to finish, for Pepys wrote, "I to buy my espinette which I now did agree for".
11. In Haward's shop at that time there was a harpsichord in playing condition; Pepys was singularly impressed with the "virginal-maister's" playing on it.[119]
12. Pepys paid Haward £5 for his spinet (its price could have been the cause of a possible disagreement). Years before, on 26 Feb 1661, Pepys may have convinced a friend to back out of a harpsichord purchase because they were unable to lower the price: "the master not being at home, we could make no bargain, so parted for to-night". "We offered £12 – they demanded £14".[120]
13. On 15 July 1668, the spinet Pepys had bought two days before was delivered to him.

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[118] "Called upon one Haward, that makes virginals" "Did there like a little espinette" "Will have him finish it for me" "I am very pleased that I have found it."

[119] A Mr. Thacker – see Diary (21 Feb 1661).

[120] The 'master' on Bishopsgate Street, then, was undoubtedly John Haward.

14. On 20 July 1668, Pepys bought a 'rest' (a tuning hammer), not from Haward, but from a blacksmith[121]. This is Pepys' last diary-mention of his spinet.

From Pepys' Diary-entries, we can also make several observations:

1. Pepys' use of the French term for 'spinet' for the first time, must have come indirectly from Zenti, who had worked as a virginal-maker for two years at the French court just before coming to England. In England, he was employed as King Charles' virginal maker in 1663. It is highly likely that Zenti, the acknowledged originator of the spinet, made these instruments in both countries and used a prestigious French term with its two terminal 'e's for this instrument when in England – a term that was undoubtedly picked up first by John and then Charles Haward, and finally by Pepys.
2. The spinet was clearly a new and unfamiliar form to Pepys, and, almost assuredly, to Charles Haward, who had to take three months to finish this particular instrument.
3. Pepys' spinet had to have been largely finished when he first saw it; otherwise, he would not have understood how it would look.
4. Although it has been shown not to have been begun by Charles Haward, spinet **16XX** had to have been finished and sold by him, for it bore his name, alone, on the faceboard.

Could there have been a second spinet, made in its entirety from April 1668 or later, and then sold to Pepys that July?

To accept a second-spinet hypothesis, we would have to assume, as Martin has (2003), that Charles Haward was making spinets speculatively in 1668. This would suggest that Charles Haward's competitors, e.g.: Player and Keene, were doing so, too. If so, music publishers were not recognizing this and, today, no other extant spinet appears to pre-date the late-1670s (at the earliest).

We would also have to assume that this second spinet, sold to Pepys and possibly bearing some Pepysian evidence, is no longer in existence. Spinet **16XX**, which has survived, would have undoubtedly been sold to someone else – to a player, who, for some reason, used it little, and took particularly good care of it before putting it into long-term storage.

Direct evidence of Pepys ownership of **16XX**, however, does exist, and we will examine it in the following two sub-chapters. It will show this had to be his spinet.

D. Evidence: The Spinet Inscriptions

At this point we have found craftsmanship on spinet **16XX** not seen on any of the other Hawards. From its measurements we have discovered a rational layout not found on any other Haward. From three of its traits, we have been able to determine a late-1660s date for it – some years earlier than any other Haward. Because we have found identifying direct evidence of John Haward's early work on it, and knowing the year of his death, we have been able to narrow the date of its completion. We have shown that Charles Haward finished it shortly after John's death and he worked without collaboration, placing his name, alone, on the faceboard.

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[121] Earlier, 1 Apr 1663, Pepys was taught how to tune by a workman from a virginal-maker's shop.

Much of this evidence is both direct and mutually affirming. Although we can now be certain that **16XX** is this spinet, the evidence for Pepys' ownership, although compelling, is at this point circumstantial. What we do know is that Pepys found a solitary unfinished spinet at Charles Haward's shop in early 1668 at the time John Haward's spinet should have been there, and bought a finished spinet from him three months later. Although we have believed this spinet was **16XX**, and felt sure there was just a single spinet, these are just tentative conclusions. However, they can now be supported with direct evidence.

On 20 May 1668, Pepys wrote in his diary of "inventing a better theory of musick than hath yet been abroad". Three days later, he wrote that he wanted a "harpsicon to help me in my musique notions which my head is now-a-days full of". Then, on 29 March, reaching for the heavens, he wrote of his resolve to "go and make a scheme and theory of musique not yet ever made in the world". Finally, on 4 April, he wrote that the unfinished spinet he had just seen at Charles Haward's, "will do my business of finding out of chords".

We are fortunate that Pepys was not a keyboard instrument player and bought his spinet solely as a pedagogical tool. We can observe bold scale letters on the faceboard and on the wrestplank showing evidence of his letter writing style. More important, we can observe, visible only with a raking light, two scratched frames with numbers on the underside of the keyboard cover.[122] One of these frames, a ladder, was evidently prompted by Rene Descartes, and the other, a grid, could be possibly linked to Albrecht Durer or to Thomas Campion. Identical alphabetic lettering appears on the faceboard and by the wrestpins in the same brown ink (see Appendix A). Barely visible are faint vertical lines and matching faint letters in three places on the faceboard that would have been placed there to indicate location at the time when the board was in its vertical position.

In 1930, Philip Jones wrote, "Not least amongst the interesting features of this spinet is the lettering by the maker above each note". Then he added, "This being completely chromatic is unusual as it shows a departure from the common practice of making the lowest octave short".[123] This seems to have been overlooked earlier by Hipkins, who had described the short octave as well as spinet **16XX** in Grove's Dictionary.

The letterer of this spinet was unaware of the short octave. He cannot have been a performer, for a performer would have realized the need for a low AA in some of the latest music of the time. As Pepys was not a performer, this 'error' would seem to point to his ownership of spinet **16XX**.[124]

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[122] It might be fairly asked how it happened that I discovered scratched notations in two places that had not been seen before by so many past owners. On 17th and 18th century clocks and in clock cases, I found similarly scratched information – most typically, names and dates by former owners or repairmen – often visible only with a raking light. I have learned to take a raking light to everything chronological where I have had the opportunity. This has occasionally led to some surprising discoveries. For example, on a Federal-period American clock, the maker had scratched his full name on the forward-edge of the seatboard and spelled his first name, "Isiah". This showed that in Philadelphia in the late 18th century, this biblical name was pronounced in today's English manner.

[123] Philip James, Early Keyboard Instruments (proceedings of the Musical Assn., 57th Session, 1930-31).

[124] In short-octave tuning, the lowest note, an apparent BB, is tuned down to GG, C# is tuned to AA, and D# is tuned to BB. By the late 1680s, however, the two lowest sharps were typically split, so that the chromatic and the diatonic notes could both be played on divided keypads. Charles Haward, however, split just one key – the D#.

Pepys' "Finding Out of Chords"

In 1662 (13 Jan 62) Pepys engaged a 'Mr. Berkenshaw', a 'mathematical theorist', to help him "invent a mathematical way of composure". When Pepys dismissed this over-priced tutor a month later, he "settled to put all his rules in fair order in a book", for "I think I have all the rules that he hath to give".[125] Six years later, the day before his first visit to Charles Haward's shop, Pepys bought Descartes 'little treatise of musique' (3 Mar 68). This seems to have rekindled his desire for a 'little harpsicon' first expressed in his diary twelve days earlier. The 'little treatise' Pepys acquired then was the 1650 Utrecht edition of Descartes' *Musicae Compendium* in Latin containing Descartes' illustrations.[126] Two weeks later, he also acquired the English translation of 1653 made by his friend and mentor, William Brouncker. On Christmas day that year, Pepys would write about Descartes' book, "which I understand not, nor think he did well that writ it, though a most learned man" (I sympathize), but its text is not relevant. On page 22 of the 1650 printing is Descartes' reading of a battery of hexachords: six-note scales in their three positions ('soft', 'natural', and 'hard'), dating from the 11th century. Pepys would have seen this very drawing and could have viewed it as a sophisticated template that could be combined with what he had carried away from Berkenshaw to allow him to create something new.

A drawn, printed figure (Figure 12.D.1) shows clearly the content of the two frames found on the underside of the spinet's keyboard cover. The scale ladder on the right appears to be a simpler, but similar looking ladder to Descartes'. Where Descartes' notes ascend, the lid's descend. Where Descartes has arranged six notes from 'ut' to 'la', in the three hexachordal fashions, the lid shows a six-note scale beginning on 'mi' – but in a single column. Perhaps the most important thing is that numbers have been substituted for solfege. Evidently, Pepys (guided, perhaps, by Berkenshaw), saw the desirability of a fourth hexachord beginning on 'mi', that, unlike the usual three ('ut', 'fa', and 'sol'), contained two half-steps instead of one. Conceivably, but most unlikely, he might have envisaged the use of the Phrygian mode. However, except for the Ionian (major) and the Aeolian (minor), the other modes had been swept aside well before this period.

To the left of the scale ladder is a block of triads – the tonic chord in all three positions. Pepys would have been aware of Campion's 'Rule of the Bass',[127] meant to aid a composer in constructing a pair of parts above the bass line. Pepys might have taken Campion's table of two parts, rotated it 90-degrees and then inserted a third part in the middle, creating identical triads in every direction.

Pepys would also have been familiar with the 'magic square' and probably Albrecht Durer's celebrated engraving, 'Melencolia – 1', which incorporated a particularly interesting example. Durer had worked the numbers '15' and '14' on to the bottom row of his pictured 4 x 4 square (1514 was the year of this renowned engraving). It was well known in Europe in the 17th century and Pepys had to have been aware of it.

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[125] See *John Birchensa, Writings on Music* Ed. By C.D.S. Field, Univ. of Edinburgh; B. Wardhaugh, Univ. of Oxford, Ashgate Publishing, 2010.

[126] Rene Descartes (1596-1650) *Musicae Compendium* (Amsterdam – 1617, Utrecht – 1650).

[127] Thomas Campion, 'A New Way of Making Fowre Parts in Counterpoint' (1663).

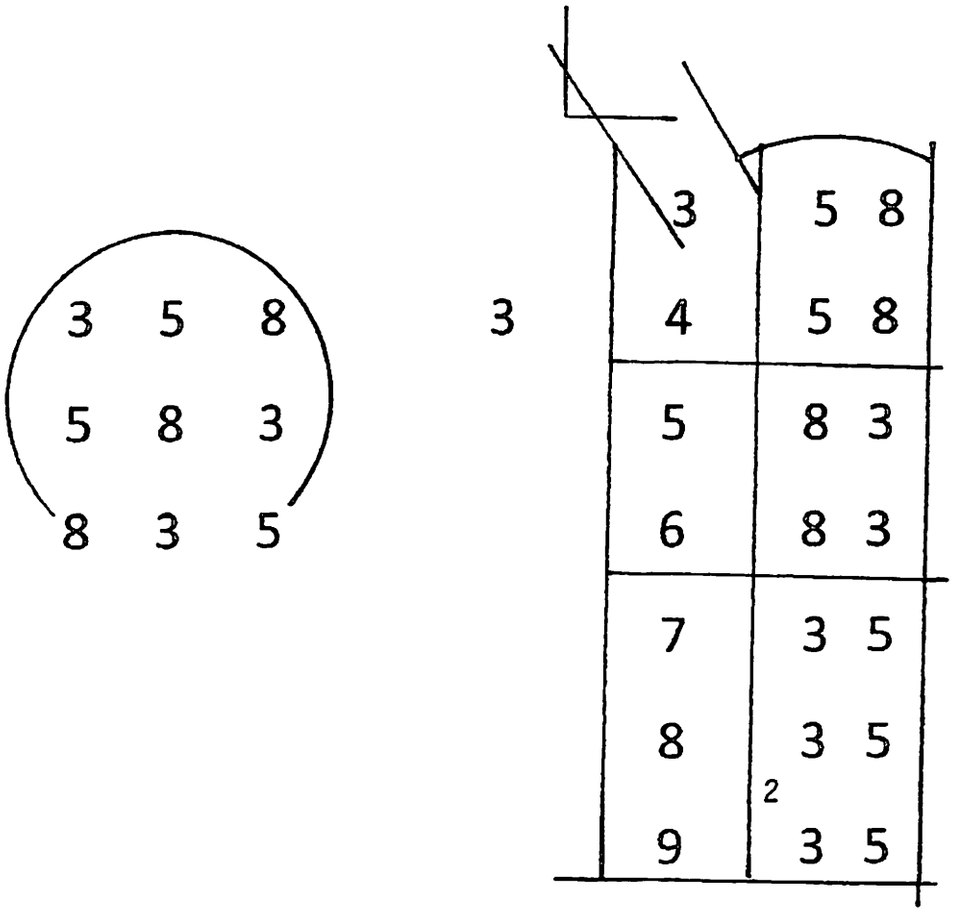

Figure 12.D.1.

In a magic square, the sums of all columns, all rows, and both major diagonals are equal.[128] If Pepys attempted to create such a square by using his three triadic notes, he was seven-eighths successful: He missed one diagonal.

While Pepys' idea for this grid is uncertain, its intended purpose seems clear: He has moved the three triadic notes horizontally on his grid to the right and positioned them in pairs into three boxed sections of his ladder. He then used these pairs to harmonize the remaining four diatonic notes of the scale. Whether he was pleased with the result of his resulting chordal simplification is unknown.[129] I believe that this attempt to assign each diatonic scale note to a single chord –

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[128] On a 3 x 3 square, assuming just single-digit numbers 1 – 9, there is just one possible arrangement, but by tilting and reflecting the square, eight can be created. The number five would remain in the middle of all of them.

[129] Pepys' chordal simplification attempt might be compared to Benjamin Franklin's attempt to simplify the clock and also the string quartette with simplified tunings (he actually wrote a short one). Neither of these intellectually-stimulating tries, however, resulted in radical breakthroughs.

the tonic chord – may be the harmonic objective Pepys was hoping to achieve. If so, this scratched ladder is a Rosetta Stone to his thinking.[130]

E. Further Evidence: Pepys' Lettering and Numbering Style

Our interpretive understanding of **16XX**s inscriptions as outlined in the preceding sub-chapter can be supported by an analysis of the styles of his letters and, in particular, his numbers. With Pepys' first diary page of 1 January 1660, we have the assured evidence of his writing style in that decade.[131] It is copied in Figures 12.E.1 and 12.E.2. We have the faceboard note lettering and the scratched grid and ladder numbers to compare to this diary page. Figures 12.E.3 and 12.E.4 are ink-enhanced photographs of the grid and ladder, scratched on the underside of the keyboard cover to compare to this diary page. Photographs taken with controlled lighting but without the ink-enhancement can be seen on exhibits Figures 12.E.5 and 12.E.6. Figure 12.E.7 is a photograph showing **16XX**'s faceboard note-lettering.

[130] At Oberlin Conservatory in the 1950s there was a Clementi-Kuhlau Society with the Pogo-inspired slogan, 'I Love Muzio and Kuhlau, too'. One day I recall seeing posted on the bulletin board an announcement of a supposed lecture, 'The C-Major Tonic in Root-Position – Nature's Own Chord'.

[131] It was, however, all written in code.

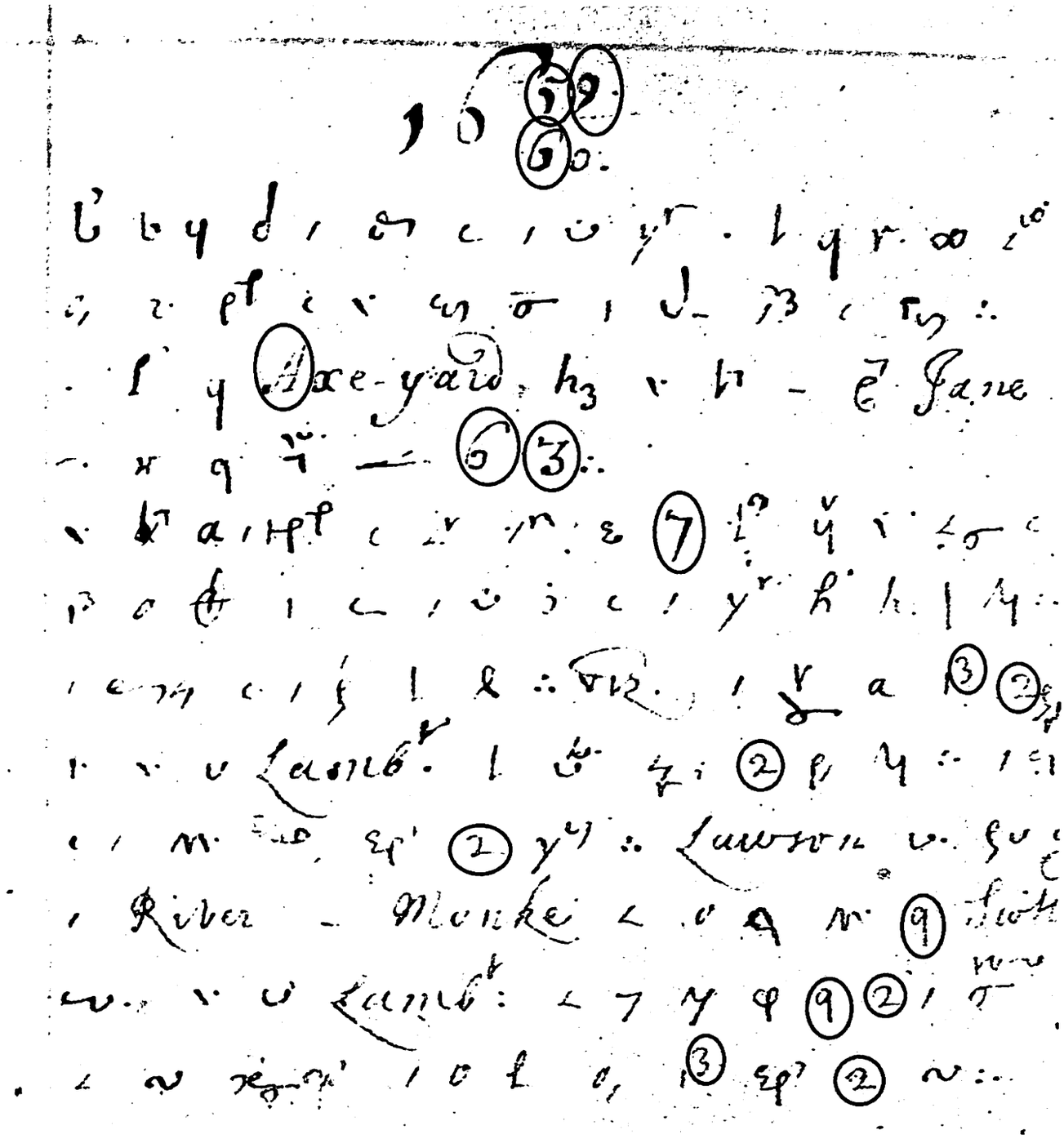

Figure 12.E.1.

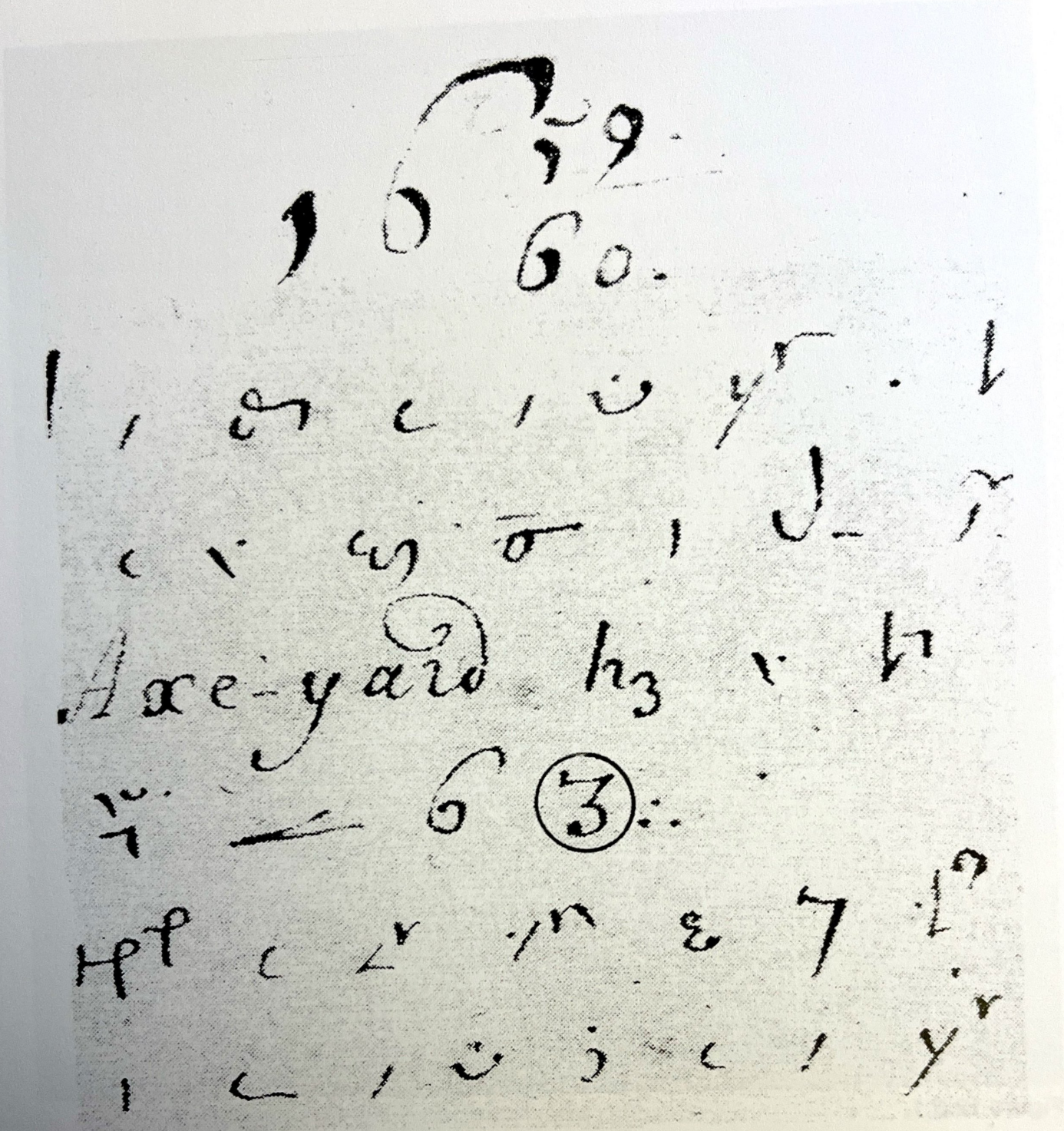

Figure 12.E.2.

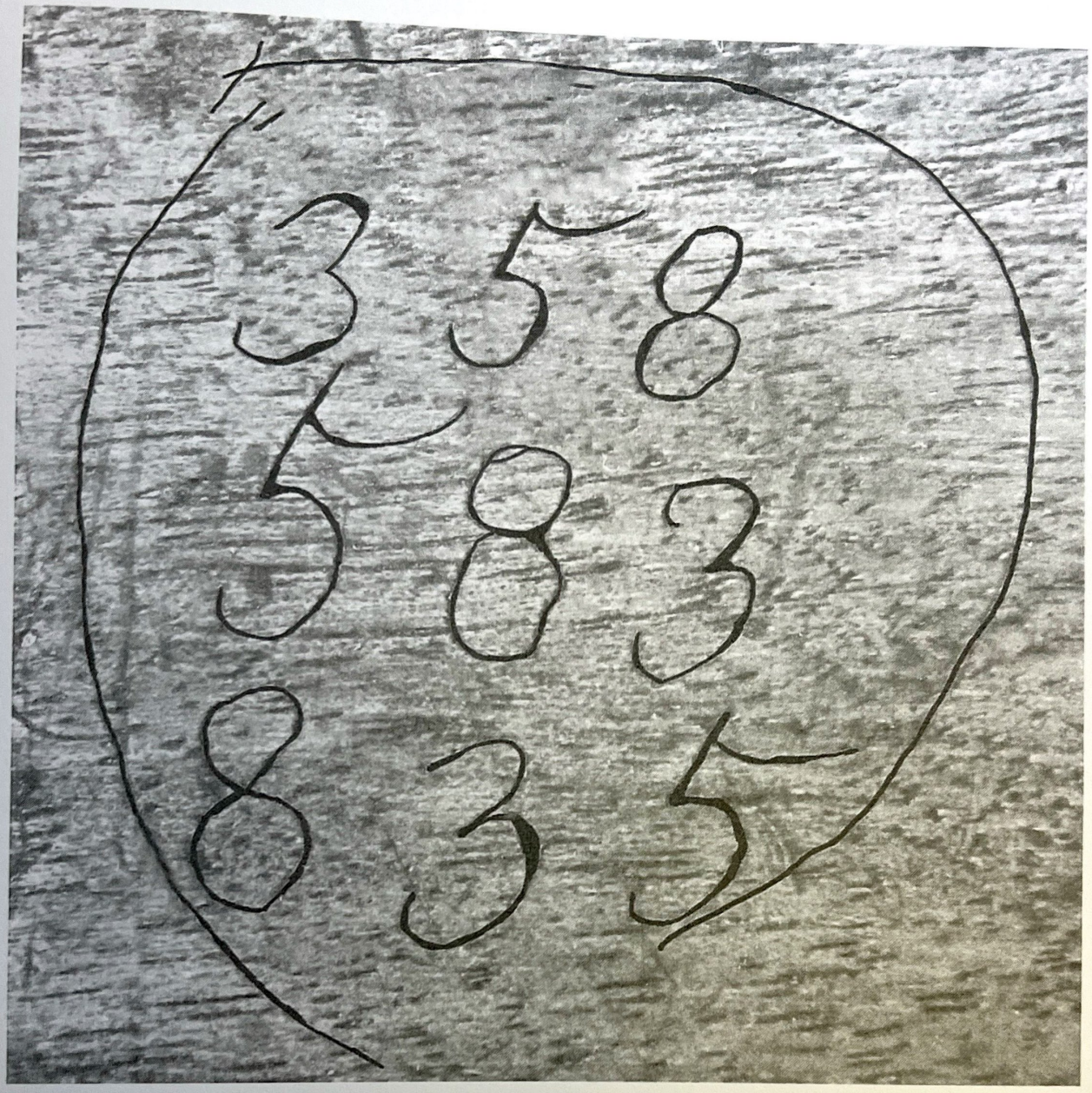

Figure 12.E.3.

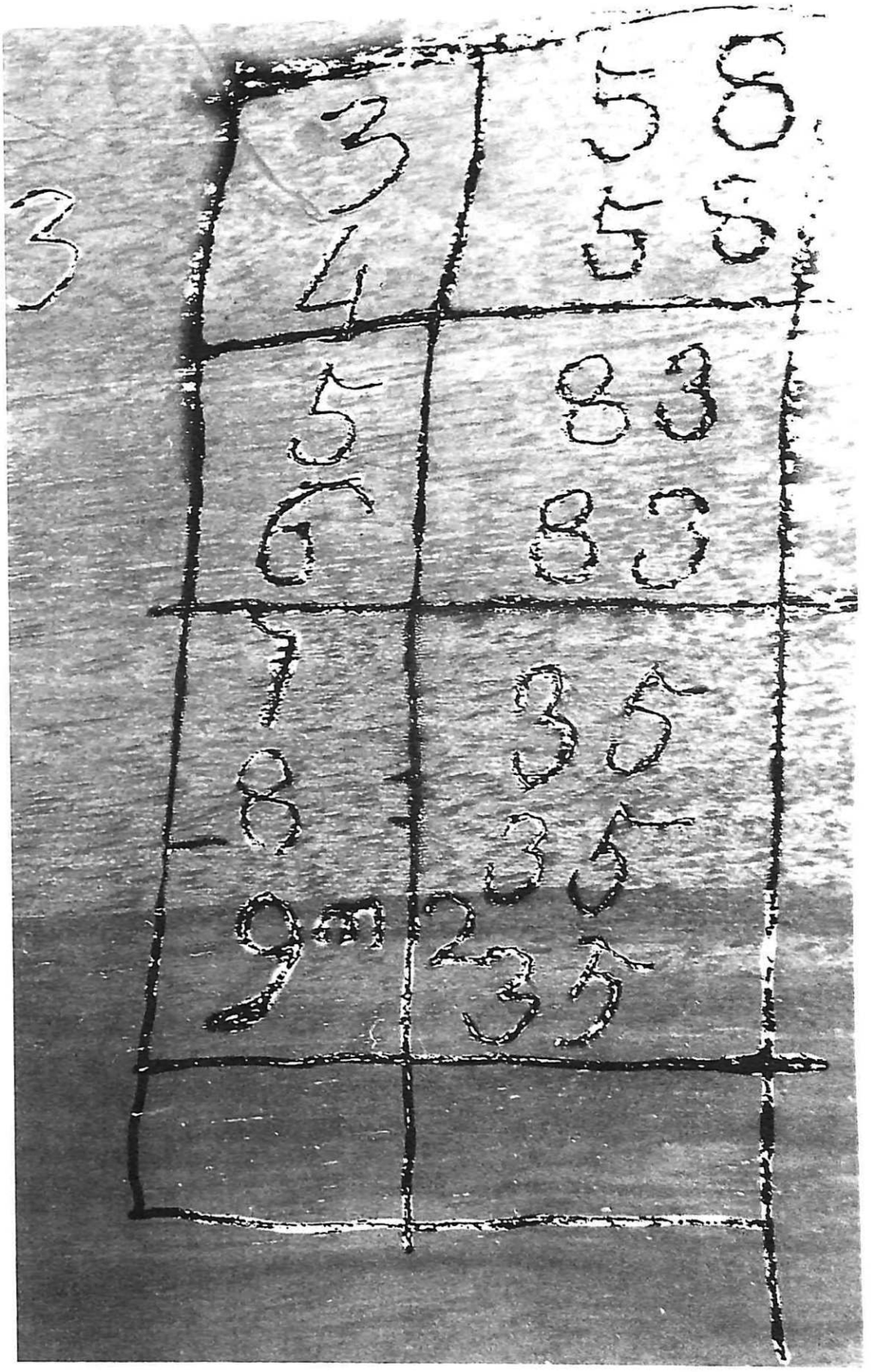

Figure 12.E.4.

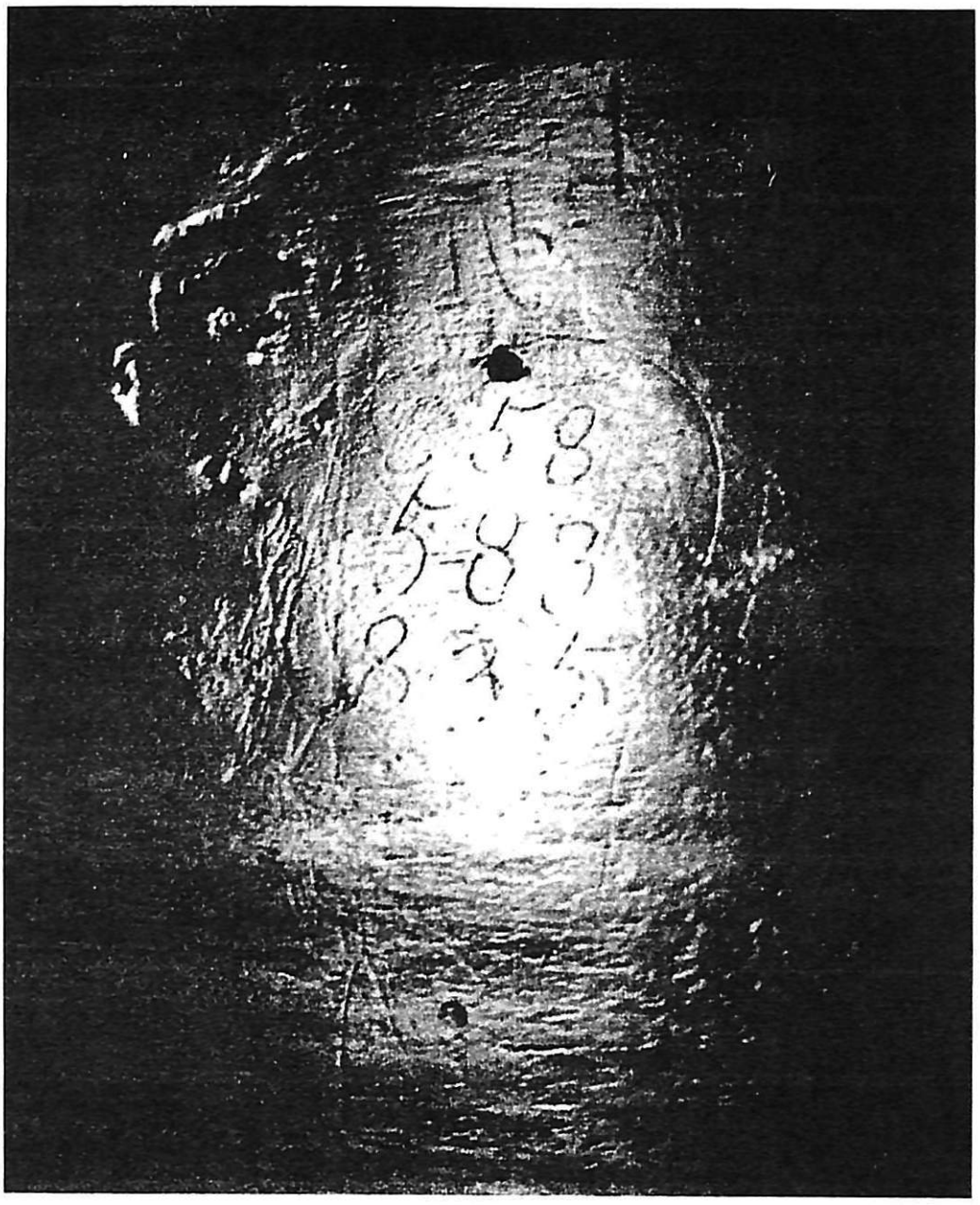

Figure 12.E.5

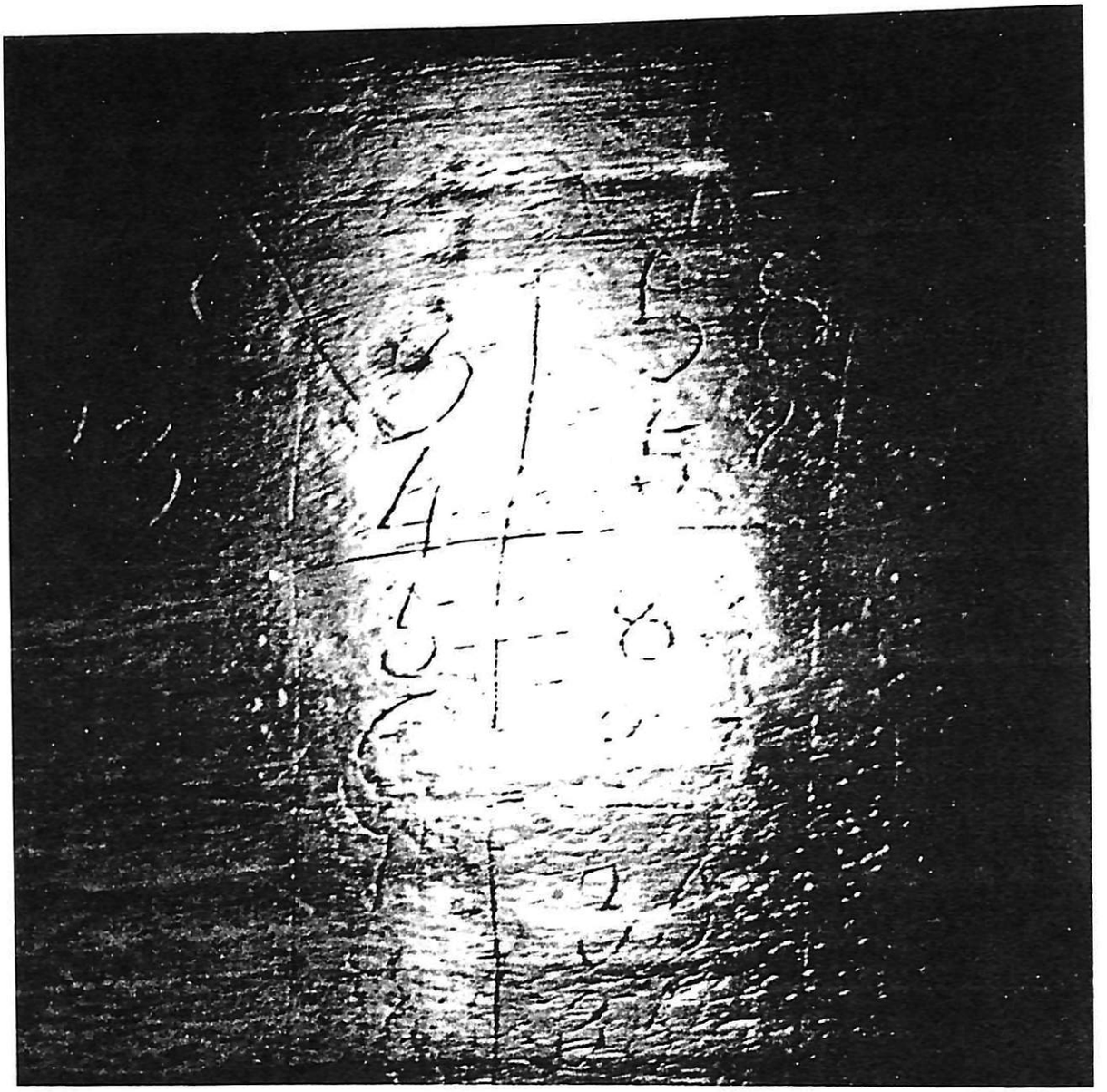

Figure 12.E.6.

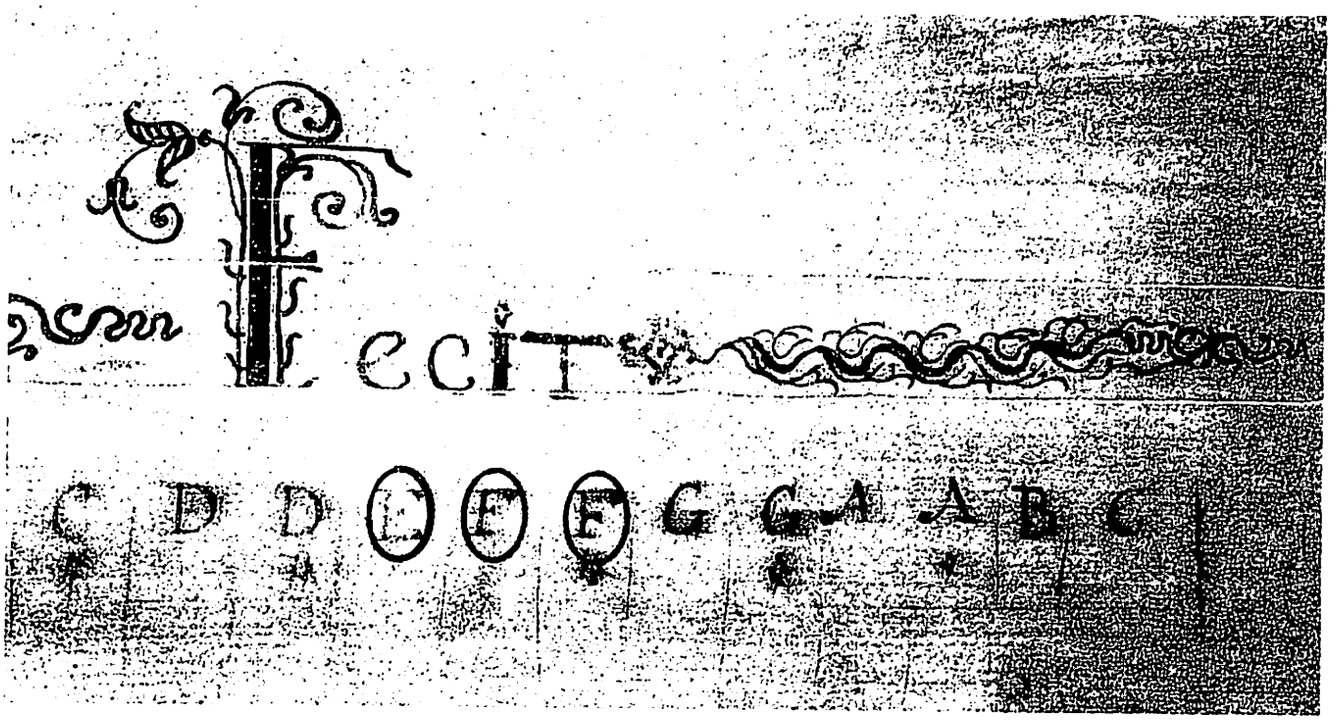

Figure 12.E.7.

Some of what we might regard today as writing anomalies are characteristic of the period, whereas others are the more unique traits of Pepys, and we must try to distinguish them. It is important to point out that Pepys was a man of his times and many peculiarities we might note on spinet **16XX** that we might assume are unique to him were actually shared by others. While any one oddity may go no further than to suggest Pepys, several, considered together, should authenticate the Pepysian connection to **16XX**.

The Evidence: The Analysis

On the faceboard, there are three letters that can be tied to the diary's first page: 'A's, 'E's, and 'F's. The 'A's with their distinctive dots have only indirect relevancy, for I have found these dotted 'A's were made by some others in this period. The 'E's and 'F's, however, are unusual and are strikingly similar to that large, flat-topped '3' in the centre of the diary page. This is a highly significant match.

On the underside of the keyboard cover, there is a small single '2', a single '4', a single '6', a single '7', eight '8's, nine '5's, nine '9's, and ten '3's. Figure 12.E.8 is a photograph of the key tops of **16XX** showing Charles Haward's number style, written at roughly the same time. The '3's, '4's, '5's, '6's, '7's, '8's and '9's are radically different from Pepys'. Typically for many, and perhaps most letterers in the 17th and early-18th centuries, the '5's and '8's are tilted about 45-degrees as are Hawards, but not Pepys'. Haward's '2's have short curved bottoms, whereas the spinet's single '2', like Pepys' '2' on the diary page, shows a straight, horizontal base surmounted with a backwards 'C' of a semi-heart form. The spinet's single '7', like the '7' on the diary page, has an angled, slightly cupped top. The spinet's single '4' has a counterpart on the diary page: With its open top and strong LH vertical, it differs significantly from most others of the period, including Haward's, that have closed tops. None of the spinet's '8's are tilted.

The '5's on the spinet's keyboard cover all have long, cup-shaped tops. This style of '5' seems to be often found in mid-century. In my search for examples, the earliest I have seen of this flamboyant '5' is from c.1625, and in the last quarter of the 17th century, it seems to have

become uncommon. Pepys in his later years appears to have abandoned it.[132] This style '5' can be clearly seen at the top of the diary page, but like the dotted 'A', it has to be regarded as a weak Pepysian indicator.

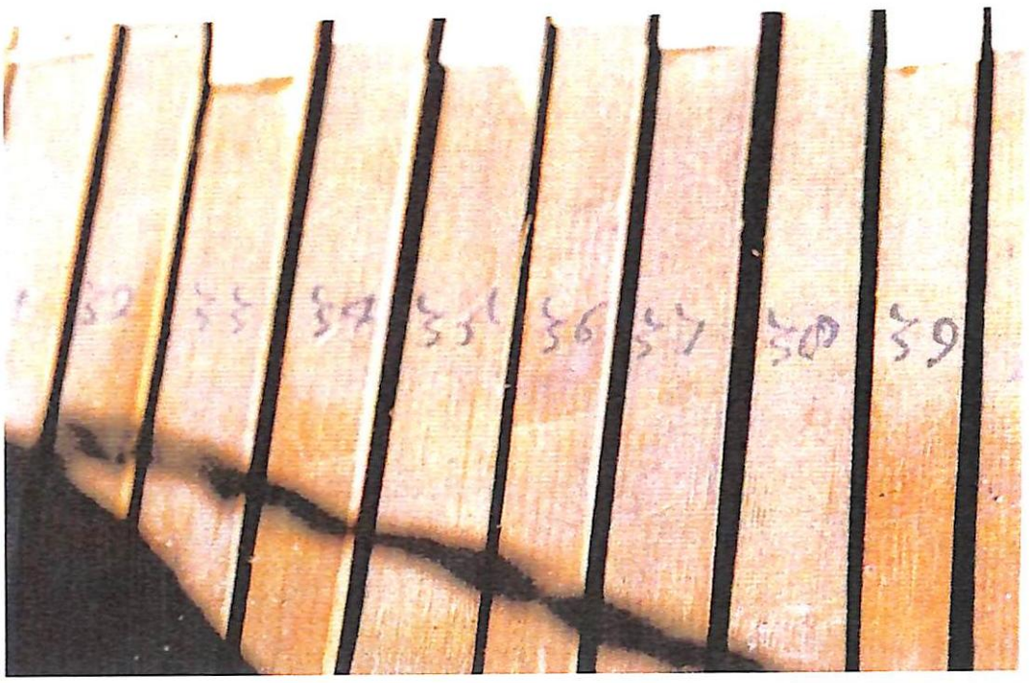

Figure 12.E.8.

Pepys' '3's, '6's, and '9's are unusual. His '3's are all untilted, round-topped, and resemble semi-circles over slightly tilted, pot-bellied half-hearts. This unusual shape is consistent, and it differs significantly from Haward's and other contemporaries, most of which have flat tops – more like the giant '3' on the diary page (undoubtedly a code symbol for something other than a 'three').

Pepys' '6's and '9's are markedly distinctive. Typical 17th century '6's have short curled tops and '6's inverted for '9's, as seen on the Haward key tops. In contrast, both the diary page and the lid show particularly exuberant '6's combined with very restrained '9's – these two being treated very differently. In Pepys diary page, his '9'-verticals are either straight or just slightly curled – short and never elongated. This difference may be unique or nearly unique to Pepys.

I have included an auction photograph (Figure 12.E.9) of a 1659-dated jug because its tilted '5', although bearing no relationship to Pepys, appears to be identical to Haward's. Its '6' and '9' are also suggestive of Haward's writing – but not Pepys.

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[132] A lingering late use of this cupped-top '5' can be seen on the Arabic number (minute) bands of 18th, and even early-19th century longcase clocks with both painted dials and silvered chapter rings. But these later tops are always particularly short; mid-17th century '5' tops are always elongated.

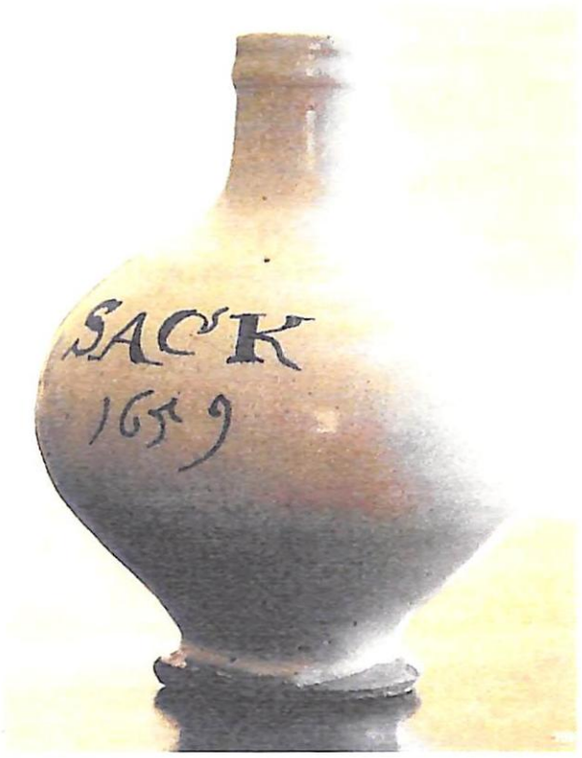

Figure 12.E.9.

F. Conclusion

To the extent that Pepys' ownership of **16XX** can be accepted, based on our analysis of this spinet's inscribed content, the further study of his writing style might be considered redundant. It might lend sufficient support in a negative manner merely by showing that no parts of the spinet's inscriptions were at variance with the manner of number-writing found in Pepys' diary.

We have gone beyond this, however. We have been able to lend positive support to Pepys' spinet-inscripted content connection by distinguishing the writing style elements unique, or nearly unique, to Pepys from those more often expected in the mid-17th century. We have observed on both the diary page and this spinet:

- A giant '3' that can be tied to two faceboard letters.
- Untilted '5's and '8's.
- High-crested '6's.
- Restrained '9's.
- Distinctive open-topped '4's.
- Round-topped, tubby-based '3's.
- '5's with long, flamboyant tops.

In Chapter 11, we have shown that spinet **16XX**, bearing John Haward's markings, was begun by him and then completed and singularly labelled by Charles after John Haward's death in 1667. We have determined that in April 1668 it was the only spinet in Charles Haward's shop;

and it was, undoubtedly, an unfamiliar instrument to him. In this chapter we have argued that in the absence of a second spinet, it had to have been the unfinished spinet seen by Pepys in April 1668 and then bought by him three months later. We have also argued there cannot have been a second spinet owing to the nature of the markings and inscriptions coupled with this spinet's evidence of minimal use: both suggesting its early ownership by a theorist, or at least, a non-performer. A misunderstanding of the spinet's short octave and the style and explanations for several inscriptions tie this spinet to a non-performer. Pepys was a theorist and a non-performer. The spinet's markings were shown to be both pedagogical and done in a Pepysian-indicated style.

We are left with two questions: First, what did Pepys do with his nearly-new spinet after it had served his purpose? And, second, where was it for 200 unaccounted-for years?

CHAPTER 13 QUEEN ANNE'S HAWARD SPINET

Summary

The eight accounts of Queen Anne's Haward spinet

- Each account is quoted
- The accounts are analyzed
- From these, 15 determinations can be made
- Observations about three of the determinations:
  - Was her spinet a virginal ?
  - Was it intended later to be a practicing instrument?
  - Was it later actually used as a practicing instrument?

The Chapel Royal – Described

- Its history
- Its musical component
- Responsibility of its Masters

Six masters inherited Queen Anne's spinet

- Biographies of each
- Masters just before and just after these six

Three possible reasons why her spinet was not passed on to the seventh master:

- Proprietary, pecuniary, and a third likely explanation

The spinet's importance to Queen Anne

- Princess Anne
- The spinet's early importance to her
- Anne and the Church of England
- Anne and the Chapel Royal
- Queen Anne's lack of a written will
- Her probable intention – the boy-choristers
- Her spinet's late importance to her

The case for one of three survivors

- Early instrument recognition in the mid-19th century
- Either a royal purchase or a gift
- A royal purchase can be ruled out
- It was new or nearly new and up-to-date when given to her
- It had to have been cherished by her for at least 25 years
- Its initial possession was probably at a sensitive period of her life
- We can rule out spinets: 1689, 1687, and 1684
- The three likely candidates are: 1683, c.1685, 16XX

The case for each of these three:

1683
c.1685
16XX

Samuel Pepys and Princess Anne
Samuel Pepys and the Duke of York
Princess Anne and the spinet
Spinet 16XX and the criteria
The 16XX Restoration
A Middleman Needed Before Dale
The Bildeston Hall Account
A Gap – A Needed Cover Story

Conclusion

It is the intent of this chapter to present all known evidence concerning Queen Anne's spinet, but given the absence of direct evidence, not to come to a definitive conclusion.

Queen Anne's Haward Spinet - Text

A. The Eight Accounts

Everything certain about Queen Anne's spinet comes solely from the following accounts dating over 138 years. Except for the fourth account by Rimbault, all of the others are recent discoveries.

The numbers in these accounts, following the names of the Masters of the Children (the boy-choristers) of the Chapel Royal, corresponds with those used in the attached table of these masters: they reflect their chronological order. Note that in these accounts, the masters' names are frequently mentioned out of order.

1776

In his book, *The Science and Practice of Music,* the music historian, Sir John Hawkins, wrote (1776:718):

> QUEEN ANNE PLAYED ON THE HARPSICHORD. SHE HAD A SPINET, THE LOUDEST AND PERHAPS THE FINEST THAT EVER WAS HEARD, OF WHICH SHE WAS VERY FOND. SHE GAVE DIRETIONS THAT AT HER DECEASE (1714) THIS INSTRUMENT SHOULD GO TO THE MASTER OF THE CHILDREN OF THE CHAPEL ROYAL FOR THE TIME BEING, AND DESCEND TO HIS SUCCESSORS IN OFFICE: ACCORDINGLY IT WENT FIRST TO DR CROFT (1), AND IS NOW IN THE HANDS OF DR NARES (3), MASTER OF THE CHILDREN (1757- 1780).

This is probably the earliest written account of Queen Anne's spinet. Hawkins seems to have received this information directly from Nares, the master at that time. It was not reported by Burney in his *General History of Music* (1776). Later, many others quoted or paraphrased this laudatory Nares-Hawkins description of the instrument's sound.

1825

In his 'Concert Room and Orchestra Anecdotes of Music and Musicians, Ancient and Modern' – Vol 1, Thomas Busby, Mus.D. wrote (1825:39-40):

> QUEEN ANNE, WHO WAS INSTRUCTED IN MUSIC BY GIOVANNI BATTISTA DRAGHI, CHIEFLY PRACTICED THE HARPSICHORD. SHE HAD AMONG HER KEYED INSTRUMENTS A SPINET, THE LOUDEST AND PERHAPS THE FINEST, THAT WAS EVER HEARD; AND WHICH SHE HIGHLY VALUED. HER MAJESTY, JUST BEFORE THE PERIOD OF HER DECEASE, GAVE ESPECIAL DIRECTION, THAT THIS INSTRUMENT SHOULD GO TO THE MASTER OF THE CHILDREN OF THE CHAPEL ROYAL, FOR THE TIME BEING, AND THAT IT SHOULD REGULARLY DESCEND TO HIS OFFICIAL SUCCESSORS. ACCORDINGLY IT PASSED FIRST INTO THE POSSESSION OF THAT SCIENTIFIC AND INGENIOUS MUSICIAN, DR CROFT (1), AND AFTERWARDS INTO THE HANDS OF DR NARES (3) BROTHER OF THE JUDGE OF THAT NAME, FROM WHOM IT DESCENDED TO MR GATES (2), AND THENCE TO THE LATE DR AYRTON (4), FATHER OF THE PRESENT MR AYRTON.

Busby (1755-1838) wrote that Hawkins had been employed for 35 years collecting materials and during the latter 16, preparing it for publication. Busby had evidently studied Hawkins' History. At the time he wrote this, the spinet was in the hands of William Hawes, the sixth master.

1844 (c.1834)

The *Carlisle* (Cumberland Co) *Patriot* carried the following article by 'The Maestro' on 18 May 1844:

> QUEEN ANNE'S SPINET – QUEEN ANNE, WHO WAS INSTRUCTED IN MUSIC BY BATTISTI DRAGHI, CHIEFLY PRACTICED THE HARPSICHORD. SHE HAD AMONGST HER KEYED INSTRUMENTS A SPINET, THE LOUDEST AND PERHAPS THE FINEST THAT EVER WAS HEARD, AND WHICH SHE HIGHLY VALUED. HER MAJESTY, JUST BEFORE HER DECEASE GAVE ESPECIAL DIRECTION THAT THIS INSTRUMENT SHOULD GO TO THE MASTER OF THE CHILDREN OF THE CHAPEL ROYAL, FOR THE TIME BEING, AND THAT IT SHOULD REGULARLY DESCEND TO HIS OFFICIAL SUCESSORS. ACCORDINGLY IT PASSED FIRST INTO THE POISSESSION OF THE CELEBRATED DR CROFT (1), FROM HIM TO DR NARES (3) AND DR AYRTON (4), AND IS NOW IN THE POSSESSION OF MR HAWES (6). IT WAS USED TO ACCOMPANY A SONG OF LOWES' (actually of Nicholas Lanier's) 'SILLY HEART', SOME TEN YEARS SINCE, AT THE ORATORIOS, WHEN UNDER THE DIRECTION OF BOCHSA; BUT ITS WIRY AND JARRING TONE WAS ANYTHING BUT AGREEABLE –THE MAESTRO

G B Draghi (c.1640-1708) apparently excelled as a harpsichord player and was at the courts of Charles II to Queen Anne. He was a native of Italy.

Nicholas Lanier (1588-1666), a native Englishman, was appointed Master of the King's Music from 1626-49 and again, 1660-66. His 'Stay, Silly Heart and Do Not Break' is from the poem 'Hero & Leander' by Christopher Marlowe.

R N C Bochsa (1789-1856) 'fled' to London from Paris in 1817. From 1826 to 1839, he was musical director of the King's Theatre.

The *Dictionary of National Biography (*2004) may have defined 'The Oratorios': "HAWES, WILLIAM ...In 1825 he directed a series of Lenten oratorios at Covent Garden and in 1830 engaged in similar ventures at both patent theatres".

1860

In his book, *The Pianoforte,* Edward F Rimbault wrote (1860:68):

> QUEEN ANNE HAD AMONG HER MUSICAL INSTRUMENTS A SPINET BY HAYWARD, THE LOUDEST AND PERHAPS THE FINEST THAT WAS EVER HEARD: AND WHICH SHE HIGHLY VALUED. HER MAJESTY, JUST BEFORE THE PERIOD OF HER DECEASE, GAVE ESPECIAL DIRECTION THAT THIS IMPORTANT INSTRUMENT SHOULD GO TO THE MASTER OF THE CHILDREN OF THE CHAPEL ROYAL FOR THE TIME BEING, AND THAT IT SHOULD REGULARLY DESCEND TO HIS OFFICIAL SUCCESSORS. ACCORDINGLY IT PASSED FIRST INTO THE POSSESSION OF DR CROFT (1) AND AFTERWARDS INTO THE HANDS OF DR NARES (3) FROM WHOM IT DESCENDED TO BERNARD GATES (2) AND THE LATE DR AYRTON (4). MR HAWES (6) WAS THE NEXT MASTER, AND WHEN THE WRITER LAST HEARD OF QUEEN ANNE'S SPINET, IT WAS CONSIGNED TO THE COCK-LOFT (attic) OF THAT GENTLEMAN'S HOUSE IN THE ADELPHI TERRACE, WHERE, IN ALL PROBABILITY IT STILL REMAINS.

Thomas Helmore was unmentioned. While he followed Hawes as the master in 1846, he never received Queen Anne's spinet.

A Hawes daughter could be the key to the disappearance of the spinet. Maria Hawes Merest (1816-1886) was an accomplished contralto: In 1846 Mendelssohn wrote 'O Rest in the Lord' (Elijah) expressly for her. But then, when she married in the following year, she seems to have put her musical activities behind her. After she was widowed in 1860, she moved back to 7 Adelphi Terrace, which had remained in the Hawes family. Since the bulk of her late husband's estate went to the eldest son of his first marriage, she was no longer well off. Judging from her advertisements and notices in the *Musical Times,* in the 1860s, 'Mrs Merest, as she called herself, was trying to earn money, in musical activities, any way she could, by giving vocal lessons, holding 'soirees', composing songs, and later, performing in provincial towns. She was living at #7 until 1867, when she moved to another London address. She died in 1886 at a home of her late husband's that she had inherited, on the Isle of Wight.

In 1890, the year of her brother's death, #7 was sold. It was then annexed to #6 as part of the Savage Club (see Appendix F). Adelphi Terrace, built in the third quarter of the 18th century by the brothers Adam, was a row of "24 unified neoclassical terrace houses" between the Strand and the River Thames. Tragically, it was demolished in 1936.

1864

In 'The Orchestra', 16 January 1864 (p.246):

> QUEEN ANNE'S SPINET. QUEEN ANNE, WHO WAS INSTRUCTED IN MUSIC BY GIOVANNI BATTISTA DRAGHI (c.1640-1708), CHIEFLY PRACTICED THE HARPSICHORD. SHE HAD AMONG HER KEYED INSTRUMENTS A SPINET, THE LOUDEST AND PERHAPS THE FINEST THAT WAS EVER HEARD; AND WHICH SHE HIGHLY VALUED. HER MAJESTY, JUST BEFORE THE PERIOD OF HER DECEASE, GAVE ESPECIAL DIRECTION THAT THIS INSTRUMENT SHOULD GO TO THE MASTERS OF THE CHILDREN OF THE CHAPEL ROYAL, FOR THE TIME BEING, AND THAT IT SHOULD REGULARLY DESCEND TO HIS OFFICIAL SUCCESSORS. ACCORDINLY, IT PASSED FIRST INTO THE POSSESSION OF THAT SCIENTIFIC

AND INGENIUS MUSICIAN, DR CROFT (1), AND AFTERWARDS INTO THE HANDS OF DR NARES (3), BROTHER TO THE JUDGE OF THAT NAME, FROM WHOM IT DESCENDED TO MR GATES (2) AND THENCE TO THE LATE DR AYRTON (4).

This account was taken directly, without paraphrase from Busby, written 39 years before.

1870

In a lengthy 'letter' in the *English Mechanic & Mirror of Science* 1 July 1870 (p.346), 'The Harmonious Blacksmith' wrote:

> "I also take this opportunity of appealing to the good feeling of those who possess any instruments which would add to the wealth of our national collection to follow the liberal example of Messrs. Broadwood and Messrs. Kirkman by presenting them to the nation; or at least like the less liberal example of Mr Carl Engel who has lent 60 instruments from his collection to the museum including the only example of 'ye clavichordis' which is in it. Happy should I be if Lord Lytton or the Rev, Mr Spalding, or the present possessor of the virginal sold at the sale of the effects of Lord Spencer Colchester in 1863 or Dr Rimbault could be induced to lend the virginals now in their possession –
>
> --OR THAT THE OWNER OF QUEEN ANNE'S SPINET, SAID TO BE ONE OF THE MOST POWERFUL EVER MADE BY HAYARD WHICH IS NOW IN THE POSSESSION OF MR HAWES (6) OF THE ADELPHI TERRACE IN 1860, WHO I BELIEVE YET HOLDS IT IN TRUST UNDER QUEEN ANNE'S TESTAMENTARY DIRECTION FOR THE USE OF THE SINGING BOYS OF THE CHAPEL ROYAL – PROBABLY THEY DON'T LEARN ON IT NOW IN THESE HARMONIUM AND PIANOFORTE DAYS AND ALSO THEREFORE WILL SPARE IT –
>
> "--The present possessors of Plenius' lyrachord (1745) and Merlin's private harpsichord; the destructive Goths have spared them, may be induced to do likewise.
>
> "I am happy to say that it appears very probable that the destruction of works of art of this kind is not likely to go on at the former rate, since more have been collected and deposited at South Kensington (the V&A) some of which have been purchased at very liberal prices. That class of persons who recognize no value excepting money value are beginning to learn that there is a market for such things and that they fetch a deal more than their mere materials are worth".

The 'Blacksmith' could possibly have been Robert Holford Rosanquet (1841-1912) – an acoustician and musical theorist who corresponded with Engel.

1883 (1816)

In the first (1883) edition of Grove's Dictionary (Spinet – p.656), A J Hipkins wrote:

> THERE WAS A SPINET BY ONE OF THE HAYWARDS LEFT BY QUEEN ANNE TO THE CHAPEL ROYAL BOYS. IT WAS USED AS A PRACTICING INSTRUMENT UNTIL THE CHORISTER DAYS OF THE LATE SIR JOHN GOSS, PERHAPS EVEN LATER.

Hipkins seems to have received this information directly from Goss. John Goss (1800-80) was one of the children – there from 1811-16 under J S Smith (5). Nevertheless, later, Goss reported, "A frequent observation of Mr S: 'You came here to learn to sing and not to learn to play'".

1914 (1840s)

At a lecture, 'The Lord Chamberlain and Opera in London 1700-1740', given at the Musical Assn, 20 January 1914, W H Cummings said:

> QUEEN ANNE SUCCEEDED TO THE THRONE IN 1702, AND LIKE ALL THE STUART FAMILY, POSSESSED CONSIDERABLE MUSICAL TALENT AND LOVE OF THE ART. WE GRATEFULLY REMEMBER HER GIFT OF A SPINET TO THE CHILDREN OF THE CHAPEL ROYAL, A FINE INSTRUMENT WHICH I WELL RECOLLECT TO HAVE SEEN IN MY YOUTHFUL DAYS, IN THE HOUSE OF THE MASTER, WILLIAM HAWES (6).

William Hayman Cummings (1830-1915) was a Chapel Royal chorister in the early 1840s. He was a noted singer, researcher, composer, writer, and founder of the Purcell Society.

Queen Anne's spinet evidently remained a "fine instrument" at that late, mid-19th century period, before it was taken to the Hawes' attic. Here, on the eve of the 1st World War, and exactly two centuries after Queen Anne's death, is an eye-witness account of this spinet.

An Account Analysis

HAWKINS' account is the first information we have about Queen Anne's spinet. From it we learn she owned and played a harpsichord and G B Draghi, a court composer from the time of Charles II, was her instructor. She also owned an exceptional-sounding spinet that she "highly valued" and intended to keep until her death. At that time, "according to her instructions", it was to be passed down through a succession of future Masters of the Children of the Chapel Royal, and this began with its possession by William Croft in 1714. In this account, there was no mention of her spinet's intended purpose and no mention of its maker.

BUSBY merely paraphrased and updated the Hawkins account a half-century later.

'THE MAESTRO' lifted Busby's first 3-1/2 sentences without paraphrasing them. Since Busby had died six years before, he cannot have been the writer; and strangely, Carlisle, where the account was published, is in the northwest of England, far from London. This is an exceptionally valuable account. Hawes was accurately reported to be the then-current master and we learned Queen Anne's spinet had either survived in playing condition or had recently been restored, for around 1830 it was taken from the Hawes residence and played elsewhere in public. The 'Maestro's' pained 19th century response to her spinet's sound is in interesting contrast to the ecstatic report by Hawkins, quoted by the 'Maestro', and written just a few decades before.

RIMBAULT's account is the most valuable of the eight. We first learned that Queen Anne's spinet was by Haward and it was taken to the attic of the sixth master, presumably by the family after his death in 1846. It was not passed on, and Rimbault believed it was probably still in the Hawes' attic as he wrote his account in his book in 1859-60.

THE 'HARMONIOUS BLACKSMITH"s account again refers to 'Hayward' as the spinet maker and wrote that it was "for the use of the singing boys of the Chapel Royal". He also wrote of the escalating prices, then, for "works of art of this kind".

CUMMINGS' account is first-hand, written just seven months before the start of World War I. It confirms that Queen Anne's spinet was still in the Hawes' living quarters in the early 1840s at the time that Cummings was a chorister living there. It also confirms it could be described as "a fine instrument" just before it was moved to the attic. His is the only account that described Queen Anne's gift as being "for the children of the Chapel Royal" and not just for a succession of masters.

15 Determinations

From the eight accounts and our account analysis, we can make these 15 determinations:

1. Queen Anne owned and played a harpsichord; Draghi was her instructor.
2. Nevertheless, her spinet was particularly important to her; she possessed it until her death in 1714.
3. This instrument was a spinet and not a virginal.
4. It was made by "one of the Hawards".
5. It may have been an exceptional-sounding spinet, although "loudest and perhaps the finest" was unlikely to describe the sound of any petite 17th century spinet.
6. According to Queen Anne's oral instructions (she left no written will), after her death her spinet was to be passed on to a succession of masters of the Children (boy-choristers) of the Chapel Royal.
7. It was, in fact, passed down through six masters.
8. Whether Queen Anne intended for her spinet to be used a practicing instrument for the boys is probable, but unclear.
9. Whether it was viewed, solely as a royal relic by these masters or actually used, is also unclear.
10. It was in the living quarters of the sixth master as late as the early-mid 1840s.
11. Presumably after the death of Hawes, the sixth master in 1846, it was taken to his family's attic. It was not passed on to the seventh master, Thomas Helmore.
12. It may have remained in the Hawes' town-house attic until 1860, or after.
13. Around 1830, it had either survived in, or had been restored to, good playable order.
14. In 1830 or so, the sixth master took it from his home to a 'patent theatre', where it was used to accompany a song.
15. In the following decade of the 1840s, it must have remained in playing condition – for it was later described by Cummings as a 'fine instrument'.

Three of these determinations warrant further comment.

Was This Instrument A Virginal ?

Queen Anne's instrument had never been referred to as a virginal before 1956. Citing Rimbault as his source (Ri:68), Donald Boalch in B1 erroneously wrote, "Queen Anne had a virginal by him...". (B1:46). However, since Rimbault in the cited passage had referred to her instrument as a spinet, this had to be a mis-quote. From that year, but only from that year, every organological writer mentioning it has called it a virginal.

Even in the absence of this cited mis-quote, there is other evidence: First, Nares, Goss, the "Maestro", Rimbault (possibly), and Cummings, actually saw the instrument and each called it a spinet. They all would have had a modern and Anglo-Saxon understanding of a 'spinet' as distinct from a 'virginal'. Second, the appearance of any English spinet with a highly-decorated interior should have been commented on by one of these observers. None, however, mentioned the appearance of Queen Anne's spinet. Third, today, it appears, no Haward virginal survives; yet, we can account for six known Haward spinets.

Its Intended Use

We have only one reference to Queen Anne's intended use for her spinet by the boy-choristers. It is the 1870 account by the 'Harmonious Blacksmith', and it is both late and second-hand. Nevertheless, its intended use by the boys is highly likely. It would have been simple for her to have willed it to the Chapel Royal or to the Dean, instead of the complexity of successive ownerships by future masters of these boys. Her motivation for this could be credibly explained.

Perhaps the most tragic event in her sorrowful life was the loss of her 11-year-old son in 1700 – the only child of hers to live beyond the age of two. Eleven was the age of most of the Chapel Royal boys when they began to sing there. Perhaps she saw her son when she looked at their faces, Sunday after Sunday.

Its Actual Use

We have, likewise, just one account that suggests that her spinet was actually used as a practice instrument for the boys – the account by Hipkins. Since Hipkins apparently discussed this matter with John Goss, a chorister in the Regency-period, his account may not be apocryphal. But given Goss' statement that his musical education was to be restricted to singing, his access to her spinet seems unlikely. Another consideration is its lessened usefulness over time. Queen Anne's truncated 4-, or 4+-octave range was becoming marginally inadequate by the time of her death, let alone decades later. Also, before the close of the 18th century, its plucked sound might have had little appeal to young boys with up-to-date tastes. After Croft and, perhaps, Gates, if any of the Chapel Royal singers were being trained on a stringed keyboard instrument, it is most likely to have been on a more modern instrument of their master's.

Her spinet was clearly housed and protected by each of six masters. But except for Hawes, we have no evidence that it was ever played, kept in playing order, or even if it was kept in the living quarters of any of these men rather than being stored safely away awaiting its transfer to the next master.

B. The Chapel Royal

The English Chapel Royal, along with its choral tradition, has existed almost continuously for nine centuries. The only known gap has been the eleven-year period of the Commonwealth of

the mid-17th century.[133] Except during the short four-year reign of James II, when a second Roman Catholic chapel was established in the late 1680s, the chapel establishment was always at a single location. From 1703, following a fire at the chapel – then at Whitehall, it was moved to the Banqueting Hall of St James' palace.[134] When living at the palace, the monarch would ordinarily attend the service held each Sunday morning.

There is no record of a harpsichord or other plucked keyboard instrument in the chapel until the reign of George III (1760). But the presence of an organ there goes back centuries. Because of a space-limitation at the St James chapel, there was room for only a small organ, and one was built by Bernard Smith in 1703-4 and used during Queen Anne's reign. In imitation of what he had observed at the court of Louis XIV, Charles II instituted his '24-violins' at the Chapel Royal in 1662. They persisted until they were disbanded by King William in 1689. However, Queen Anne, from the beginning of her reign, requested their use whenever she was there.[135] She would have remembered these violins as a child at the French court when she was there for two years in the late 1660s.

For centuries, the chapel's musical complement consisted of about ten to twelve children, up to 32 gentlemen, at least one organist, and from the mid-15th century, a master of the children. He was responsible for the board, lodging, clothing, costuming, and educating of the young boy sopranos in the choir. The alto, tenor, and bass parts were sung by the gentlemen – probably not over six or eight at the same time, however. The gentlemen, unless they resigned, were chapel members for life. Many, perhaps most, had earlier been chapel children.

Some of the most remarkable figures in English musical history have been connected to the chapel. Some of the chapel's organists were C Tye, T Tallis, W Byrd, J Bull, O Gibbons, T Tompkins, J Blow, H Lawes, H Purcell, W Croft, M Greene, and W Boyce.

By the 19th century, talented boy sopranos were no longer spotted and conscripted as they had been previously, but were brought (and sometimes removed) by their parents. This was the case of S Tie Wesley, who was brought by his father, Samuel Wesley, in 1819. In the 1840s, W H Cummings was removed by his father who felt his son was being subjected to overly-harsh discipline.

Typically, a boy would come to the chapel at age eleven and remain until his voice broke – in the 18th century, this was as late as 16 or 17 (Purcell's voice broke at age 14). He would live in the house of his master who, in Bernard Gates' time, received an annual stipend of £240 a year plus £24 for each boy. When he left, the boy would receive a small payment, plus various items of clothing, a bible, and a prayer book. Where he would typically go from there and how that differed in various eras is unclear, but over the years, many later pursued careers in music, as did S Tie Wesley and Arthur Sullivan, just to name two. Some would later become gentlemen, and masters of the children would typically be selected from among these men by the sub-dean. It is worth noting that while Henry Purcell, his brother Daniel, and his grandson Edward Henry, had all been choristers, none of these three later became gentlemen.

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[133] The term, 'Chapel Royal' has been used somewhat ambiguously to mean both the religious and musical establishment and also its physical building. Our focus here is on the former.

[134] St James' palace was the principal residence of Queen Anne, George I and George II.

[135] Only a few of these 24 would have played at the same time.

It is particularly worth noting that one of the children under Helmore in 1872 was a 'W Dale'. 'W' is almost certainly 'William',[136] meaning a 'William Dale' was there, and would, most probably, have been between the ages of 11 and 15 that year. This would establish a probable birth year between 1857 and 1861 for what is arguably the first known owner of spinet **16XX**.

Eight Masters

The chart shows each of the six masters who took possession of Queen Anne's spinet plus two that did not: John Blow, who preceded Croft and Thomas Helmore, who followed Hawes. The first seven of these eight men were steeped in England's continuous sacred choral tradition and all seven of them, particularly Blow, Croft, and Nares, were compositional contributors to that liturgical tradition. Three of the eight held MusDr degrees from either Oxford (Croft) or Cambridge (Nares and Ayrton). All, except Helmore, had earlier been connected with the chapel. Of the seven, all except Ayrton had been Chapel Royal children and all but Nares, and, perhaps Croft, had been selected to be a master from among the gentlemen. Helmore's departure from some of these historical norms is interesting: His focus on plainsong and his prior success with a cappella choral singing represented a new direction for the Chapel Royal choir that was evidently sought at the time. Helmore's Chapel Royal exposure was comparatively recent.

John Blow	1649-1708		Hon MusDr 1677	34 yrs	1674-1708
Dr Wm Croft	1678-1727		MusDr 1713 Oxford	13 yrs	1708-1727
Bernard Gates	1685-1773	James St. Westminster		30 yrs	1727-1757
Dr James Nares	1715-1783	St James St. Westminster	MusDr 1756 Cambridge	23 yrs	1757-1780
Dr Edmund Ayrton	1734-1808	24 St James St. Westminster	MusDr 1784 Cambridge	25 yrs	1780-1805
John Stafford Smith	1750-1836	? Paradise Row Chelsea		12 yrs	1805-1817
Wm Hawes	1785-1846	7 Adelphi Terrace Strand		29 yrs	1817-1846
Thos Helmore	1811-1890	6 Cheyney Walk Chelsea			1846-c.1885

Table 13.1. Six Masters who took possession of Queen Anne's Spinet and Two Masters who did not (Blow and Helmore).

The royal family may have been a party to this apparent choral musical redirection in 1846. Prince Albert was an accomplished amateur composer and in 1840 he and Queen Victoria were married in the Chapel Royal. Queen Victoria had been England's reigning monarch for three years prior to their marriage that year.

[136] Unlike, say 'J' or 'R', which begin several common names.

Typically, the period for each master was a little less than 30 years; nevertheless, Helmore was a master for more than 40. Except for Blow, who was just 25 when appointed master, these men were generally in their thirties or forties. Smith was not appointed until he was in his mid-fifties, and he was a master for only a dozen years. These appointments were made either by the dean (the Bishop of London) or the sub-dean.

Except for Nares and Helmore, all of the other six were also associated with Westminster Abbey in their careers. Both Blow and Croft had been organists there. Gates, Ayrton, Smith, and Hawes were lay-vicars. Blow, Croft, and Gates were buried there. Blow, Croft, Ayrton, and Hawes were similarly involved with St Paul's Cathedral. And both Blow and Hawes had been masters of the cathedral's choristers: Hawes was master at St Paul's at the same time he held this same position with similar responsibilities at the Royal Chapel (see Appendix F).

Since Queen Anne's spinet was held by six of these masters for well over a century, it would seem appropriate to examine some of their biographical detail and the contributions made to England's music, secular as well as sacred, and the musical understanding of each of them. It should be pointed out that although Queen Anne's spinet was presumably cared for in their houses, there is no evidence that it ever played a part in any of their in-house musical activities.[137]

William Croft

Born 1678 in Warwickshire, Croft became a Chapel Royal child at the age of ten and, remarkably, remained there as one for ten years. Just two years later, in 1700, he became a Chapel Royal gentleman and in 1708, at the death of Blow, he was appointed master. He also replaced Blow as organist of Westminster Abbey as well as composer to Queen Anne. At that time, he remained master until his death in 1727 and he was buried in Westminster Abbey.

Best remembered today for his hymn, 'St Anne' ("O God Our Help in Ages Past"), he was a prolific composer.[138] Between 1698 and 1700, he published secular songs and suites for harpsichord, violin, and recorder. However, from the time he was appointed master, all his compositions were sacred. In 1713, for his music doctorate at Oxford, he composed two odes for solo violin, choir, and orchestra. The following year he composed music for Queen Anne's funeral as well as George I's coronation. Ten years later he composed a two-volume church music collection of 31 anthems: *Musica Sacra.*

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[137] Two major sources of information about these masters comes from: *A Biographical Dictionary of Actors, Actresses, Dancers, Managers, and Other Stage Personnel in London 1660-1800* (1973), P H Highbill, Jr, et al. and *The Oxford Dictionary of National Biography* (2004). Other sources used are: Musical Times (various), The Times (various), Groves Dictionary (various editions), World Cat Identities, Answers.com, and www.Oxford Music online. Pictures of the Adams Brothers' Adelphi Terrace townhouses can be found in *London Then and Now,* Diane Burstein (2002) p.106. Also, *Lost London 1870-1945,* Philip Dawes (2015) p.153.

[138] His hymn 'Hanover' from Psalm 149 has been found on several 18th century New England musical clocks.

Bernard Gates

Born 1685 in the Netherlands, Gates and his family moved to London three years later. He became a Chapel Royal child at the age of eleven and remained there as one for nine years. Three years later, as a bass singer, he became a Chapel Royal gentleman. At the death of Croft in 1727, he was appointed master, and in 1740 he was also appointed master at Westminster Abbey. In 1757, he resigned from both of these positions, however, and moved to Oxfordshire. After his death at the age of 88, 16 years later, he was buried in Westminster Abbey.

Although Gates was a minor composer of church music, he was particularly active as a bass singer – particularly of Handel's church music over several decades. In 1713, he sang in Handel's *Ode for the Birthday of Queen Anne* at the court a year before her death. Three years before, he was among those who founded the Academy of Ancient Music – an organization that would survive for over a century.

Apparently the first performance of Handel's *Esther* was held at Gates' home, with the Chapel Royal children as the sopranos, on 23 February 1732, Handel's birthday - and Handel was in attendance. Although Queen Anne's spinet had to have been in the house at the time, there is no reason to believe it was used in this historic performance.

James Nares

Born 1715 in Middlesex, Nares became a Chapel Royal child before age 12 and may have remained there as late as 1735 when he was appointed organist of York Minster. The following year he was appointed Master of the Choristers there. He held these two positions until his appointment as master at the Chapel Royal in 1757. He was never a Chapel Royal gentleman, but some months before, he succeeded Maurice Greene as the Chapel Royal organist and composer. In 1757 he also received his doctorate in music from Cambridge. In 1780, he resigned as master; then, three years later, he died, leaving his second wife and their four children an apparently abundant estate in a complex will that included three houses. He was buried at St Margaret's, Westminster.

Nares was not only an accomplished keyboard instrument performer, but a gifted composer for the keyboard. In 1747, he wrote a set of eight harpsichord lessons followed by five harpsichord lessons in 1759, and then, *Three Easy Harpsichord Lessons* plus an *Introduction to Playing on the Harpsichord or Organ,* plus, *Thirteen Voluntaries for Organ or Harpsichord.* He wrote a number of sacred vocal works and in 1770 he was awarded a prize from the Catch Club for a glee.

Nares had every opportunity to play Queen Anne's spinet – either as a chorister at the time of Croft and then, Gates, or in the 23-year period from 1757 when he possessed it. If Queen Anne's spinet was played by any of the masters beside Hawes, it certainly would have included Nares.

Edmund Ayrton

Born 1734 in Yorkshire, Ayrton was never one of the Chapel Royal children. He was appointed organist and 'singing master' of the Southwell Collegiate Church in Nottinghamshire in 1755, and the following year he was able to study for three months under Nares in London. In 1764, he moved permanently to London and was appointed a Chapel Royal gentleman. Three years later, he became a Vicar-Choral of St Paul's Cathedral, a lay-Vicar of Westminster Abbey, and in 1780, he was appointed Chapel Royal master. In 1784, he received a doctorate of music from Cambridge. In 1805, he resigned as master and he died three years later at his home at St James Street, Westminster. He had married in 1762 and the couple had 15 children. In his will

he left a Baker Harris harpsichord to a daughter's husband, "my old family organ" to his second son, and a Tabel harpsichord to his doctor. Despite the advanced year of 1808, no pianos were mentioned. But at this late date, it is interesting that two harpsichords, many decades old, were still worthy of mention. Ayrton was the first of three masters reputed to be harsh disciplinarians and indifferent tutors. He evidently hired out his Chapel Royal boys to sing at public theatres. How he was able to house and feed 15 children of his own plus ten or twelve choristers is an interesting question. He was able to refute the charge made against him of "starving" the children, however.

Ayrton composed two surviving anthems and some secular vocal music. Although he played the harpsichord, he left no keyboard compositions.

John Stafford Smith

Smith was baptized 30 March 1750 in Gloucester Cathedral. The son of the cathedral organist, he began as a boy-singer in the cathedral choir. He came to London to study under William Boyce, who would later become his father-in-law. In 1761, he became a Chapel Royal child under Nares, and he apparently was one of those able to remain in the choir after his voice broke. He was made a gentleman in 1784 and in the following year, a lay-vicar of Westminster Abbey. He was appointed a Chapel Royal organist in 1802 and master in 1805. He was 55 when appointed and was a master for just twelve years: He resigned in 1817 - some years before his death in Chelsea in 1836.

Smith was a pioneer musicologist. From his early years he began to amass an exceptional collection of musical manuscripts and editions. He apparently shared his collection and some of his observations with John Hawkins, who acknowledged his indebtedness in the preface of his *General History of the Science and Practice of Music* (1776-89). In 1779, Smith published *A Collection of English Songs...Composed about the year 1500...* At his death, his collection passed to his daughter, Gertrude, who was pronounced insane in 1844. An auction of his collection was held. Evidently, 2191 volumes of music were sold off. There was apparently no catalogue of other description made of this material, and the bulk of this collection remains lost today. In his later years, Smith was occupied with studying and editing early music, and he published some of his activity in a work, *Musica Antiqua* (1812).

In 1766, Smith was one of 25 founding members of the Anacreontic Society; Samuel Johnson was another founding member.[139] Today, Smith is best remembered for writing the music (but not the words) of *To Anacreon in Heaven.* This became the 'Anacreontic Song' of the Society and, with minor modification, it is today's American National Anthem.

William Hawes

Born in 1785, Hawes is the only one of the six masters who was a London native. He was a Chapel Royal chorister from 1795 to 1801 and was appointed a gentleman in 1805. In his early post-chorister years, he played violin in the Covent Garden orchestra and also taught singing. In 1810, he married the sister of a fellow gentleman of the Chapel Royal and this couple had six children, all of whom were living at the time of his death 36-years later. In 1812, he was appointed master of the choristers at St Paul's Cathedral, and five years later he was appointed master of the children of the Chapel Royal. He held both positions for the rest of his life.

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[139] Named for Anacreon, a 6th century BC Greek poet, the group's intention was the betterment and support of music. In January 1791, Haydn and the 12-year-old Hummel attended a meeting where Hummel played the harpsichord.

His extensive London musical involvement, none of which involved the children either at the Chapel Royal or St Paul's, is described in the Hawes Chronology (Appendix F). It is important to note that he took Queen Anne's spinet from his home around 1830 and used it publicly to accompany a song. It had either been restored or had survived in playable condition by that late date. More than, perhaps, any other of the six masters, Hawes' skills were more scholarly and organizational than compositional. He did, however, write several operettas and songs, also a requiem on the death of Princess Charlotte (1817) and in 1836, he won a prize for a glee, 'The Bee'.

Maria Hawes Merest, a daughter of William Hawes' who had no children, appears to have been the only musical Hawes of her generation. Yet, William Hawes' great, great grandson was the composer, Malcolm Arnold (1921-2006). He would have descended from one of Hawes' three sons or two other daughters.

Spinet Not Passed Down – Three Possible Reasons

Proprietary

Most of William Hawes' six children were too young to remember their father's purchase of his town house at 7 Adelphi Terrace in 1817 and his taking possession of the spinet that same year. But their mother, Elizabeth Mulinex, who was married in 1810, would have remembered. She must have known of her husband's responsibility of passing it on. Since this spinet was used, publicly, by her husband around 1830, it may have been restored expensively by him a short time before. If so, this could have engendered a feeling of family entitlement; although this is hard to square with its later storage in their attic.

In 1841, William Hawes wrote his will. In it he left most of his estate to his wife, including his insurance and the proceeds of his music publishing business. He asked her to "provide for the children". There was no mention of a spinet to be passed on, but the will did contain a sentence stating that his wife was to have, "all household furnishings, books, musical instruments". Does this suggest that William Hawes could have been behind the decision not to pass the spinet along? Does this suggest to his wife that the spinet was to be hers? Again, this is hard to square with its later attic storage.

Pecuniary

A year-and-a-half after her father's death, Maria Hawes Merest married a wealthy widower and moved to one of his estates. Some of her brothers, sisters, and their mother continued to occupy the Hawes' town house, however. Based on her younger brother, John's mid-1850s ads seeking employment (see Attachment F) and their renting of rooms, which began in 1861, the family was experiencing financial hardship. After her husband's December 1860 death, Maria, who received little from her husband's estate, moved back to the Hawes' town house, and a number of ads and notices in the *Times* beginning then, show she was endeavouring to raise money through her musical skills. These notices continued until she moved away in 1867. Presumably, the decline in the family's fortunes was felt as early as 1846. Nevertheless, although Queen Anne's spinet might have been seen as having value, this value was primarily going to come from its royal provenance; yet, that connection would have to be severed before they could sell it.

The Cummings account proves that the boy-choristers were well aware that the spinet they saw regularly had been Queen Anne's. Presumably, some of the house guests had to be aware, too, of its royal connection when they saw it over three decades. Rimbault had to have learned of the existence of this spinet in the Hawes' attic from someone, and so its continued Hawes' possession cannot have been just a tightly-guarded family secret. With the 1860 publication of

his book, the entire musicological community would have been made aware of it. If it was still there in the attic after 1860, its sale would have required a cover-story, even though this would seriously compromise its value. If the Hawes' interest was financial, what were they thinking when they took it to the attic? Eventually it would have to be brought down.

A Third Explanation

There is a third, highly likely, non-proprietary, non-pecuniary explanation for the Hawes family's continued possession of Queen Anne's spinet: They could have offered it to the seventh master, Thomas Helmore, who refused to take it. Born in 1811, he grew up well within the piano era and would have seen this spinet as having no functional relevance. He may have felt he had no place to safely store it and he may have felt no need to carry on a senseless tradition. Unlike the masters who preceded him, he had no apparent prior connection to the Chapel Royal. His father was a Congregational minister and he was ordained in the Church of England only in 1840, just six years before he was appointed master. Consequently, he may have felt little responsibility for carrying out an earlier monarch's oral mandate. The Hawes family in 1846 may have shared this possible indifference. The spinet was not being used, it was taking up space; and, unwilling to continue to display it, they simply carried it to the attic – postponing the question of what they were going to do with it.

An Inference

Since this spinet had survived to the mid-19th century, even though no longer musically relevant, it was a historic royal artifact of previous musical value. It had to have been appreciated as such by the Hawes family: They never would have discarded it. Since William Hawes' widow died in 1871, presumably at #7, we might assume it had been sold or given away at or before that year. Having survived to the mid-19th century as a "fine instrument", this spinet, almost certainly, has survived to the 21st. I believe it is one of three Haward spinets known today.

C. The Spinet's Importance to Queen Anne

Queen Anne's spinet would have been new, or nearly-new when acquired. This means it had to have been in her possession at or before 1689, the year of Charles Haward's death. And given the fact that Queen Anne had to have held onto it for decades before her final years, it must have been cherished – for a reason. This reason could suggest its initial possession at a sensitive period of her life. Two of these periods coincide with the dates or date-estimates of all extant Haward spinets.

The Early Years

Princess Anne was born 6 February 1665. Her first eight years seem to have been particularly difficult. In 1667, two of her brothers died within a month of each other. The following year, she was sent to France to stay with her grandmother (the widow of Charles I) in the hopes that French doctors could cure her eye 'defluction'. That next summer, however, her grandmother died. Anne was then sent to live with her aunt, who died less than two years later. The following month she was brought back to England with no cure for her eye affliction. Only a few months after she returned, she experienced the death of her mother (March 1671) followed by the death of a family friend, Anne Hyde, a day later.

Anne was considered delicate, and not, then, given long to live. But it was her brother and a sister who died within a few months of their mother. This left only the two sisters, Mary and Anne. By mid-1671, the six-year-old had experienced little but an endless string of deaths – and continued difficulty with her eyes.

The Early Marriage Years

Anne was married in 1683 to Prince George of Denmark. Following their marriage in the Chapel Royal, the couple lived in the 'cockpit', a suite of rooms at Whitehall Palace conferred by Charles II to Anne, his niece. This was part of a complex of rooms Henry VIII had built as an arena for cockfights over a century before. Over the following 16 years, Anne had a reported 18 pregnancies there. Twelve were still-births, three babies were born alive, but died the same day. Two died within two years, and one, William, died in 1700 at the age of eleven. Despite these reported misfortunes, several of her biographers have written that those cockpit years were a happy time in Queen Anne's life: The couple had a circle of friends and they entertained frequently. Most important, these years were free of political tensions and obligations. It is a virtual certainty that Anne's spinet was with her in these lodgings. It could very well have been a wedding present. It could also have been a later gift from a close friend. It could also have been something she had owned prior to her marriage.

Anne and the Church of England

In 1670, while the five-year-old Anne was in France, her father, the Duke of York (later, James II), abandoned the Church of England and embraced Roman Catholicism.[140] Then, shortly before her death, her mother did, too. Anne was probably too young to be troubled by this turn of events, but her father's conversion would later have a major impact – perhaps the most significant monarchical impact – on her life. Concerned about their upbringing, King Charles II declared his brother's two daughters 'children of the state' to be raised as Anglicans.

While Anne's sister, Mary, would view the Church of England in political terms, Anne would experience it more spiritually. In so many difficult times in her life, it seems to have been her firm support. In her words, "Our Church teaches no doctrine but what is just, holy, and good, or what is profitable to salvation; and the Church of England is without all doubt, the only true church".[141] Anne seems to have regarded the Anglican church as a flower garden – a weeded flower garden perhaps, and her strong Anglican faith was evidently as core to her life as Catholicism was to her father's.

Anne and the Chapel Royal

When Anne's sister, Mary, married William of Orange in 1677, the wedding took place in Mary's bed-chamber at St James' Palace. It is, perhaps, significant that when Anne married Prince George five-and-a-half years later, it was at the Chapel Royal.[142]

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[140] This evidently became public three years later with the passing of the Test Act – a religion-disclosing measure, which resulted in the termination of his leadership of the Admiralty.

[141] From a letter of 1686 to her sister, then in the Hague.

[142] Years later, in 1708, Anne, as Queen, began to hold Thanksgiving services privately at the Chapel Royal. They had earlier been held publicly at St Paul's Cathedral. 1708 was the year of Prince George's death.

Queen Anne's Lack of a Will

Queen Anne must have left us with an instruction that has come down to us concerning her spinet, for it was picked up by the accounts and accepted by each of six Chapel Royal masters. Nevertheless, it was never put in writing. There is an existing draft of a will of hers that was never finalized, but in it there is no mention of a spinet. There was, evidently, a bundle of papers the Queen always slept with, beneath her pillow in her late years. Written on this bundle was a directive that it should be destroyed, unread, after her death. Her wishes were carried out. Clearly, this packet would not have contained any post-mortem instructions of any sort.

Queen Anne's Intention – The Boy-Choristers

Although Queen Anne felt a close attachment to the Chapel Royal, this attachment must have centred on the young boys. She might have more conveniently left her spinet to the chapel, itself, or more specifically to the dean or the sub-dean. Instead, she left it to a succession of masters, charged with caring for and educating the boys. There is no contemporary evidence of her intention of it to be used as a practice instrument. This likely-intended use was not addressed by any of the accounts until the 'Harmonious Blacksmith's' written in 1870 – after the time that the spinet disappeared. Nevertheless, by leaving it to future generations of boys, she must have wanted them either to play it or to be able to hear it played.

Perhaps the most difficult event in Anne's life was the loss of her eleven-year-old son in 1700 – the only child of hers to live beyond the age of two. Eleven was the age of most of the Chapel Royal boys when they began to sing there. Perhaps she saw her son when she looked at their faces, Sunday after Sunday.

Although it could never compete with her harpsichord in tonal grandeur, keyboard range, or registration colour, Queen Anne's spinet must have had meaning to her for some private reason that lies beyond our grasp. Perhaps she acquired it at a particularly sensitive period of her life and it fulfilled a special need at that time. Perhaps it was her life-long companion – always there when those closest to her were not. More than likely, it was the instrument played by Abigail Hall Masham, her chambermaid in her last few years before she retired each night.[143] This could explain why the queen kept it till the end.

D. The Case: One of The Haward Survivors

Queen Anne's spinet, having survived as a "fine instrument" until the middle of the 19th century, must still be in existence - one of those known today bearing Charles Haward's label. We can trace it to the period when any old, restorable, keyboard instrument, becoming recognized by the musical community for its historic importance, should have been spared. Moscheles gave his pioneering Scarlatti concerts on a Shudi-Broadwood harpsichord in 1837. In 1845, Prince Albert directed and chose the programme for an 'Ancient Music' concert using early instruments (though no keyboards). In 1870, the 'Harmonious Blacksmith' could write of the enhanced value of early keyboards as instruments, rather than as sources of parts. Short of fire loss, few survivors from the mid-19th century should have disappeared.

A Royal Purchase or a Gift ? - Criteria

Queen Anne's spinet had to be either a royal purchase or a gift. If it had been a royal purchase, the maker's name, prominently displayed, would not be expected. This would rule out all but

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[143] James Anderson Winn, author of *Queen Anne: Patroness of the Arts*, Oxford Press (2014) regards this as "highly probable" (PC).

c.1685 and **1687**, both of which have decorative faceboards without inscriptions. Also, a royal purchase would suggest the use of at least some uncommon, perhaps exotic, ornamentation not seen on another Haward spinet. With nothing of this nature on any of the six, this would seem to rule out a royal purchase.

Her spinet, believed, therefore, to be a gift, may or may not show evidence today of frequent use; but it would never have been abused before the mid-19th century and would hardly have been mistreated later. Consequently, it should have survived with minimal restoration and show no sign of neglect. Finally, as a gift to a royal family member, it would have to have been then in pristine condition, be of an up-to-date design, and reflect fine workmanship.

I believe three of the six Hawards can be eliminated. **1689** is too crudely made and too out-of-date in the late year of its rebuilding to be considered. **1687**, while up-to-date, was not well cared for, and, today, much of it is not original. It has survived as just a shell. **1684** shows neglect that goes back some years before the 1880s. Its original jacks suggest it may have been only marginally playable even when new. This leaves **1683**, **c.1685**, and **16XX** as likely contenders. A detailed case for each of these in made in the following three sub-chapters.

E. The Case for Haward's 1683

This spinet, now at Mellerstain House, Kelso, Scotland, is the most original of the six and its restoration carried out in 1886 appears to have been minimal. While it is missing its original rose, pieces of it are probably within its case, assuming the soundboard has not been removed. It still has its original spiral-turned trestle with a period, low-mounted 'double-Y' stretcher, and its faceboard and soundboard are remarkably clean. It has clearly always been well cared for and never abused. However, if it proves to be the spinet that was in Mellerstain House in the early-18th century, and then more recently returned, we will have to exclude it from consideration.[144]

A particularly strong argument for **1683** is its year, 1683, prominently displayed on its faceboard. 1683 is the year of Queen Anne's marriage to Prince George of Denmark. She was devoted to him: The marriage began and remained a happy one over its entire 25 years. The marriage date may have had particular significance to her, for she chose St Anne's day (28 July) in 1683 for her wedding. She could have been reminded of her marriage every time she sat facing this instrument.

F. The Case for Haward's c.1685

The actual date-span for this spinet is 1687+/- two years. The strongest argument for this spinet is its prescient and lavish design. Spinet **1687** confirms this spinet was not unique. Spinet **c.1685** exhibits traits expected on Keene spinets from around 1710. The appearance of these two late Haward spinets would not have appeared dated even in 1714 – the year of Queen Anne's death. **c.1685** and **1687** share similar decorative faceboards with maker - identification discretely located on the jackrail - appropriate for a royal possession.

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[144] Mole (2009:62) writes of the 1707 Household Accounts of Lady Grisell Baillie, Countess of Haddington of Mellerstain House. In it she writes of her 14-year-old daughter, 'Grisie', who after breakfast at nine, always played the spinet till eleven. This proves there was a spinet there in 1707 as there is today. But in the late 19th century, **1683** was owned by William Taphouse in Oxford, some distance away.

Like **1683**, this spinet was never abused, and despite the trestle-switch in the early-20th century, it has had only minor restoration. Its evident worm damage with particularly large worm holes suggests storage at some point.

G. The Case for Haward's 16XX

We have confirmed the date of spinet **16XX** to be 1668 and shown, with direct evidence in Chapter 12 that this is the spinet that was once owned by Pepys. Can it also be shown to be the spinet later owned by Queen Anne?

The Samuel Pepys Parallels

Pepys wrote in his diary on its final day (31 May 1669), "And thus ends all that I doubt I shall ever be able to do with my own eyes ...having done now so long as to undo my eyes almost every time I take pen in my hand ...my eyes hindering me in almost all other pleasures..." Pepys was no stranger to ocular woe.

Late that year, Pepys and his wife, Elizabeth, travelled to the Continent. Three weeks after they returned in October, his wife fell ill and died (10 November) and Pepys didn't return to work for three weeks. Pepys was, likewise, no stranger to family transience.

Pepys and the Duke of York

It would be hard to exaggerate the importance of the Duke of York (from 1685-88, James II) to Pepys and his career. Of those who outranked him, the Duke of York is probably second only to Lord Brouncker in importance to him. Pepys was born the same year as the duke, in 1633. On 17 May 1660, in his diary, he wrote that he had kissed the hands of Charles and his brother, James, and on 25 May, he returned with them to England. The following April, Pepys would write that he saw the duke in his 'night-habit' dressing himself. In 1664, the duke was Governor of the Corps of Royal Fishing and Pepys was one of 32 'assistants. In 1666 (9 January), he noted the duke and duchess had not spoken "for many days". In 1669 (2 April), Pepys was at the duke's lodgings, and after dinner he saw Princess Mary dance "most finally so as almost to ravish me". (Anne was then in France). In that entry, he showed concern that the duke "did eye my wife mightily". Then on 19 May, the duke confided to Pepys about an intimacy connected with the queen's (the duke's sister-in-law) bed-chamber. On 31 May, the diary's final day, Pepys wrote, 'Had another meeting with the Duke of York at Whitehall on yesterday's work, and made a good advance". On the last 13 days of the diary, in late May 1669, the duke is mentioned in seven of them - including Sunday.

After the diary-period (1660-69), the duke encouraged Pepys to run for Parliament – both in 1669 and 1673. (In November 1673, Pepys won his election.) Earlier that summer just before the duke resigned as Lord High Admiral (a position he had held for 13 years), he appointed Pepys Secretary of the Affairs of the Navy. At the duke's coronation in 1685, Pepys was among the 16 barons immediately behind the duke's canopy.

At some point, the duke gave Pepys an elaborate game-board that, undoubtedly, still survives.[145] Apparently, in November 1688, even while William and his troops were approaching London, the duke, as King James II, was posing for a portrait by Godfrey Kneller to be presented to Pepys.[146] Finally, the following March, Pepys was imprisoned for a month for

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[145] In 1936, property of the British Museum. See *The Antique Collector,* Oct. 1936, pp265-69).

[146] This portrait was finished and apparently remained in the Pepys' family until 1931.

refusing to swear allegiance to William and Mary, who had dethroned James II. Pepys' career was over; his sense of loyalty, though, prevailed.

There is little that Pepys could offer (except his wife!) that would have had any value to the duke. But the gift of a nearly new, unused, petite, up-to-date spinet could have been an unforgettable present to the duke's young daughter. Such a gift could only strengthen the bond Pepys had been building with her father.

Princess Anne and the Spinet

While the spinet had to be essentially unknown in England at this time, the princess must have seen one or more at the French court where Zenti had spent two years as an instrument maker before moving to London in 1663. Its novel form and small size could have had a special appeal to a five-to-six-year-old. Nevertheless, this £5 musical instrument of Pepys would have been in decided monetary contrast to a gift to her from Louis XIV. When she left France, he reportedly gave her what was described as, "Two bracelets of pearl with diamente valued at 10,000 crowns". If she acquired her spinet in c.1670-71, it had to have had some significance, then, that transcended its value.

Princess Anne returned from France with her eye affliction uncured a year after Pepys terminated his diary owing to his eyesight. By mid-1671, the six-year-old Anne had experienced seven deaths in her immediate family, including her mother. Pepys' wife had died at the end of 1669.[147] She was being tutored in the arts, which included music. She would almost certainly have seen a spinet at the French court. Pepys' petite spinet could have been a singularly cherished gift coming at a particularly sensitive time.

Spinet 16XX and the Criteria

16XX has been continuously kept in playing condition from before 1888. It has never been ill-treated and it appears to have been played infrequently over the years based on its little evidence of wear. Although it has had a major restoration, this is the apparent result of worm-damage and not abuse. The trestle foot-plate, the spine top, and the lock batten replacements suggest attic storage with the case in two positions against a wall (see Appendix A). We can determine from the design of the replaced lock that this restoration was done in the 19th century – after c.1820. Assuming they were not later replaced, the four patinated screws on the lock batten point to a later probable date – after c.1850.

The Restoration

Someone, before Dale's ownership, considered spinet **16XX** to be important enough to warrant an unusually painstaking restoration. The trim, tapered jacks, specially made to fit into the narrow register gaps, are similar in design and quality to those on Kirkman or Shudi harpsichords (see Appendix A). The replaced wood (probably cherry) was carefully fitted and patinated to match the original cedar and walnut. A metal hinge tip was almost invisibly replaced (shown in Appendix A), and all new metal work was carefully colour-matched to accord with the original. Several skilled individuals with varied talents had to have carried out this restoration. Why was this work carried out on this particular spinet? William Dale, this spinet's first recorded owner, as explained in Chapter 9, was either not informed or misinformed about its restoration.

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[147] He never remarried.

A Middleman Needed

If **16XX** was the spinet that came from the Hawes' attic, there was almost certainly a middleman because of the timing. Elizabeth, William Hawes' widow, died the year before 1872, the year William Dale was listed as a Chapel Royal chorister, and Maria Hawes Merest, her daughter, who had returned at the end of 1860, moved away seven years later. While John Hawes, one of Maria's brothers, probably remained at #7 after 1871 (see Appendix F), it is highly unlikely that Queen Anne's spinet was still there at this late date.[148] Both the restoration and the timing suggest a middleman. The extravagance of the restoration strongly suggests, but only suggests, that **16XX** was Queen Anne's spinet.

Bildeston Hall

When Maria Hawes married James Merest in 1847, they moved to one of her husband's three houses – in Bury-St Edmunds, Suffolk. Since this was fewer than 15 miles from Bildeston, she had to know of the long-deserted ruins of the former manor house (see the correspondence in Appendix G). Two years later, the couple sold this Suffolk property and moved to another Merest estate, 22 miles west, in Soham, Cambridgeshire. Then, sometime before 1860, they moved again out of the area. Since what remained of Bildeston Hall was finally torn down in the 1850s, they were probably still in Soham at the time. Given the need for a cover-story, the claim that the spinet in the Hawes attic had come from a long-deserted, and then razed, manor house could be accepted and never questioned. It is important to keep in mind that regardless of which of the three Hawards was removed from the Hawes attic and whether it was then sold or given away, a cover-story was required: The spinet had to be severed from Queen Anne's ownership and her oral instruction. Nevertheless, the Bildeston Hall claim came from Dale, who owned **16XX**.

A Gap

We know the provenance of Queen Anne's spinet, going forward, for close to 200 years. We know the provenance of spinet **16XX** going forward from the early-1880s. If we assume there was just one spinet, we are unable to bridge this 20 – 25-year gap decisively. Queen Anne's spinet was last known about the time of Dale's probable birth. There is apparent evidence of a **16XX** restoration at about this time. Assuming these two spinets are the same, we have argued for the existence of an intermediary-owner. Yet, the existence of such an owner, although compelling, is not supported by known evidence. And Dale never disclosed the name of the seller.

H. Conclusion

Only circumstantial evidence – in part, negative – supports a connection of spinet **16XX** to Queen Anne. However, if we accept the case for either **1683** or **c.1685** rather than **16XX,** we would have to accept William Dale's account. But if we did so, we would have to concur with every one of the following six points:

1. Pepys sold, or gave, his Haward spinet to 'Auditor Beale' – with whom he had business dealings during the diary-period.
2. At or before Auditor Beale's death in May 1674, the spinet's ownership would have to have passed to Beale's brother, and then, to his brother's son – or else, directly to his brother's son.

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[148] John Hawes could have lived at #7 until he died in 1890. In that year, the town house was sold.

3. His brother's son, Bartholomew Beale (one of several contemporary Bartholomew Beales) had to have taken this spinet, 30 years or so later, to his country estate, Bildeston Hall, after he acquired it in 1704. Bildeston Hall had been emptied of all its contents before it was sold to him.
4. In 1726, following the death of both Beale and his wife, a probate inventory was taken of the entire contents of Bildeston Hall. There were no musical instruments. Since all 26 rooms were inventoried except for a fourth room in the attic used to store lumber, the spinet would have to have been stored half-hidden in this room.
5. Shortly afterwards the inventoried contents must have been removed, for the hall would remain unoccupied from that time on. Portions, however, may have been occasionally used over the years as housing for farm labourers. Since its fittings and architectural features were advertised for sale in 1762, the hall may have been gutted at that time. Nevertheless, the spinet had to have remained in that lumber storage room for well over a century until the final demolition of what remained of the hall in 1851-61.
6. The spinet was transferred, for some reason, to the 'Farm House to Street Farm' – which, evidently being enlarged using bits and pieces from the manor house, took the name of 'Bildeston Hall'. It was then transported from there to London.

If, on the other hand, we accepted **16XX** as being Queen Anne's spinet, we would have to disavow Dale's Bildeston Hall account and accept an alternative account that in c.1670-71 Pepys gave his marked, but unused, spinet he no longer needed, to Princess Anne or to her father. It should be pointed out that although spinet **16XX** could still harbour lingering DNA evidence in its key grooves, there is no marking on it that has been found to support this second beguiling account. It is not the intent, in this thesis, to go beyond claiming a qualified, 'most-likely' conclusion. It is the intent, only, to present all the discovered evidence.

SECTION III DESCRIPTIVE SECTION

CHAPTER 14 A GRAPHING REVISION

Summary

In recent years nearly all organologists have plotted and portrayed string lengths on semi-logarithmic graphs. While improved visually over more traditional arithmetic graphs, they are confusing to many and insensitive to exact measurement.

I am proposing a revision that will, by substituting comparable or equivalent string lengths for actual lengths, allow them to be plotted onto more readable and understandable arithmetic graphs. With this substitution all posted lengths are C 2 lengths equivalent.

Three problems are unique to or primarily affect spinets: irregular length-layout accuracy in the high treble, alternating string lengths, and inconsistent C 2 identification. With this graphing change, these problems can be highlighted and mitigated. Potential spring breakage points can be assessed.

In Chapter 10, graphs, both semi-log and C 2- equivalent, are shown for five Haward spinets. Here, C 2 equivalent graphs are shown for six other spinets.

A Graphing Revision - Text

A. Semi-Log / C 2 Equivalent Comparison

In recent years almost all organologists, when addressing string length, have portrayed their string layouts on semi-log graphs. With this graphing, the arithmetic, horizontal axis (the X or absessa) represents the ascending keys and the geometric, vertical axis (the Y or ordinant) represents their corresponding lengths. Previously, when done at all, this graphing was arithmetic on both axis resulting in an irregularly-curved length line that conveyed little information. Not unlike the periodic table of chemical elements, however, any graph is useful in showing relationships; the alternative of a columnar, tabulated listing falls short in this regard.

Semi-log graphing has two major drawbacks: First, any use of a logarithmic scale can be confusing to a layman used to understanding proportional dimensions only with uniform gradations. Second, semi-log graphing is simply not sensitive enough to highlight small anomalies that can have importance: the gaps in the diagonal lines are small and both the line-to-line spacing and the intro-line spacings are irregular, allowing for only approximate readings.

In this thesis, I should like to propose a revision to semi-log graphing that highlights comparative or equivalent string length with utmost clarity, but at the expense of actual length. In this revised graphing design there are arithmetic scales on both axis. Across the chart are evenly and broadly spaced horizontal lines. If several strings fall along a particular line, they will share the same equivalent length even though differing in their actual lengths, which, if just, will be expected to double in length for each descending octave before their required foreshortening toward the bass.

All "just" strings, doubling or halving every octave, will fall on this line and all strings deviating from just will fall above or below the line. The broad consistent space between parallel lines allows for an accurate reading of each string's equivalent length.

Typically, equivalent lengths are based on the note c^2 as they appear.[149] If the length of a string is twelve inches (305) long, then (assuming the same diameter, material, and tension) the middle C (MC) string, if just, will measure 24 inches (610). Assuming MC is of this length, its equivalent lengths will be the same as c^2's actual length: twelve inches.

If, on the other hand, it measures, say, 23 inches (584), then, by dividing its actual length by its just length, we can determine its c^2 equivalent length to be 11 ½ inches (292) (23/24 x 12). The lengths of all chromatic notes within an octave can be calculated by using the irrational factor, 1.059463 -- multiplying each descending note and dividing each ascending note by this factor.[150] Pitch will be a length inversion: if, say, c^2 pitch is 522 c/s (at A = 439), then c^3 will be 1044 and MC will be 261. Just values for additional octaves can be readily found by halving and dividing each of the lengths that have been calculated within a single octave.

Our tonal system has to assume pure, beatless octaves – each note exactly doubles the vibratory rate (and therefore exactly half the length) of the other.[151] We must also assume the division of each octave into twelve logarithmically equal parts: in other words, equal temperament. Such a division has been attributed to Aristoxenus, a pupil of Aristotle, who lived about a century and a half after Pythagoras. He divided the octave into six equal tones or intervals, and then each of the six, into two equal semitones.[152]

B. Specific Spinet Problems

There are three string layout problems with spinets not found on harpsichords: The first concerns treble layout accuracy, the second – alternating string lengths, and the third, the inconsistent Cs on various spinets. A harpsichord can be expected to be precisely laid out, for its top strings are at right angles to the nut and close to a right angle at the bridge. Knowing just

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[149] I believe it is doubly unfortunate that so much organological analysis has been based on A = 440 c/s: "Violin A". First and most important, the choice of A rather than C; the C's being the scales' most important note, the neutral note; and second, the choice of 440 as the chosen beat or frequency for A. If A's frequency were lowered slightly to 439 from 440, the important c^2 would be an essentially even 522 c/s, - an easily divisible number. At 440, however, c^2 is a complex 523 ¼ c/s.

[150] The comparable diatonic factor would be 1.122462 - - (just under 1 1/8 in).

[151] An exception is the Pythagorean system when tuned beyond its first near-perfect fifth and fourth. After a circular succession of twelve 5^{ths}, with no correction, it will be a fifth of a semi-tone sharp of the starting note at the end. Uncorrected however, each fifth (within the MC – c^2 range) will exhibit just one beat in two seconds. This tiny discrepancy would not have been apparent to Pythagoras, who used his monochord to measure, perhaps, a single fifth and fourth in the late sixth century B.C.

[152] Alexander Ellis (1814-90) refined Aristoxenus' breakdown by assigning 100 "cents" to each of these twelve steps or intervals – 1,200 for every octave. With this breakdown, there would be four cents between every vibratory beat or cycle per second within the chromatic half-step between A-flat (415) and A-natural (440) (equals 100 ÷ 25). While it has been said that the ear is incapable of recognizing such sound differences the ear may nevertheless be able to distinguish close to 17 of these close divisions in each chromatic step at this frequency range.

its c^2 length, we can make credible string assumptions about a harpsichord's treble. There is a risk in trying to define any spinet's treble just by its c^2 length, however. Its treble strings are at an acute angle to both bridge and nut, and since reasonably uniform spacing has to be allowed for the jack tongues, precision is difficult. To assess accuracy and to identify rogue notes, every spinet should have measurements taken at every string in the top two octaves. A maker's bridge-placement accuracy can be assumed if the dots form relatively horizontal lines. A maker's bridge-pin, nut-pin accuracy can be assumed if the lines are fairly smooth and not jagged.

Except for 16th century Italian harpsichords that have not been converted, all harpsichords will be expected to have two unison strings located on either side of each gap. Because of the spinet's compressed space, however, similar appearing strings in the same positions as a harpsichord will have to be a half-step apart.

This means adjacent notes will have alternating string lengths – more critical in the treble than in the bass. The c^2s in spinets are inconsistent. Assuming the top jacks are located within the top gaps, spinets ending in Cs, Ds or Es will have short Cs whereas those ending in Fs and Gs will have long Cs.

Given the spinet strings alternating lengths, any single-line graph attempting to connect every progressive string will exhibit a confusing, discontinuous zig-zag pattern. I have separated the long and short strings and have placed them on separate lines which I feel enhances scale clarity and positions the Cs.

The long strings are particularly important. Since all wires of a given material will, theoretically, show identical breaking points if they fall on the same horizontal line, we should be able to determine whether brass can be employed for an entire spinet or, if not, how far up it can safely be taken. The lengths of the longest c^2 equivalent strings are key.

It should be borne in mind one cannot accept the reported tensile strength of a spool of wire and conveniently calculate its potential maximum pitch. Wire should not be expected to break along its vibratory portion or its overdraught, but at a sharp bend where its outer side is stretched and weakened. At this point, when under tenson, it behaves like a smaller diameter wire – less able to withstand the degree of stress that the wire's measured diameter would suggest. The sharper the bend, the greater this outer strain.

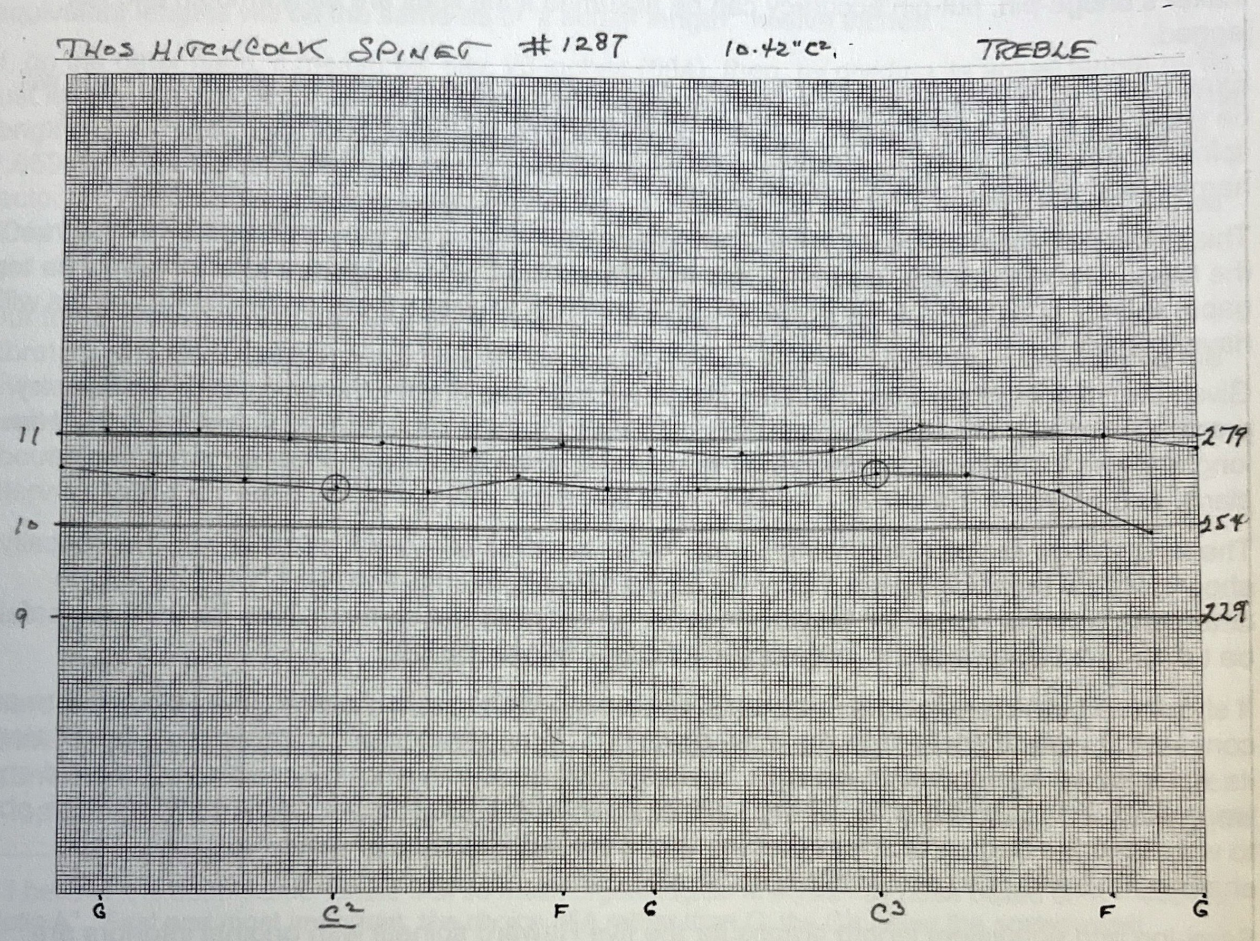
Semi-log and equivalent length graphs for the five Haward spinets with original interiors are shown in Section II. Six equivalent length graphs that I believe are exceptionally interesting follow.

Treble accuracy of the six varies. The Crang Hancock is exceptional. But the Player and Hitchcock are also precise. The Rouchead typifies most spinets in its excursion, but the Hitchcock and the Tannenberg appear to have been laid out with chosen upper equivalent string lengths in mind. The Joseph Small was made by a cabinetmaker with only a vague sense about proper string layout. It would be interesting to know how it was first strung and whether the maker was pleased with the result.

C. Six – C^2 Equivalent Graphs with Comments

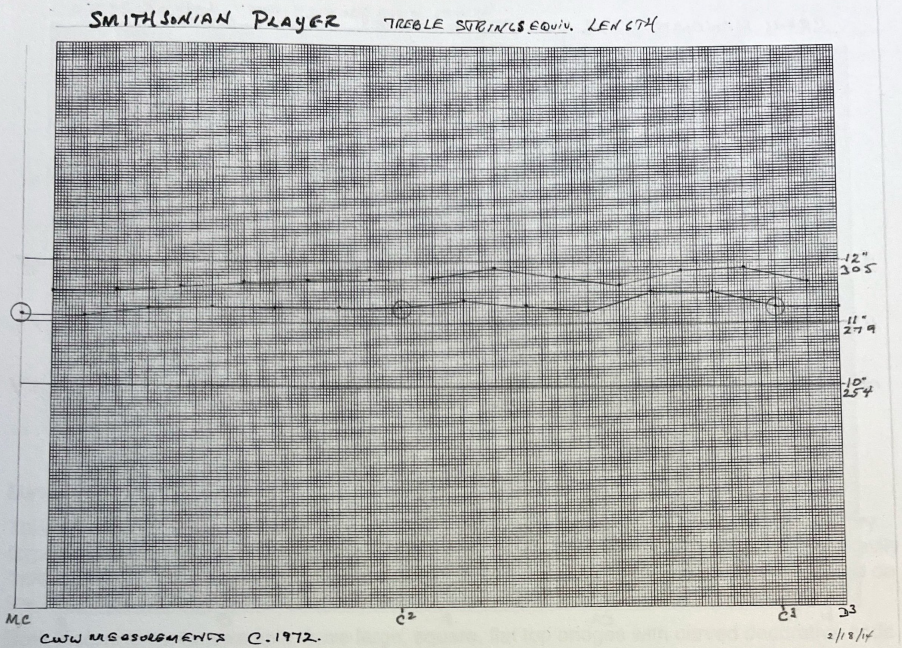
Thomas Hitchcock Spinet No. 1287 (Smithsonian Institution)

This is one of two spinets I measured at the Smithsonian Institution in 1971. The string layout is remarkably similar to that in a John Hitchcock spinet No. 1520 at Winterthur museum. Both were laid out with exceptional care, and show a consistent close-to-eleven inch (279) long string from the top g^3 down two octaves. Such precision and maximum string length could hold true for many other, perhaps all other, Hitchcocks. Most important, it shows that John must have inherited Thomas' templates.



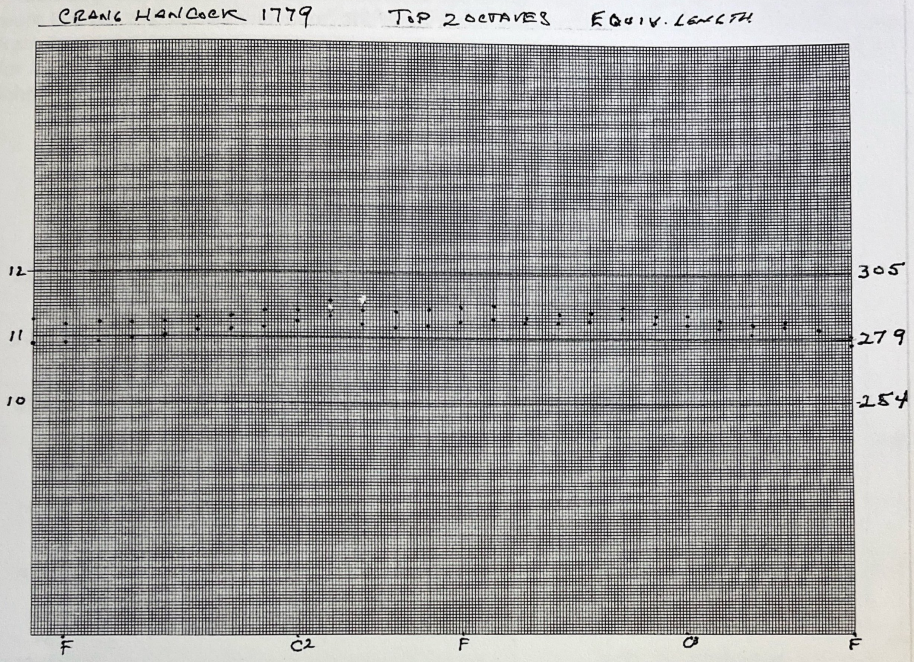
John Player Spinet No. nd-4 (Smithsonian Institution)

This is one of two spinets I measured at the Smithsonian Institution in 1971. Like, perhaps, all Players, it was laid out with particular care. There are two noticeable differences between this and the Hitchcock layouts: whereas the Hitchcock appeared to want to meet but not exceed eleven inches (279) in their long strings, all the Players strings exceed this length in the top two octaves. Also, the Player fall-off here begins an octave from the top and not well-below MC as on the Hitchcocks.



Crang Hancock Spinet Piano 1779 (Property of the Author – formerly, Richard Barnett)

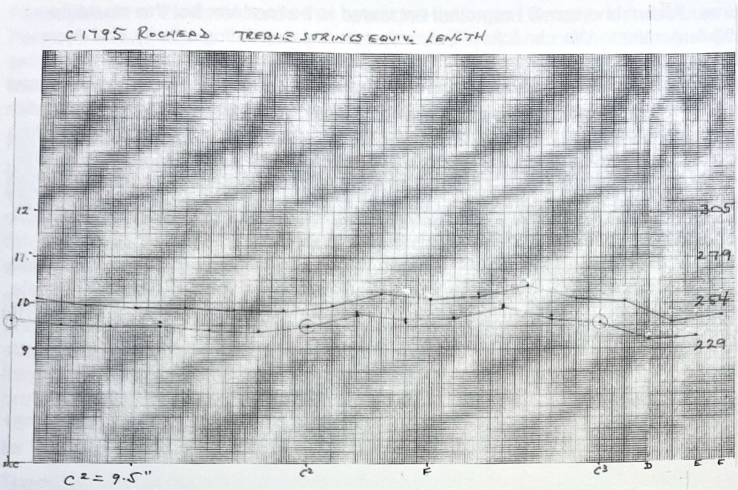
This is one of three surviving pianos by Crang Hancock in a wing spinet form. Laid out in spinet fashion with its lowest strings against the spine, its keyboard is nevertheless, tilted just six degrees with its Viennese-like rear-pivoting hammers, and its keyfront to pivot point is a long harpsichord-like seven and a half inches (190) at MC. With its small bridge it has little sustaining power, can't handle chords, and has a highly-distorted FF. But with its ultra-light action, it is well suited for rapid passages: In the treble, only 13 grams of pressure are required. It was made with an escapement before Geib introduced this to squares years later, and it has wired 'mopstick' dampers before such a thing was ever used on any other pianos. Called a "Portable Grand' by Hancock, it is, in reality, massively heavy. Its workmanship is outstanding as it seems to be on all spinets made by organ builders. Note the repaired unison strings positioned close together and meant to be struck together. This was, after all, a piano.



Rouchead (Edinburgh) Spinet c.1795 (Property of the Author)

Made, perhaps, six years after the 1789 Argent, which is the latest surviving dated British spinet recorded in Boalch (1, 2, M3), this may be the latest surviving British spinet from the classical era since Andrew Rouchead removed the "u" from his name (by application) in 1794 (see MB3), and must date from 1794-5. (I understand his name is pronounced "Rock-Hide" north of Hadrian's Wall.)

This spinet clearly shows the error of defining a spinet's treble string layout solely by its c^2 length and therefore its probably all-brass stringing on this basis only. This Rouchead's c^2 of just 9.5 inches (241) would certainly suggest all brass. But its longest c^2-equivalent string of 10.4 inches (265) suggests this might present a problem. This graphing shows that Rouchead did not simply take (as I once thought) a GG – g3 layout and transfer it to FF – f3. It is interesting that Rouchead's nut markings show string diameters a size larger than expected on much of his spinet. This could be a reason for his shorter-than-expected string lengths. Another is greater string length consistency. He has carried his 9 1/2 – 10" lengths almost an octave below MC towards the bass. This is unusual, but possible on a short treble-string instrument.



David Tannenberg (A) Spinet - Lititz, Pa (A) 1777-82 (A) (Private Ownership)

This unsigned spinet can, I believe, be safely assigned to Pennsylvania's leading 18th century organ builder, David Tannenberg, on the basis of its black walnut key levers, its peculiar, heavily molded key fronts, and several characteristics in common with a clavichord of his, unlabeled on the baseboard but signed and dated "1761" on the soundboard underside.

Both instruments, for example, have large, square, flat top bridges with carved decorative ends and all strings are on both double pinned. While it lacks the refined elegance of a late-18th century English spinet, it shows remarkable craftsmanship and its few remaining strings suggest a potentially outstanding plucked sound. Like all of Tannenberg's organs made before 1804, it has ebony naturals and ivory-capped sharps.

Although musically it is wholly at variance with the Small spinet, it has much in common. Both (like Charles Haward's spinet) have walnut nuts, bridges, and hitchpin rails. Both have what appears to be cedar soundboards – both in flawless condition. Both have compound-curved bentsides. Both have solid English lids. The Tannenberg has a walnut tressle with turned English baluster legs with logical but unorthodox central stretchers. Both have deep acoustically superior cases: the Tannenberg keyboard angle is 35 degrees out; the Small's is 44 degrees. The Tannenberg has a vertically-rising, pedal-actuated buff stop and a long harpsichord-like treble string scale.

Born in Saxony in 1728, Tannenberg moved to America, initially to Bethlehem, Pennsylvania in 1749 and in 1757 he established an association with Johann Gottlieb Clemm (1690-1762), a Moravian organ builder, which apparently lasted for five years until Clemm's death. It would be tempting to assign this spinet to those early years spent with Clemm coinciding with the period of the clavichord (Clemm has left us with a surviving spinet). But several spinet characteristics suggest a later date.

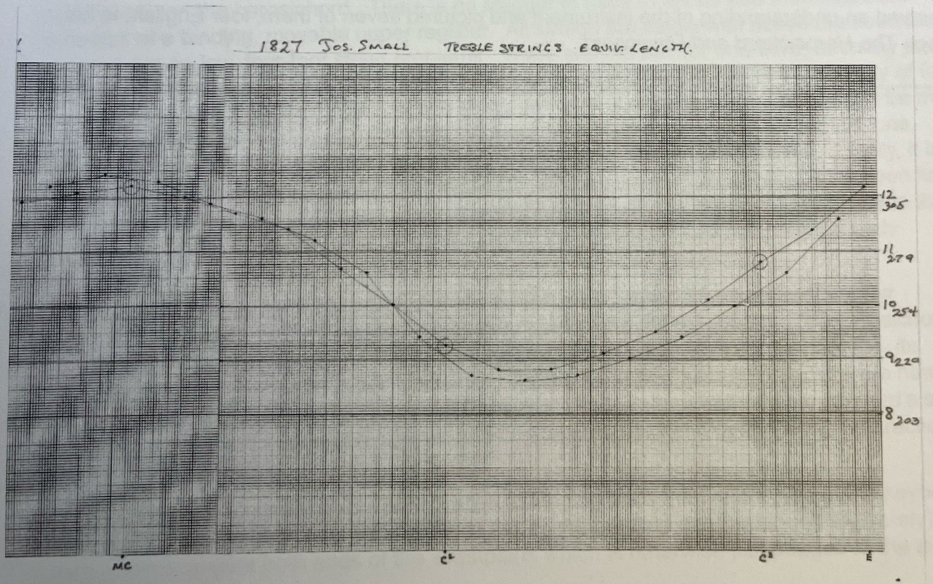
The English-type, stapled, single-dampered, unweighted, jacks are cut for leather – and this appears to be original. All mouldings show the later cove profile – rather than the earlier cyma

Pennsylvania at the time) made this spinet in Huntington County. He was born in York, Pennsylvania, and was trained in his father's carpentry and cabinetmaking shop there. Before selling his farm and moving west in 1818, records show he had sold an organ to a local church two years before. Whether he was the maker or not is unknown. His farm was located just a couple of miles away from where the spinet is today, just outside of York.

His spinet may reflect design features of other "Pennsylvania Dutch" spinets made in this state but that are no longer with us. It shows mortise and tenon joints in places where you wouldn't expect to see them. It has a serpentine bentside suggestive of German spinets, but a solid cherry Anglo-Saxon top. Its full-height faceboard has a painted decoration and an ink inscription referred to as "fractur". The lettering style corresponds to the string identification letters by the wrestpins.

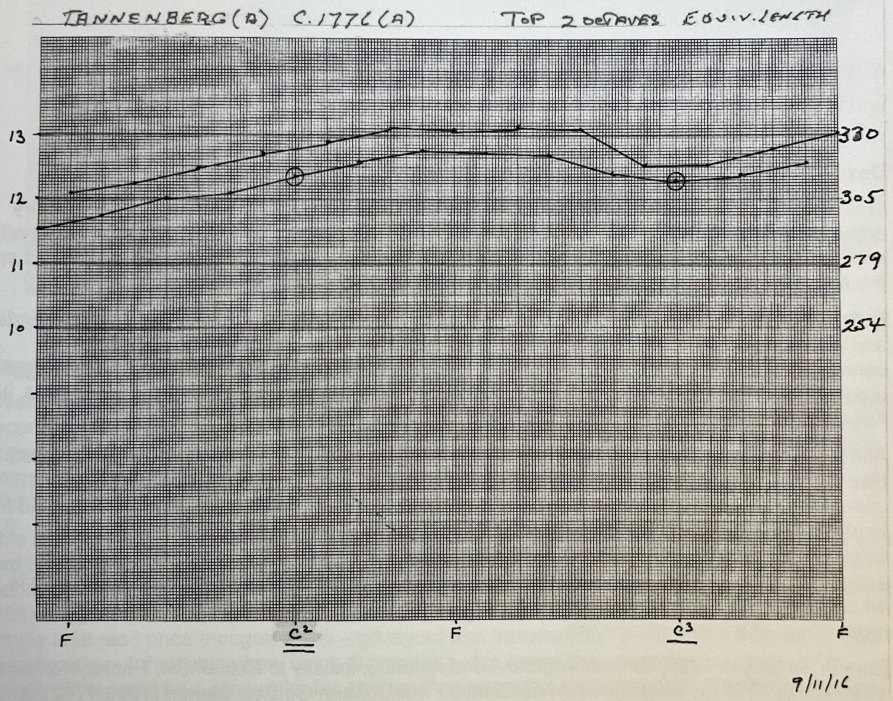
It seems clear it was made for a church. There were no large houses in Huntington County prior to the 1830s and so many of its idiosyncrasies point to the need for volume. It is double-strung with one unison above the other as well as two sets of jacks of different heights. Incredibly it has no dampers and so all strings can vibrate in sympathy. But then this is not a problem for handbells owing to slow-changing church harmonies. While the jacks are similar to 18th century English jacks, the plectra openings are not slits or rectangles but tiny holes perhaps for Washington Hawthorns.

The bridge layout certainly shows Small was not a professional instrument maker. While the bridge position superficially looks reasonable, graphing shows severe irregularities in its placement. Also, string side-bearing at the nut and bridge is at acute angles of as much as 45 degrees. While not now playable, this spinet is certainly a future challenge. In the meantime, it is a remarkable study piece.



or compound curve. All but one screw I removed appeared to be modern; but this no doubt reflects post-1850 restoration. We can follow Tannenberg's organ-building activity and even know where in Lititz he set up his shop in 1765. But for some reason, at the time of the Revolutionary War, from 1777-82, there was a hiatus. He seems to have built no church organs then, but he must have been doing something in those years and as a Moravian pacifist, he did not fight in the war. This spinet could have been made in this latent five-year period. According to the organ historian Raymond J. Brunner, Tannenberg made no fewer than 14 church organs in the last decade of his life. He died in York, Pennsylvania where Joseph Small grew up, when he fell while installing his last organ there in the Lutheran church. This organ survives today in the local historical society.

As I was measuring and examining this spinet, I began to call it "sine nomine" (without a name) but today I would gladly change this to a Tannenberg. The long, consistent, c^2-equivalent scale around 13 inches (330) is undoubtedly responsible for a shortening that begins at about c^2. The dip in the long string length around c^3 is accurate.



Joseph Small Spinet - Huntington County, Pennsylvania, 1827 (Property of the Author)

While over a quarter of the 285 classical-period British spinets recorded in Boalch 3 were in America in 1995, there had been only three known survivors that had been made here: The 1739 Clemm, the circa 1768 John Harris, and the circa 1785 Blyth. This 1827-dated Joseph Small, is now, the fourth. I have been able to determine which Joseph Small (of several living in

CHAPTER 15 THE SPINET'S ADVANTAGES AND SHORTCOMINGS

Summary

I discuss twenty-three of what I consider to be the spinet's assets or advantages: twenty-two plus the fundamental advantage, the saving of space.

Of these, five are shared with harpsichords, four with rectangular instruments, leaving fourteen specific to the spinet.

The spinet's most important advantages are those of the harpsichord. While many of these relate to the spinet's comparative ease of maintenance, several of them spare the spinet from some of the harpsichord's most intransigent problems.

I have listed twelve of what I consider to be the spinet's liabilities or shortcomings: ten plus what might be regarded as the most important: the lack of tonal variety and the compressed resonance space.

Of the twelve, one is shared with harpsichords, three with rectangular instruments, leaving eight specific to the spinet.

Of the twelve, four could be regarded as correctable, two others partially correctable.

Critiques by four 20th century scholars, Philip James, Frank Hubbard, Richard Luckett, and Raymond Russell are brought together at the end of this chapter. The first three regarded the spinet, or at least the early seventeenth century examples, as fundamentally flawed. Russell showed an understanding of the instrument and pictured seven of them, four English, in his book *The Harpsichord and Clavichord.*

The Spinet's Advantages and Shortcomings - Text

A. Introduction

Essentially the spinet can be understood as a one-manual harpsichord with its keyboard re-oriented in order to save wall space. It does this by sacrificing the tonal variety expected on a northern European harpsichord. Beyond this singular trade-off, there are a number of other less obvious spinet assets and liabilities that should be examined to allow for a fuller, better balanced understanding of the instrument.

B. The Spinet's Advantages

Compared to the harpsichord, the spinet has more advantages than its harpsichord space–saving. It also has other advantages in comparison with rectangular instruments. On the other hand, it has more shortcomings than just its lack of registration changes. A few are intrinsic, but many are, at least palliative, if not wholly correctable.

The clearest, best understood advantage of the spinet over its harpsichord harbinger is its wall space saving. Without a side projecting wrestplank and keyboard, its total length is little more than the length of its longest string and it requires no wall space for a chair. In addition, its extension into the room is perhaps half as great, and it is at just a single point, rather than the breadth of a harpsichord's cheek. There are a number of other advantages of the spinet over the harpsichord in addition to space-saving. With each note's single jack and single string, voicing can be vigorous, creating the volume of two unison strings that each must be voiced more gently on the harpsichord. There is no stagger to have to set up and then maintain. There is no risk of a binding, movable upper register. All strings are safely well above the soundboard as there are no low, four-foot string problems. There are just half (or one-third) as many jacks to maintain and just half (or one-third) as many strings to tune. The critical tuning stability of four-foot strings is also avoided. With just one string per note, a slight out-of-tuneness can be more easily tolerated: there is no objectionable "vibrato" from paired strings slightly out of tune. A spinet which is slightly out of tune, can still be practiced on - its sound tolerated. Finally, it has little risk of case-deformity. English harpsichords, with cores of white oak that have been heated to form their bentsides, have a tendency to straighten in time (oak is particularly prone to this reversion). Spinet cores of soft wood and minimal treble tension have virtually no such problem.[153]

The spinet retains some of the harpsichord's layout advantages. Unlike all rectangular instruments its wrestpins are located completely just behind the faceboard. The harpsichord's nut-to-register position remains. If given a keyboard/spine angle of about 27 degrees, its harpsichord-width gap for its jacks is retained. Its key lever and fulcrum distances are nearly equal. Unlike all rectangular instruments, the spinet retains about half of a harpsichord's semi-exponential-shaped cavity which can enhance resonance, and with bottom-last construction, its firm upper-level bracing.

All spinets have two strong transverse braces extending back from either side of the keyboard to the spine. Not only do they add rigidity to the spine, but they can (unfortunately, rarely), be used to firmly anchor both ends of the wrestplank which is otherwise just pegged to the sides of the case.

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[153] It can be argued that English harpsichords' cheek-cocking is visual and rarely tonal, however.

Unlike rectangular instruments that are strung diagonally, there is little risk of case twisting and no need for a massive base, as the spine takes the stress and is well positioned to do so.[154] As a result, a spinet can be exceptionally light in weight.

In contrast to rectangular instruments, a spinet with bottom-last construction can later be internally worked on without the removal of a soundboard.

Because of the manner that the top treble of the spinet's bridge approaches the liner, which runs along and just behind the wrestplank, all spinets seem to have bright, silvery top-half-octaves.

In common with rectangular instruments, the spinet's open lid directs all of its sound to the player and in the event that its volume is too great, the lid can be lowered, reducing its opening angle. As an open, reflective lid has its major effect on higher frequencies, this may be a reason why so many later spinets are designed to attenuate their treble overtones.[155]

Also in common with rectangular instruments, there is aural advantage in the proximity of the soundboard to the performer's ear.[156]

As noted, a spinet slightly out of tune can be tolerated for practicing purposes. With the low tension of its typically short-treble strings combined with just one string to a note, even a badly constructed spinet can maintain its tuning stability sometimes for months (with minimal humidity change). And when needed, the tuning will take minimal time.

Mention must be made here, as elsewhere in this thesis, of a spinet's visual appeal. With its keyboard reoriented, a wing is created, a modification of a harpsichord's harp shape. On an English spinet, several of the harpsichord's enhancements are retained – their effect augmented on the spinet owing to their compression. With the English trestle, the spinet shares the harpsichord's horizontal aspect. The English spinet's cantilevered, extended wing combining the coved curve with the strait element or else an elongated compound curve is a visual assertion of music on to an elegant, reticent, furniture form.

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[154] A rectangular instrument in this regard is not unlike a convertible (drophead) motor car. When an open car (a convertible) is substituted for a closed one (a coupe), the car's chassis must be reinforced to lessen its flexing.

[155] It might also be suggested that the cup-shaped staved lids on virginals could have been acoustic in intent.

[156] It is for this reason that Haydn was reported to be so taken with Stodart's upright grand piano when he was in London in the 1790s.

C. The Spinets' Shortcomings

Philip James, one of several critical of spinets as musical instruments (1930:32), faulted them as "often harsh and inevitably monotonous owing to the lack of stops." The issue of the sound quality will be discussed. While the lack of tonal variation was seen by James as a signal liability, he failed to fault the virginal or the Italian harpsichord on these same grounds.[157]

There have been instances where spinets were given buff stops (described elsewhere) and at least one spinet was made with a nag's head swell (1789 Argent). These, however, like multi-strung spinets, were aberrations.

A major spinet flaw, perhaps the spinet's most distinct flaw, is its curtailed resonant space. Inherent in the spinet's design is the reduction of "wasted space." But the harpsichord's virtually enclosed cavity is not wasted – it acts as a Helmholtz resonator (or a loud-speaker bass-reflex cabinet). The greater the volume of that space, the lower the resonant frequency and the greater the listener's perception of depth even when the resonant frequency is below the sounding bass notes. The spinet's truncated space is particularly evident with the short early spinets whose diminished interiors were pretty much crowded with lumber. But no one ever described the direct immediate sounds of any spinet, early or late, as having a "great cathedral sound". Another consideration is the matter of the spinet's configuration. An Italian harpsichord, with a comparatively small case and just two unison strings can ameliorate its fairly limited space with the profile (albeit in a single dimension) of a long exponential horn. The bridge for its lowest strings is optimally located right over the horn's point of origin, making efficient use of this space.[158]

In comparison, such an exponential horn length on any but the longest spinets will be severely pared.[159]

Another spinet weakness but only of importance to the maker, is the keyboard-to-spine angle (usually an odd angle). It not only positions the keyboard, but the entire instrument as well. Everything must be laid out consistently with this bias.

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[157] If variations in tone colour is, somehow, important to our enhanced understanding of music, then, we might ask if Beethoven's late quartettes couldn't be improved by being arranged for symphony orchestra – perhaps like Stokowski-Bach.

[158] In an elevated view of an Italian harpsichord, Hubbard (1965: pl 1) shows this clearly.

[159] Perhaps the most noteworthy instruments with large resonant cavities are the special group of Shudi 5 ½-octave, nine foot long harpsichords partially listed in Russell (1959:163). In a letter to his father, from Vienna, 27 June 1781, Mozart wrote: "We have TWO harpsichords in the house where I am lodging, one for galanterie playing and the other an instrument which is strung in the lower octave throughout, like one we had in London, and consequently sounds like an organ. So on this one I improvised and played fugues." (Source: Emily Anderson: *The Letters of Mozart and His Family* (London. MacMillan, 1938:748)) (I am much obliged to Dr Larry Palmer for bringing this to my attention). It would appear that every one of these particular harpsichords that was made has survived – including the first three for Frederick the Great. He purchased one later as a gift to Maria Theresa, whom he had never met, but had beaten in battle. The one played by Mozart in 1791 may have been purchased six years earlier by Maria Theresa as a gift. Moscheles gave his pioneering 1837 Scarlatti concerts in London on another. This harpsichord is now in Switzerland at Shudi's birthplace.

There is a tonal problem affecting the typical short-treble-scale spinets. As the bridge ascends from the bass, it curves away from the hitch-pin rail and liner above middle C, rather than subtly approaching them as in a harpsichord. Without supplementing barring for stiffening (rare), the soundboard is too flexible and acoustically more appropriate for lower frequencies.[160] On the spinets with long scales, however, this bridge curvature is not a problem for the bridge will better align with the bentside as it would in the harpsichord.[161]

The spinet shares a bridge durability problem with some rectangular instruments with curved bridges that double-back in the treble. These bridges were typically cut from one piece of wood. Because of this, there is a cross-grain weakness where the reverse-curve is tightest; there is a high risk of fracturing from shrinkage at this point. The problem could have been avoided if the bridge had been made from two boards joined with a glued dog-leg connection. I believe this was never done, however. Although the tight bridge configuration is unlikely to affect an instrument's treble sound adversely, a bridge split can be serious and could mandate its replacement. Harpsichords seldom have this problem.

There is a major tuning difficulty affecting all spinets that cannot be corrected. Because of the canted keyboard, the wrestpins do not align with the key levers. In the treble, the wrestpins are located four to five inches to the left of the keys and in the bass, the distance typically increases to eight to nine inches. Unlike early square pianos with wrestplanks often marked in ink, such marks seem never to be found on spinets. If care is not taken while tuning, the counterintuitive offset can result in broken wires. Perhaps this confusing misalignment is one reason the majority of spinets were made with short treble scales: it could have been intended as a safety measure for their owner-tuners.

A second, and very minor tuning problem is caused by the 45-degree lid opening which makes several bass strings on any spinet difficult to tune. A longer lid stick, just intended for tuning, could solve this problem if the spinet is not securely located against a wall.

The spinet's lid creates another difficulty. Because of its position, the spinet is a poor instrument for ensemble or concert use. If the lid is angled toward the audience as it would be with a harpsichord, the performer will be facing away. Lid removal could allow the spinet to be placed in any position, but its sound will not then be projected.

A significant liability of all spinets is their extreme layout sensitivity. With harpsichords, generally, French harpsichords in particular, a consistent layout will result in a predictable result. With spinets, minor modifications can result in major tonal differences, some of which are hard to predict. The result is a wide range of spinet sounds. If James found spinets to be "often harsh", this would be true only for certain spinets.

Because of their typically narrow keyboard angles, creating shallow cases, early spinets tend to have keys with short fulcrum lengths – key fronts to pivot points. This does not hold true however for spinets with broader keyboard/spine angles. And because of the spinets' solitary role of jacks, many players may not feel this length is important.

Even the earliest square pianos had a provision for printed music as did English harpsichords made in the George III's years. While such an accommodation would appear to be simple –

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[160] Straight, "bentside" Zuckerman harpsichords share this acoustical flaw.

[161] Hubbard (1965: pl.23) shows the interior of an unsigned, early-mid 18th century spinet. The bridge excursion away from the case in the treble of this typically short scaled instrument is clearly shown.

essential, even – I am not aware of a single instance of a classical-era spinet with this accessory. If portable music desks that could be supported by the wrestplank and face-board were made, some should have survived. I have never seen or heard of one.

In common with all harpsichords, the spinet has a dense concentration of bass strings secured at the tail. This has a tendency to implode the tail liner below the hitch-pin rail and the sound board. This weakness could have been easily corrected with a short brace between the centre of the liner and the spine. Small triangular blocks at the tail's two corners would have secured the line connections and retained the angles' integrity. Although both types of braces were used on 18th century chair legs, I have not seen either one on a classical-era spinet or harpsichord.

If, as I believe, the spinet's major flaw is its diminished enclosed space, this could be ameliorated in one of three ways: by increasing its case height, by increasing its length, or by broadening its keyboard/spine angle. Of these, the increase in case height would offer nothing but volume, and the spinet would lose more in its horizontally-oriented appeal than it would gain in resonance. The length increase would add to its attractiveness and allow for longer bass strings, but at the expense of wall space – the spinet's very justification. An increase in the keyboard inclination angle – even a major increase – would not noticeably alter a spinet's appearance at an angle greater than 27 degrees; it would permit more space at the jackgap than even a harpsichord has and it would allow for deeper key-to-fulcrum lengths. The 1827 American-made Joseph Small spinet has an angle of 45 degrees, creating an unusual depth that is hardly noticeable. The sole cost of such an extreme angle is the lessened support of the spine by the right hand of transverse brace as it is attached farther to the right, away from the spine's centre.

D. Scholarly Critique / Summary Comment

Philip James' 1930 critique of the spinet has been noted. Three others, writing in the late 20th century, are valuable in showing how differently three musicologists viewed the spinet – particularly the 17th century spinet – and how each explained the reasons for their conclusions.

Frank Hubbard (1967:152) "The characteristic seventeenth century spinet was rather small . . . the tone was not good, the bass strings had too little sound board, and the scale was likely to be short in the treble".

Richard Luckett (1974) (The spinet) . . . "an instrument which, though like a harpsichord in tone, is clearly deficient when compared with that instrument. This is particularly so with the small late-seventeenth century spinet, which has a poor bass, a tenor unable to sing out because of the comparatively heavy case, and a treble muffled by the unavoidable contortions that the bridge goes through in this vital area." ("The English Virginal" of the English Harpsichord Volume 1, No. 3, 1974)

Richard Russell (1959:72) "These (Hayward and Player spinets) represent the form which the small domestic keyboard instruments then assumed . . . It is really a small harpsichord of the most simple musical content, and of modified shape convenient for small rooms . . . In seventeenth century models the jacks attack the strings close to the nut, and the tone is thus bright and crisp. But in the larger eighteenth century instruments the plucking point is further from the nut and the tone is consequently less incisive, particularly in the lower octaves."

Of these four writers (which includes James), Russell seems to have shown the greatest familiarity with, and interest in, the spinet. In his book, *The Harpsichord and the Clavichord,* he pictured no fewer than seven spinets: four English (and American), two French, and a

Silbermann. Two photographs (pp 59-60) of a Player that he owned were shown. Using the words, "most simple musical content", he may have been faulting the spinet solely on its lack of tonal variation, which was James' chief complaint.

It is my belief that judging all spinets, including early spinets, on the basis of one or even a few individual variations on similar looking spinets simply invalidates any broad judgement. The tonal worth of some may be disappointing, but some spinets are exceptional musical instruments by any standard.

CHAPTER 16 FOUR PROPOSED SPINET GROUPS

Summary

Philip James in 1930, proposed "Three distinct chronological groups" for English spinets. His first was based on a misreading of a single spinet based on just one of its traits. His second, covered 35 years but left a decade-long gap. His third, rather vaguely combined all spinets made in the half century: 1725 – 75.

Mole more recently assigned Keene-school spinets realistically to three groups and added a fourth for two Barton spinets, dated 1724 and 1730. He discounted a gap in the decade of the 1690s and assigned a group number three to the transition period, 1712 – 18. The later, chromatic, five-octave spinets from c.1730 on, were presumably combined with the Barton's to form his fourth, terminal group.

I propose four groups for all spinets with primary emphasis on traits found on spinets typically expected in certain periods rather than the periods themselves. This means these groups will overlap chronologically and there will be no temporal gaps.

The first group, dating to about 1695, consisting, today, of four Hawards, three Players, and two Keenes, can be called 'experimental'. Although they share a number of characteristics, the spinets of each of these makers will show individual differences, unexpected in a production shop, and varying from each maker's later production instruments.

The second group, from about 1687 to about 1720, consisting primarily of two Hawards, eleven Players, and 14 Keenes, could be referred to as early production spinets. While there are major differences between spinets of these three makers, there is greater homogeneity in the spinets of each maker than in group one.

The third group, from about 1710 to about 1760, beginning with the Keene-shop prototypes and dominated by the spinets of the Hitchcocks, is what we can regard as standard English spinets. Most spinets made in this lengthy period will follow a listing of attributes quite closely.

The fourth group, dating from the Kirkman spinets beginning in 1750, can be considered to be the flowering of the English spinet – both visually and tonally. Some of the most consequential spinets were made then and this is reflected in the high survival rate of Baker Harris spinets – probably echoed by other contemporary makers as well.

Four Proposed Spinet Groups - Text

A. Prior Divisions

Philip James, in 1930, in his book *Early Keyboard Instruments From the Beginning to the Year 1820* proposed a division of the English spinet into "three distinct chronological groups" (pp30-32). Given the information available to him at the time, James proposed dating his first group to "approximately the years 1660 and 1680". Basing his period on his estimated date-approximation of a single characteristic found on a single spinet – the V&A's Player (B2:nd1), he wrote that "oak (in his group 1) is used almost invariably for cases and stands."[162] Based on its broken (2 split #) octave, with its tuning explained, its block register, and

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[162] James pictured this spinet (p109).

particularly the turnings on its original, surviving trestle, we can assign a c.1690, or even an early-1690s date to this spinet today, and it would appear to be preceded by, at least, three other extant Players: York Castle Museum (BM3:nd-2), Sizergh Castle (BM3,nd-9), and Hornyold-Strickland (BM3: -), which could all date from as early as 1680. Dating his second group to "circa 1680 – 1715", James noted that walnut was "chiefly used" and added, "sometimes the nameboard is inlaid with marquetry". Leaving a ten-year gap, he combined all the spinets "of the second and third quarters of the 18th century" into his third group, beginning c.1725.

Eight decades later, Mole wrote of an "organological classification" and divided it into "three temporal periods" being "reinforced" by changes in keyboard compass (2009:378). While not specifically identifying these periods, he wrote of, "standard spinets" of about 1690 to 1710 (54 notes), following "early spinets" (50 – 53 notes), and then "later transitional instruments" after 1710 "approaching, though not reaching five octaves". Presumably, the chromatic 5-octave spinets after about 1720, might have formed a fourth period, but this was not specifically identified here.

On his table 1001 (p370), Mole assigned Keene-school spinets to three groups and placed the two Bartons dated 1724 and 1730 into a fourth group.[163] His table and his "organological classification" are consistent. Two early Keenes: Grove – RCM (BM3:1700(a)) and Hall i th Woods (BM3:nd-11) dating from the 1680s form his group 1. Fourteen others of Keene's standard design that are largely dated (1700-11) form his second, and two with 'circa'-dates of 1712-18 form his third. The two specifically-dated Bartons and, presumably, all later spinets are assigned to a new group – a group 4.

James based his first division solely on its case wood, and his second, rather vaguely on "the gradual increase in the size of the spinet" (p32). Mole based his groups, perhaps, solely on the "important growth of the keyboard compass". Both men combined all chromatic 5-octave spinets into a giant final group. Although both placed primary importance on chronology; with both, there were gaps between some of their groups of a decade or more.

Clocks of all types are rarely dated. Among horologists, it is believed that a clock should be 'circa'-dated based on the latest of its characteristics.[164] Because there are so many spinet characteristics that, unlike clocks, are often not chronologically derived, such a maxim cannot hold true for spinets. For example:

> There is a 1719 Barton spinet with a five-octave 61-note GG – g3 compass; yet, a 1731 Krickhof and a c.1760 Woffington ascending just to e3.

Two Hawards, one dated 1687, have original characteristics we would expect to see a generation later: skunktail sharps, semi-roundel key fronts, pierced (open) hinges, and yet, early virginal-like jackrail inscriptions.

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[163] He devised his own numbering system and, on this table, strangely, referred to them as "Boalch numbers".

[164] In his book, *Lantern Clocks*, (Antique Collectors' Club – 1989), George White proposed assigning lantern clocks to three periods with rather specific cut-off dates: 1:1580-1640, 2:1640-1660, 3:1660-1700. There are several problems with his cut-off points – some related to spinet-grouping. There are almost no surviving pre-civil-war clocks (his period 1). The important changes to clocks don't coincide with his cut-off dates. Essentially all his period 1, 2, and early period 3 clocks have undergone serious upgrades (although some have been converted back). Most important to us, he has disregarded the many surviving, later, 18th century clocks, being beyond his interest. Nevertheless, his three-period groupings of the earliest lantern clocks enhance our understanding of the development of these clocks, and this relates, directly, to our proposed grouping of spinets.

Early divided registers can be seen on the 1731 Krickhof, the Kirkmans of the 1750s, and a 1765 Harrison.

Soundboard grain parallel to the spine, expected only on 17th century spinets, can also be found on a 1730 Barton, the 1731 Krickhof, the Kirkmans, and most of the musically significant, long-scale, late spinets: the Kirkmans, the Crangs, and the John Hancock.[165]

Later, Italian-type block registers, normally expected with keyboard-parallel grain soundboards, seem to be on all but one Player (BM3:9); yet, only one Player (the chinoiserie-painted) may have spine-parallel grain.

Although exceptionally long spinet lengths are normally found only on some of the latest spinets, two dated spinets from the 1730s: the Philadelphia-made Clemm (1739) and the London-made Charles Slade (1734) have long spine lengths exceeding 74-inches (188).

Harpsichord-like c2 lengths over 13-inches (330) are, likewise, normally found only on certain late English spinets. However, a 1749 John Harrison has a reported 13.3-inch (338) c2 length.[166]

In devising a revised system that considers the spinets of all years, we have a chronological problem. There are two post-Haward transitional decades of 1690-1700 and 1710-1720. Mole passed over the first and designated the second as his group 3. If our primary focus were to be purely chronological, this problem cannot be easily swept aside, unless we expanded the group-count to an unwieldy six or seven.

B. Four Proposed Groups

I believe all spinets can be meaningfully broken into just four groups, though, if based on their features and measurements. Most, but not all, of each spinet's characteristics should correspond to a particular time-period, though. These time-periods will overlap:

Group 1: to c.1695
Group 2: c.1687 – c.1720
Group 3: c.1710 – c.1760
Group 4: c.1750 on.

With the primary focus on characteristics, each spinet can be assigned to a particular group if it shares the majority of that group's important traits and measurements. In the following sub-chapter, each of the four proposed groups is described and the group's characteristics are listed. This is followed by a four-group data comparison that will allow measurement changes to be viewed together. Finally, I list some of the traits that appear to be maker-related and have either minimal or no temporal relation.

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[165] A surprising exception, however, is the remarkable 1789 Argent.

[166] It should be noted that a number of Continental spinets: the 1720 Christofori, perhaps all Delins, the 1777 Kettenhoven, and, perhaps, all of the J H Silbermanns also have reported lengths of 13-inches or more. Among later English spinets, though, there are the 1750-and-later Kirkmans, a 1774 William Harris, a 1780 Longman & Broderip (Culliford), and the 1789 Argent. Slightly shorter, from about 12-1/2-inches (318), is a c.1730 Hitchcock (#1335), two Crangs, and a John Hancock. A c.1725 Woolfinden is just over twelve inches (305) as is the early Hall I th Woods Keene.

C. Group Characteristics

Group 1. Describing our understanding of the universe in 1931, Bertrand Russell referred to it as "All spots and jumps, without unity, without continuity, without coherence or orderliness..." One could use his words today to describe our understanding of the spinet's earliest years – its group 1. At this time, we know of no dated, extant spinet prior to 1683 and no evident commercial production until sometime after c.1678; yet, Pepys saw an unfinished spinet in early 1668. Just nine known spinets by three major makers could be classed as group 1 based on the majority of their traits: Four are Hawards: 16XX, 1683, 1684, and 1689, a group I have termed 'preliminary'. Three are Players: York Castle, Sizergh Castle, and Hornyold-Strickland. Two are Keenes: Grove-RCM and Hall i th Woods. All nine suggest experimentation, or in Russell's words, "All spots and jumps". These were the spinets that preceded each maker's established design. Here is a listing of many of their non-data traits:

1. 50-notes
2. C3-top note
3. Bass octave 'short' (unbroken) GG/BB
4. Registers divided, harpsichord-like, soundboard-veneered, leather covered
5. Bridges and nuts – wire-crested (not Player)
6. Soundboard grain – spine-oriented
7. Soundboard roses (not Player)
8. Soundboard – ink-decorated
9. Sharps – ivory or ivory-topped
10. Sharps – vertically-tapered
11. Natural pads ebony – sides chamfered
12. Natural pads – two to three scribed lines (plus the break)
13. Natural key fronts – parchment, trefoil design
14. Brass hardware – unpierced, unchased
15. Lock hasps – bat-wing design
16. Face boards – full height, removable
17. Face boards – inscribed names, no marquetry
18. Jack rails – no inscriptions
19. Jack rails – removable horizontally on left
20. Case sides – solid walnut, unveneered
21. Case sides with square brass decorated washers
22. Case sides with exposed nail heads (particularly at spine)
23. LH tails – truncated
24. Maximum length greater than spine length
25. Lids with no overhang – no added moulding
26. Trestles with twist turnings
27. Bottom-first construction

28. Inscriptions – varied

All of the nine named spinets will show a majority of these early traits, and yet, none will show them all. Martin's charge (2003:227) that, compared to virginals, spinets were more homogeneous is simply untrue – at least for the surviving spinets made before the 18th century that I class as group 1.

Group 2. Group 2 would consist of all the spinets not specifically identified as belonging in group 1 by Haward, Player, and Keene and his school (to c.1720). It would also include the spinets of Benjamin Slade. While these are spinets of relatively standardized design by each maker, there is greater heterogeneity in the late Player spinets than in the two by Haward and the 14 by the Keene shop, but not enough to consider them experimental.

The chronological centre of this group is clear: It is the first decade of the 18th century. The following decade would be just as clear as the first if we were to limit spinets to a single attribute, such as keyboard compass, since all group 2's spinets would fall short of group 3's expected chromatic 61-note keyboards. However, while essentially all surviving spinets made in this decade have truncated scales, some will have enough later features to warrant their inclusion in the following group – group 3. Group 2's earlier 17th century spinets present a greater problem. We have dates for several spinets of the 1680s and dates for several Keene spinets of the early 18th century, but no dated examples from the 1690s. It is significant that Mole, on his Keene table, shows this gap. Nevertheless, rough dating can be made of a few of the very late 17th century spinets that still have their original trestles, based on their designs.[167] Haward's dated 1687 spinet of a mature design strongly suggests other makers had to be upgrading and standardizing at that time as well. If they had been, their spinets from about 1690 to 1710 should have shown little outward change. Over these two-plus decades the 53-54 note range (56 when the treble was extended to e3) would appear to be universal. Following is a listing of group 2's non-data attributes:

1. 54 (56) notes
2. D3 (e3) top note
3. Bass octave broken (1 – 2 split sharps) GG/BB
4. Block registers
5. Bridges and nuts – wire-crested on Haward only
6. Soundboard grain parallel to register (except Haward)
7. Soundboards – no roses (except Haward)
8. Soundboards – no decoration
9. Sharps – ivory block (except Haward)
10. Sharps – no vertical taper
11. Natural pads – unchanged, ebony
12. Natural pads – unchanged scribed lines
13. Natural key fronts – unchanged (except Haward)
14. Brass hardware – pierced, unchased, squarish design

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[167] Separating 17th and 18th century long case clocks is possible for a most interesting reason. In the final year of the 17th century, 1700, the mouldings supporting the clock hoods, for some reason, changed abruptly from a convex to a concave form that corresponded to the trunk-to-plinth moulding below.

15. Lock escutcheons – rectangular, scalloped edges
16. Face boards – unchanged, full height
17. Face boards – marquetry panels, inscribed (except Haward)
18. Jack rails – Haward's inscribed
19. Jack rails – removal unchanged
20. Case sides – usually solid walnut, unchanged
21. Case sides – brass lock latch only
22. Case sides – all nail heads hidden
23. LH tails – now pointed (Keene)
24. Maximum length = spine length (Keene)
25. Lids with overhang and applied moulding
26. Trestles with shaped, concentric turnings
27. Change to bottom-last construction with elevated braces to the spine
28. Inscriptions varied – no change

Group 3. Group 3 would run roughly through the reigns of the first two Georges: c.1714 – c.1759. Begun by makers from the Keene school and dominated by the Hitchcocks, it accounts, today, for the majority of extant spinets. It was a period of stasis – of consolidation. If a particular spinet were to be chosen to represent the archetypal instrument, it would be a group 3 spinet.

It could be that the Hitchcock shop pioneered the (in my view, unfortunate) alteration of the mid-treble plucking point from the normal, harpsichordal position to a more central position on some of their spinets. Mole (2009:259) has shown this was done, at least occasionally, from the early 18th century. This practice seems to have grown over the decades. Evidently many spinet buyers were desiring a different sound experience than harpsichord buyers – a less-brilliant, harp-like, guitar-like sound – or perhaps a softening of the sound being projected by the raised lid. Here is a listing of group 3's attributes:

1. 61 notes
2. G3 top note
3. Bass octave chromatic
4. Block, Italian-type registers
5. Bridges and nuts – no wire cresting
6. Soundboard grain – parallel to the register – no change
7. Soundboard roses – none
8. Soundboard undecorated – no change
9. Sharps – skunk tail (ebony-ivory-ebony)
10. Sharps untapered – no change
11. Natural pads – ivory, no side-chamfer
12. Natural pads – one-to-two scribed lines (plus the break)
13. Natural key fronts – ivory, semi-circle turnings

14. Brass hardware – unpierced, chased, unique spinet design
15. Lock escutcheons astragal – (Palladian) arched sides
16. Face boards – full height, unchanged
17. Face boards – no longer marquetried, more elaborately inscribed
18. Jack rails – never inscribed
19. Jack rails – horizontal-removal on right
20. Case sides – walnut, veneered over deal wood
21. Case sides – usually no hardware
22. Case sides – all nailing under veneer
23. LH tails – straight and pointed
24. Maximum length – no change
25. Lid edges – no change
26. Trestles – paired, turned balusters framing heavy stretchers
27. Bottom-last construction with elevated braces to the spine
28. Inscriptions – on rectangular (usually) or astragal-sided plaques
29. Octave spans becoming standardized – to about 6-1/3-inches, 19-inch standard measure
30. Bentsides – both cove and cyma

Since group 3 was dominated by the Hitchcocks, it is hard to distinguish their traits from what others were doing in this era. Smaller makers would clearly follow the Hitchcock example.

Group 4. Group 4 would begin, roughly, with, or shortly before, the reign of George III in 1760. These late spinets warrant a group of their own because of their typical workmanship quality and, in many cases, their advanced design. The high Baker Harris survival rate suggests their spinets and many others made in these later years, were particularly well constructed. Beginning, perhaps, with the Kirkman spinets in mid-century, certainly some of the most tonally promising spinets were made in the following years when the nascent square pianos were beginning to displace them. Their enlarged cases, compared with earlier spinets, enhanced their mid-to-low bass resonance and aesthetically, they were transformed into some of the most compelling examples of late Georgian furniture. They combined many notable traits of late English harpsichords on to compressed forms. In addition, with their extended cantilevered wings, they created a particularly enhanced visual dynamic. Here is a listing of group 4's attributes:

1. 60 note (FF), 61-note (GG)
2. F3 or g3 top note
3. Bass octave – if FF, FF# is missing
4. Block registers – no change
5. Bridges and nuts – no change
6. Soundboard grain orientation – no change
7. Soundboard roses – no change
8. Soundboard – undecorated, no change

9. Sharps – solid ebony or ebony-capped
10. Sharps – no taper, no change
11. Natural pads – ivory, no change
12. Natural pads – one scribed line (plus the break)
13. Natural key fronts – box wood moulding
14. Brass hardware – shape unchanged, unchased
15. Lock escutcheon – shaped ends, no change
16. Lock hasps – similar to hinge-design – no change
17. Faceboards – secured, removable name-battens
18. Jackrails – never inscribed, no change
19. Jackrails – vertical removal, RH side, brass hook and eye
20. Case sides – cross-banded crotch-veneer panels over deal on three sides
21. Case sides – with brass harpsichord 'S'-hooks
22. Case side nailing – no visible nails, no change
23. LH tails – arcuate, convex
24. Maximum length = spine length, no change
25. Lid edges – no change
26. Trestles – square Marlboro, or composite
27. No construction changes
28. Batten inscriptions – cyma-arch-sided plaques. Correct German fracture lettering. Round-hand embellishment.

D. Measurement Changes – Four Proposed Groups

GROUP:

TOTAL KEY LENGTH

1. c. 3-1/2" (89)
2. c. 4-5/16" (109)
3. c. 4-7/8" (124)

KEYFRONT TO FULCRUM (MC)

1. 3-3/4 – 4-1/4" (95 – 108)
2. 4-1/4 – 4-1/2" (108 – 114)
3. 5 – 6" (127 – 152)
4. 6 – 6-1/4" (152 – 159)

KEYBOARD TO SPINE ANGLE

1. < 20 degrees
2. 20 – 25 degrees
3. 25 – 30 degrees
4. 29 – degrees

PLUCKING POINT RATIO AT c2

1. 22% (16XX)
2. 20%-25% (Keene)
3. 25%-35%
4. 40%-50%

Kirkman spinet – 26 %

Kirkman front 8' – 26 %

Kirkman back 8' – 31 %

LENGTH

1. Spine Length 50 – 60" (1270 – 1524)
2. Max. Case Length 57 – 60" (1448-1524)
3. Spine = Case Length 60 – 69" (1524– 1753)
4. Spine = Case Length 70 – 72" (1778-1829)
5. Spine = Case Length 73 – 78" (1854-1981)

BASS C

	Actual Length	c2 Equiv. Length
1.	48-50" (1219-1270)	5.8-6.2" (149-157)
2.	50-55" (1270-1397)	6.0-6.9" (152-175)
3.	55-56" (1397-1422)	6.8-7.2" (173-183)
4.	55-62" (1397-1580)	7.0-7.8" (178-198)

LOWEST BASS STRING LENGTH

	Actual Length	c2 Equiv. Length
1.	48-51" (1219-1295)	4.5-5.0" (114-127)
2.	52-57" (1321-1448)	5.0-5.3" (127-135)
3.	58-60" (1473-1524)	5.4-5.6" (137-142)
4.	GG 61-66" (1549-1676)	5.7-6.2" (145-157)
5.	FF 62-67" (1575-1702)	5.8-6.3" (147-160)

There Are A Number of Characteristics That Appear to Be Maker-, Not Temporal-, Not Group-Related:

DESCRIPTIVE

- Wrestpins – in-line or staggered
- Key block style – flat-topped or corbel-shaped
- Widths of LH / RH faces
- Bass bridge – straight, mitred, or curved
- Bridge – double-pinning count
- Rear rack – slitted wood or wire
- Rear rack overrail
- Bentside – cyma or cove-curved
- 1 -2-piece keyboard cover

DIMENSIONAL

- Wide 'D's
- Octave spans: 6-1/4" (476), 6-3/8" (486), 6-1/2" (495)
- C2 plucking point percents
- Treble string lengths
- Case heights

CHAPTER 17. THE TRESTLE'S IMPORTANCE

Summary

Although all English and continental spinets look superficially similar, their trestles create a major appearance difference: continental spinets tend to appear small and vertical; English spinets, broad and horizontal.

The Trestle's Importance - Text

Defined and governed by their canted keyboards combined with their parabolic bentsides, the spinets of all countries are superficially similar.

There are major differences in length. Some have cyma rather than cove bentsides. Long treble-scale spinets have shallower bentside curvatures, and the shapes of their short left-hand tails vary. But those differences have only a minor effect on the spinet's overall form. Important to the way we see this form, however, is the trestle – an external element. Major trestle differences distinguish the aspect of all English spinets from those of the continent.

A. The English Trestle

The English trestle, whether spiral, double-baluster, Marlborough, or compound-legged, never competes with the spinet form. All allow the wing to project out as a cantilevered plate.[168] All English trestles of the 18th century have sturdy stretchers that divide the vertical leg and emphasize the instrument's horizontality.

The four legs found on all English spinets are set back from the outer borders of the instrument and two are set back from the front projecting keyboard. A major stretcher running at an angle midway between the keyboard and the spine emphasizes the spinet's major horizontal aspect.[169] The right-hand stretcher is angled between the keyboard's transverse brace and the bentside, creating the cantilever's fulcrum.

From the side, with its lid closed, the spinet on its trestle could suggest an open hand supporting a large overhanging book - the hand not competing with the book. In the case of a compound-curved bentside, the bentside could suggest a cello or double-bass resting on its back. In the case of a Group 4 spinet, with its arcuate left-hand tail, the keyboard separates the convex and concave portions of the form as the short fillet does on an architectural cornice moulding.

B. The English Stretcher

The English stretcher is not just a functional member, it is the trestle's primary visual member responsible for the spinet's horizontal thrust. There is proof of this: Its mass is greater than it would have to be for trestle stability. It is typically the heaviest trestle member. Also, in spinets

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[168] This cantilevered plate has an interesting architectural counterpart: Frank Lloyd Wright's 1936 Kaufmann house in western Pennsylvania 'Falling Water' - justly renowned for its series of projecting cantilevered decks.

[169] It also allows ample space for a performer's knees.

through Group 3, it is always highly moulded. Leg turnings on Group 2 and 3 spinets almost always frame the stretcher: cyma-recta above and cyma-reversa below.[170]

A prominent stretcher is important to Group 4's composite stretchers separating its corpulent cyma-reversa cabriole legs from the cyma-recta balusters above. A major benefit of the stretcher design is the manner in which its prominent cabriole leg, visually separated from the spinet, is able to emphasize the instrument's form.

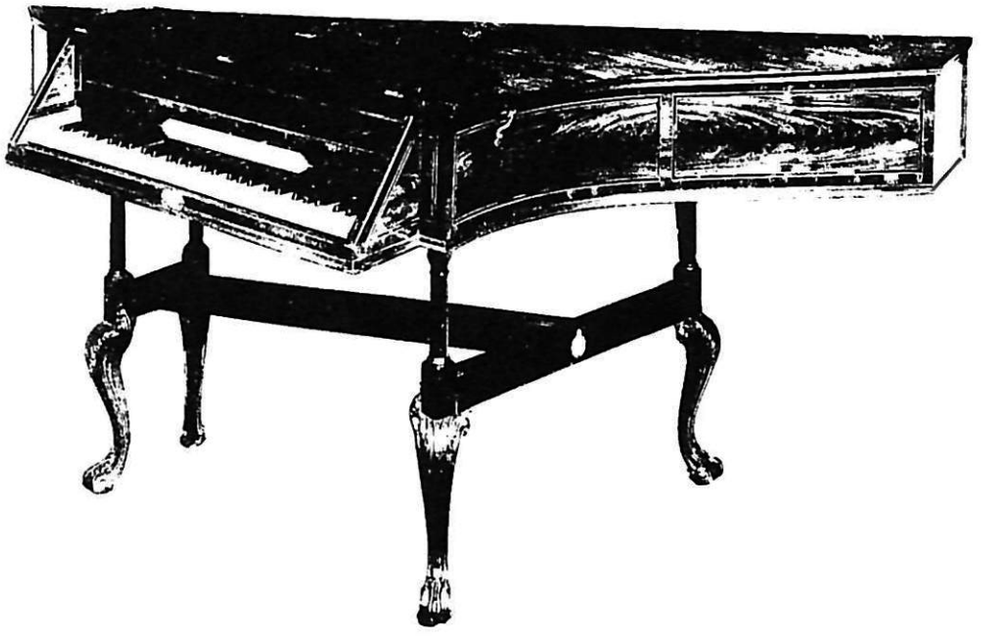

Figure 17.1 Photo of a quintessential Group 4 spinet – a Baker Harris-dated 1766 (B2:7a) (BM3:1766).

[170] The one interesting exception seems to be on Hitchcock's spinets. For some reason, all authentic, turned Hitchcock legs repeat the same cyma-recta baluster below the stretcher.

C. The Continental Trestle

With perhaps all continental trestles, the spinet is seated within a surrounding frame supported by three up to six long legs at the periphery. They descend from the shallow frame to the floor with no stretcher to break the expanse. The overall aspect is vertical. One is reminded of Charles Burney's characterization of the composer Orlandus Lassus as "a dwarf on stilts". The spinet itself has less visual importance than its support.[171]

D. The Baker Harris Trestle

The pictured spinet, by itself, shows the expected Group 4 characteristics: without its trestle: An 'S'-hook; dual-panelled, book-matched, cross-grained panelling; and an arcuate left-hand tail. It has the quasi-symmetrical FF– f3 keyboard without an FF# as found in many Group 4 spinets and the uniquely spinet-designed hinges and lockplate – expected on all Georgian spinets.[172] [173]

It has a dark mahogany keyboard-surround (that would be superseded in the 1780s with sycamore) with an expected fruitwood plaque with Moorish-arch ends as on a harpsichord. The German fraktur, always correct on Group 4 spinets, would be surrounded by roundhand embellishments – a visual counterpart to so much of Handel's music with its transparent, open chords. Roundhand design and lettering is found from the late 17th to the late 18th centuries.

Its composite trestle sets this spinet apart. It may be unique among spinets in having brass bolt covers expected on beds and harpsichords. Its leg carving, though, is certainly unique on spinets. Rising from its swirled carved feet, its acanthus leaves crested with volutes, reflect high-style London furniture of this era. Above its stretcher are Tuscan columns replacing upper balusters, as they had done on clock hoods earlier in this decade.

The ensemble reflects Palladian inspiration where frequently a heavy stone rusticated base is surmounted by a strong horizontal band over which is dressed stone fronted with balusters.

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[171] One can make a similar observation about many highly decorated continental clocks where the clock appears to be justification for its embellishment. It is as if Lady Godiva were to ride into town and we were to focus on her horse.

[172] There are two possible reasons for the elimination of the lowest FF#. For one, it allows for a slightly more compliant position on the bridge and keyboard for the FF. But more likely is this: The 18th century English (and English-Americans) were sticklers for balance. Even their use of rococo (inherently asymmetrical) was nearly always symmetric. Note the use of dual staircases and the frequently paired doors (one of which was a fake). The Dartington Hall (Ruckers) harpsichord was given a fourth knob – a dummy knob - in England in the mid-18th century. This Anglo-Saxon esteem of symmetry is an original observation of mine attributed later to the individual I had discussed this with.

[173] Keyboards, after all, with a missing FF#, look symmetric and balanced, unlike GG - g3.

A Palladian inspired market building designed by Peter Harrison and built in Newport Rhode Island in 1760 replaces the stone with brick; the balusters are Ionic. It is remarkably similar to the wings on Christopher Wren's St Paul's Cathedral. Notice the importance of its horizontal band.[174] [175]

[174] This building is pictured on page 110 of "Palladio's Architecture and its Influence" by Henry Hope Reed.

[175] In a study I made of a Virginia plantation houses dating from 1723-1800, all but four showed projecting horizontal brick bands across the facades, but only two houses of eleven, dating from 1802, showed such a band. Clearly Palladian's influence was waning in the new century.

APPENDIX A

Six Haward Spinets – Pictures with Text

In this section, there are about 160 pictures and the accompanying text is over 10,000 words. While lengthy, this section is critical to our understanding of the six extant Haward spinets. Without it, there is no confirmation of so many important observations made elsewhere – many of which, even though accepted, may be poorly understood. The pictures and the text here will supplement the charts in Appendix B, the data section, but approach the material in a less quantitative manner.

The order, **16XX, 1683, 1684, c.1685, 1687,** and **1689** is roughly chronological. However, the undated spinet **c.1685** could very likely be a later spinet than the dated **1687**. Also, **1689** may, in its original form, date from around 1680. A case can be made that it is a very early example of a spinet made entirely by Chas Haward and then restored or updated by him shortly before his death. I am using the same date-designations for each of the spinets throughout this thesis.

16XX, although determined to have been made in 1667-68, has had a variety of date-estimates assigned to it in the past: 'c.1650', 'c.1660', 'c.1668', and 'c.1680'. Since 1668 is a date to be proven, the designation **16XX** is not inappropriate.

Since I have taken all of the photographs of **16XX** over a period of several years, and because so many are investigatory, they outnumber those of the other spinets. I am indebted to Dr Orum Stringer who photographed **1683**. I am indebted to Suzanna Caldiera for so many of her photographs of **1684** and to Miles Hellon for the photographs of **1687**. I am also indebted to John Koster for the coloured photographs of **1689.** I am responsible for all but four of the photographs of **c.1685.**

16XX

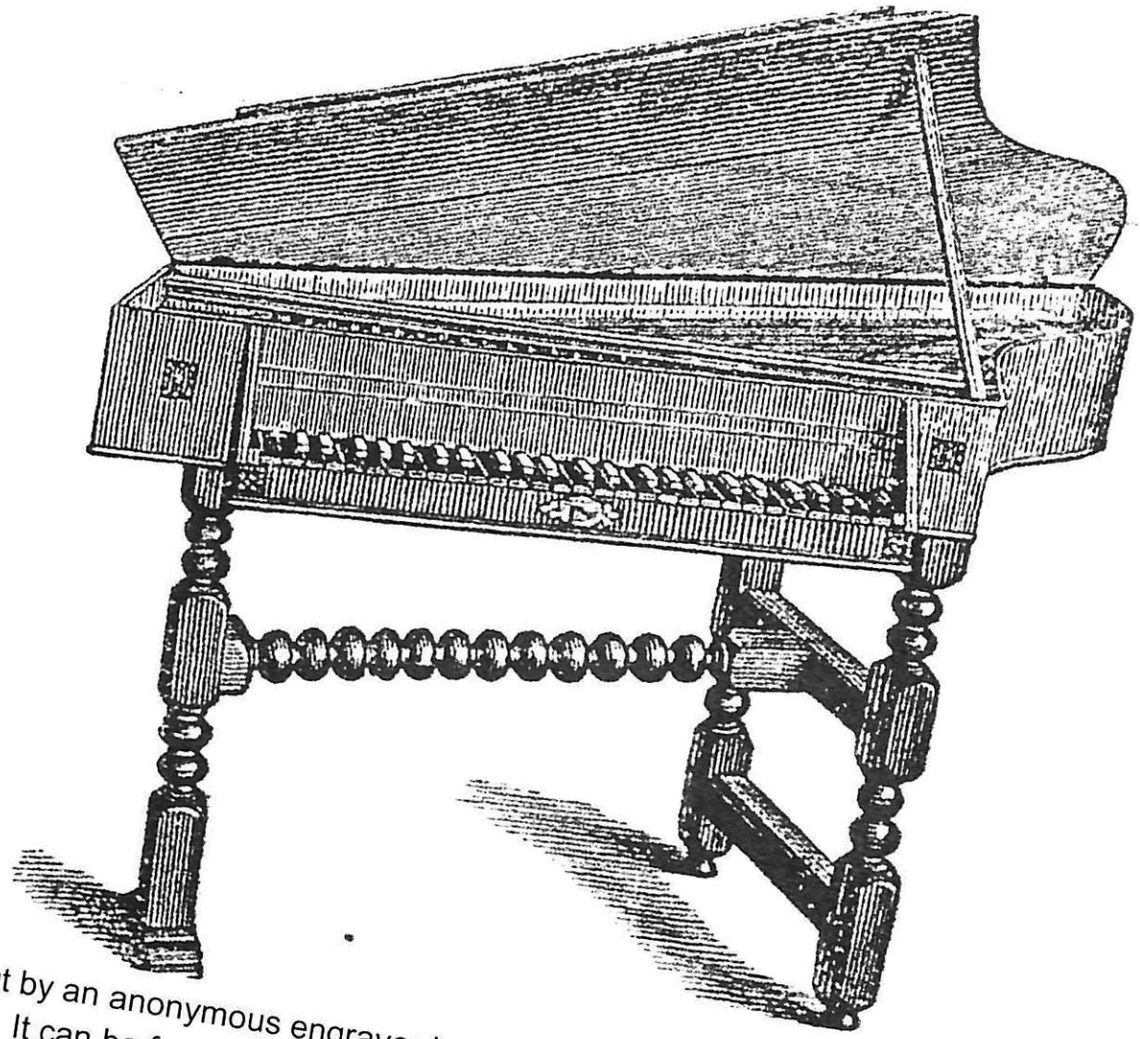


Figure 1. This woodcut by an anonymous engraver is probably the earliest representation of Haward's **16XX** spinet. It can be found in the Grove's Dictionary 1st edition. Beginning in 1878, the *Groves Dictionary of Music & Musicians* was issued in sections in alphabetical order. While 'S' (Spinet) was not issued till 1883, its writing and illustrations would probably have been prepared several years before. **16XX** was pictured from the beginning and continued to be pictured through the 5th edition that was replaced by the New Grove in 1980. This Haward was used to define a spinet in Grove's for close to 100 years. Notice the engraver's two prominent guidelines on the face board and his bold trestle turning. The same woodcut was also pictured in Rockstro's '*General History of Music*' (1886).

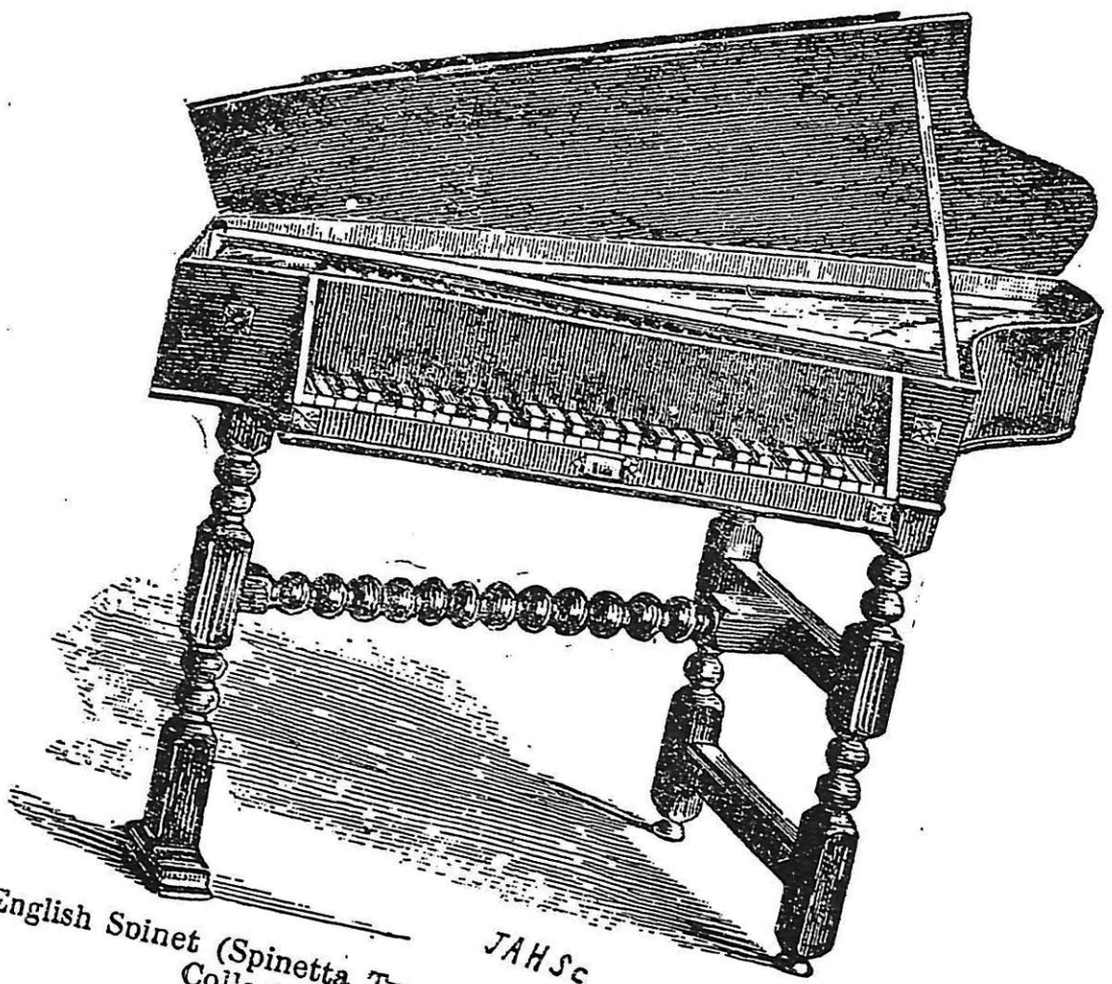


FIG. 10.—English Spinet (Spinetta Traversa), by Carolus Haward. About 1668.
Collection of Mr W. Dale, London.

Figure 2. This woodcut was pictured in the *Encyclopaedia Britannica* under 'Pianoforte' for, perhaps, 40 years beginning in c.1888. This illustration is from an encyclopaedia dated 1902. 'JAH' was Alfred J Hipkins' son, an engraver. A J Hipkins had also been trained as an engraver years before. This woodcut may have appeared for about four decades; it was no onger pictured in the edition of 1929. It shows how the second artist saw the instrument. oth engravers placed importance on the unusual trestle.

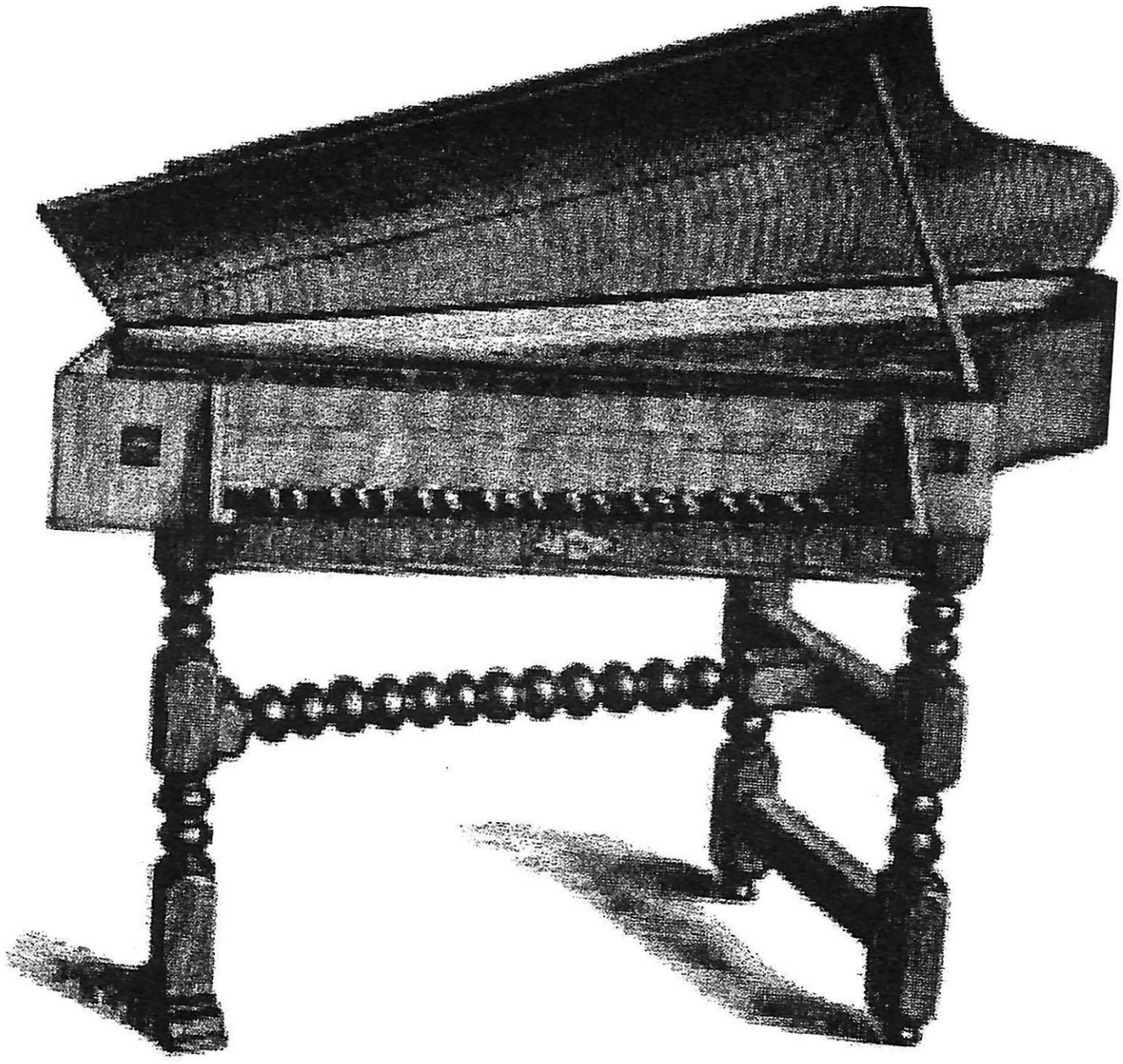


Figure 3. This drawing was pictured in Grove's in 1908. Notice the distinctive cross-grained plane marks under the lid along with the pair of guide lines and the prominent square washers. The artist has also highlighted the joins of the three boards but ignored the colour change.

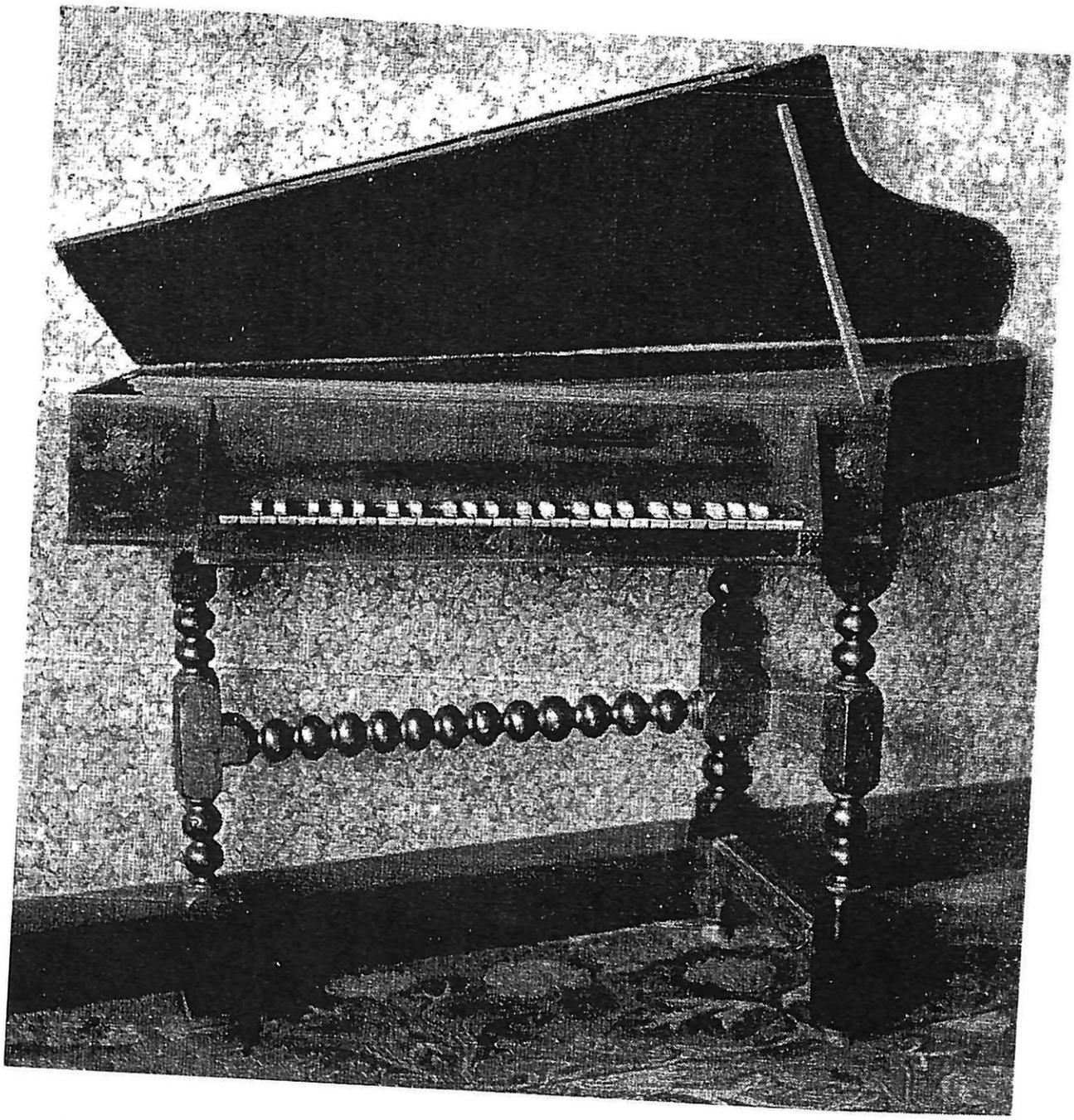


Figure 4. This photograph appeared in the 1st edition (1924-27) of Ralph Edwards' *Dictionary of English Furniture* (the 'DEF'). The same picture was used by him in his 1959 edition and his *Shorter Dictionary of English Furniture* in 1964. While the 1959 edition showed a change of ownership to C A Legg, the 1964 publication again listed Dr W H Brazil, its owner in the 1920s.

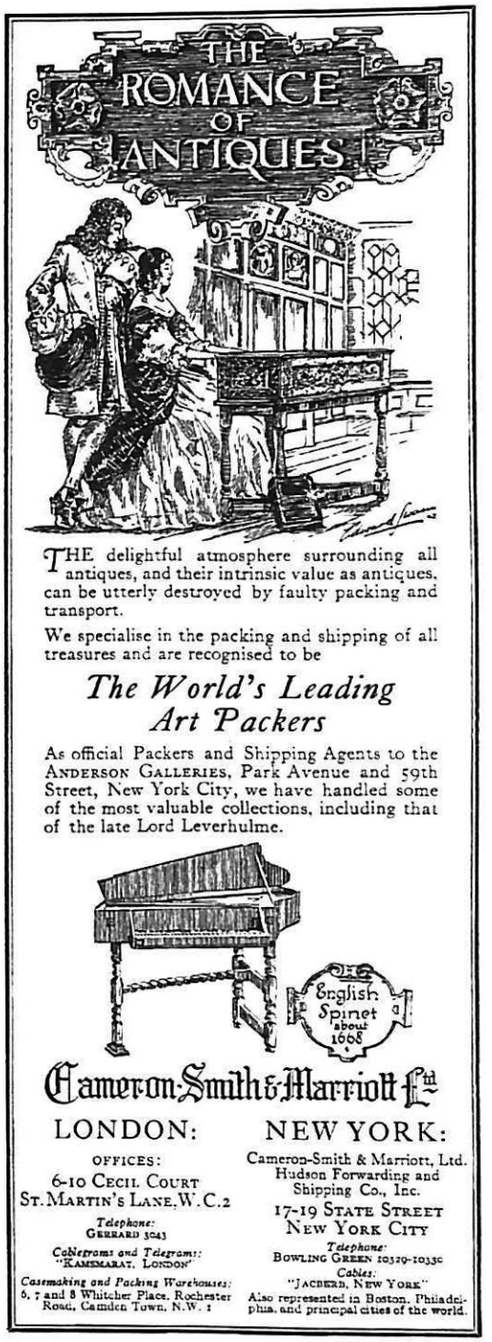
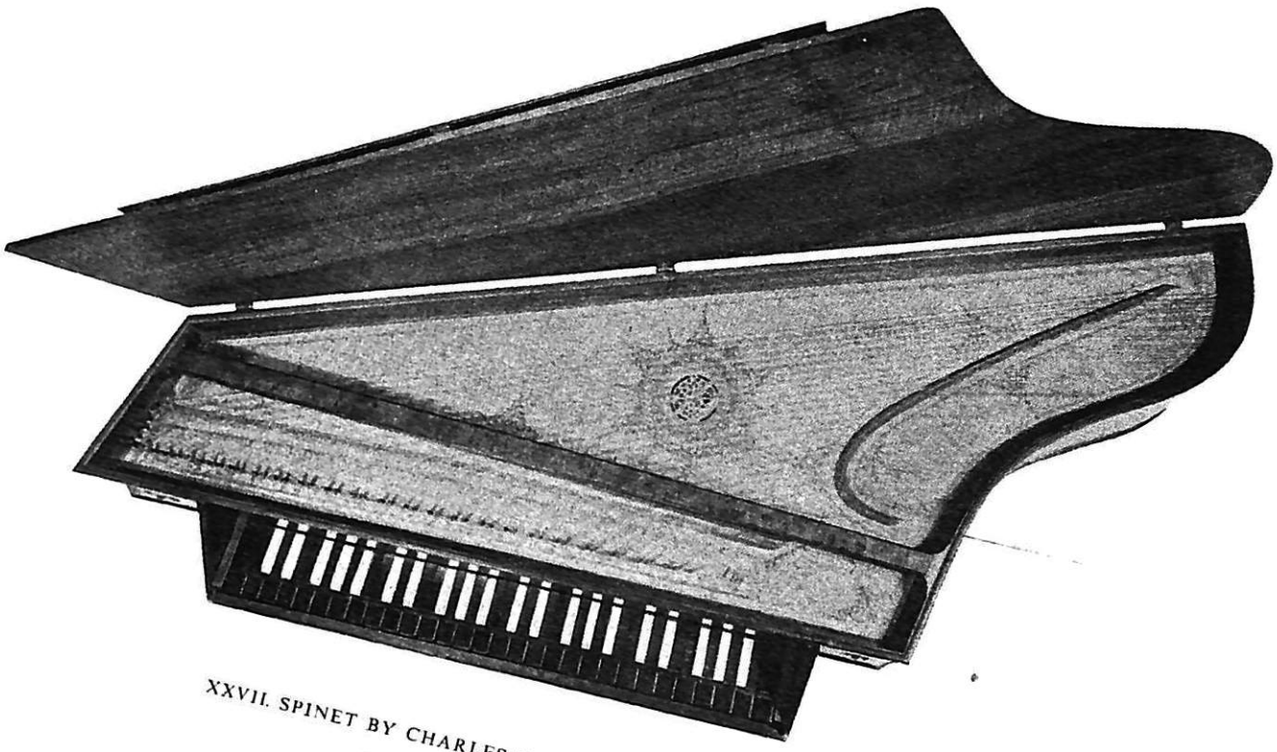


Figure 5. This ad appeared in five issues of *Antiques Magazine* from September 1927 through January 1928. Did the moving company ever transport this spinet, or did they merely want to point out they were capable of doing so? Who was it that paid the cost of this third woodcut at this late date? Note that the spinet was still date-estimated as before: "c.1668".

Figure 6. This illustration appeared in Grove's Dictionary's 3rd Edition in 1935. The photograph was supplied by Legg-Phillips, the spinet's owner at the time. The spinet was now back-dated to "c.1660".

Figure 7. This is the Bonham's auction photograph used for the last sale of **16XX** then held in March 2008. Their description read in part: "Made by Charles Hayward around 1668. The spinet is thought to be one (sic) mentioned by Samuel Pepys in his diary on 4 April of that year". There was then no evidence to support a Pepys connection, but over the years, several writers came perilously close.



XXVII. SPINET BY CHARLES HAWARD, CIRCA 1680

(By courtesy of Mr. C. A. Legg)

Figure 8. This photograph was used in the 1st (1956) edition of Boalch's *Makers of the Harpsichord and Clavichord.* It was supplied by its owner at the time, C A Legg. Notice that Boalch forward-dated it to 'c.1680' – a date estimate that has been accepted by many organologists since that time. This photograph can be compared with top-down views of award's **1684**, **1687** and **1689,** pictured elsewhere.

e the double purfling on a Maggini violin, this soundboard decoration, except for its losive umbilicus, enhances its overall form as well as its components. The soundboard not simply a piece of blank canvas, intended for irrelevant design. The same perceptive also decorated **1683** and **1684.** Later Hawards had plain soundboards with roses, but t the inked decoration.

Figure 9. The two most outwardly visible attributes of this Haward spinet are its trestle and its lid. Its trestle may be unique among surviving spinets in having, like Italian harpsichords, just three legs. This three-legged anomaly was noted by several 19thC writers who mistakenly attributed it to Pepys through a misreading of 'Triangle' in his diary. This is discussed elsewhere. This spinet is a unique survivor in having 'Cromwellian' bobbin-turned trestle turnings, suggesting a pre-1670s date. This, too, is discussed elsewhere. Its central stretcher was turned from an oak board 32-inches wide and 2-1/2 inches square, requiring a long lathe-bed. This photograph clearly shows the two types of walnut found in the lid. The front and back boards are European (*juglans regia)* walnut whereas the centre board is Virginia, or Black (*juglans nigra)* walnut. The prominent Chas Haward cross-grain plane marks on all three boards ties them to wood-planing seen on the other Hawards. They appear nowhere else on this spinet. The lid stick, pictured, appears to be original, for the worn, striated file marks on its bottom are consistent with some found towards the base of the bridge behind the scroll.

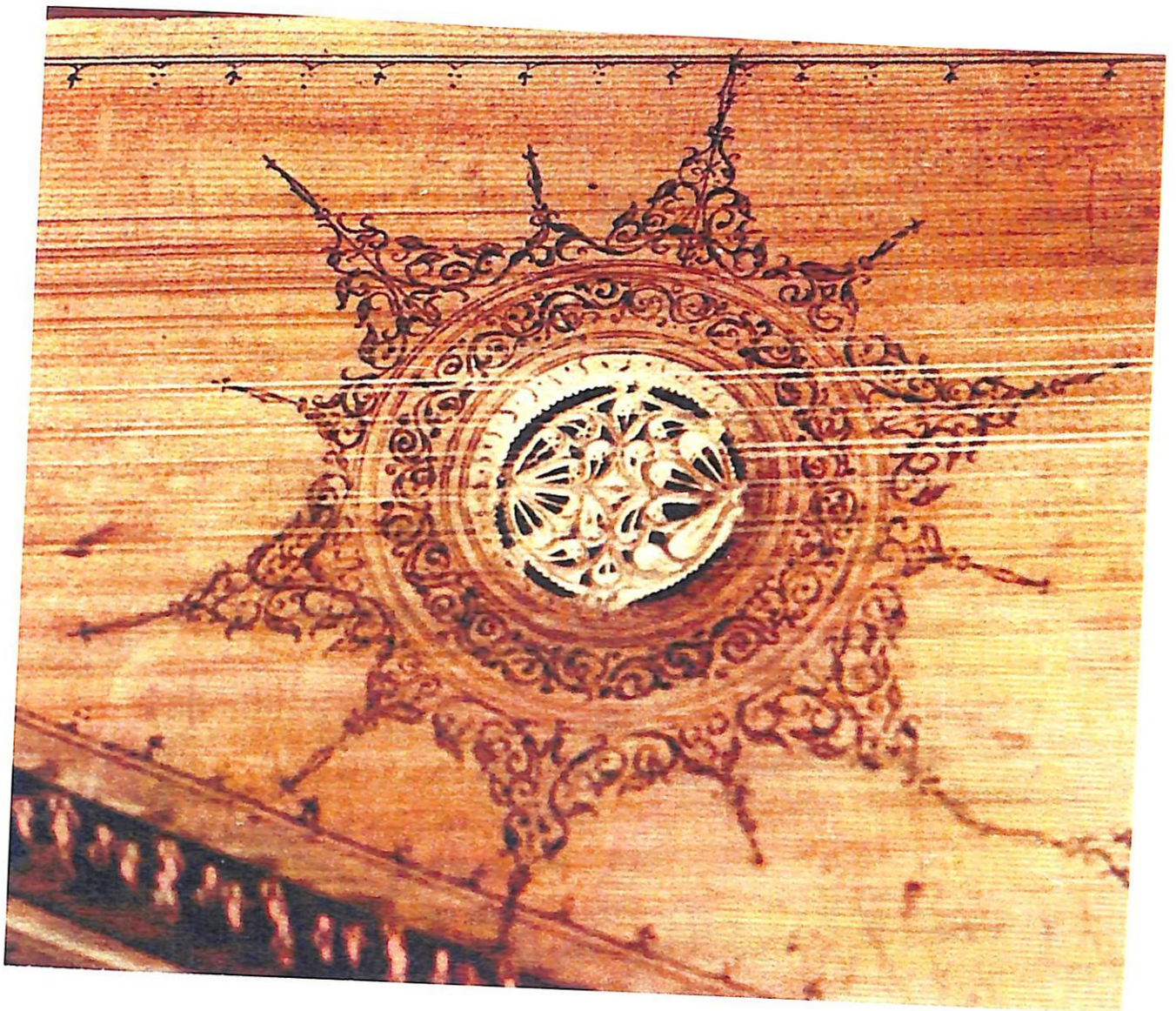


Figure 10. This inked rose-surround is not unique. The roses in Haward's **1683** and **1684** were surrounded by a similar design – clearly by the same artist. The condition of this one is remarkable. To avoid chemically-contaminating this soundboard, I used only rubber erasers to remove the surface dirt. No liquids were used.

Figure 11. The two ends of this faceboard were cut square with a 90-deg. angle to fit into boxed case pockets. This is in contrast to the **1683,** the **1689** and, perhaps others, cut at about 45 degrees. The board's veneer could be Lebanon cedar (*cedrus librani)*, but is most probably eastern red cedar (juniperus), from Virginia or Bermuda.

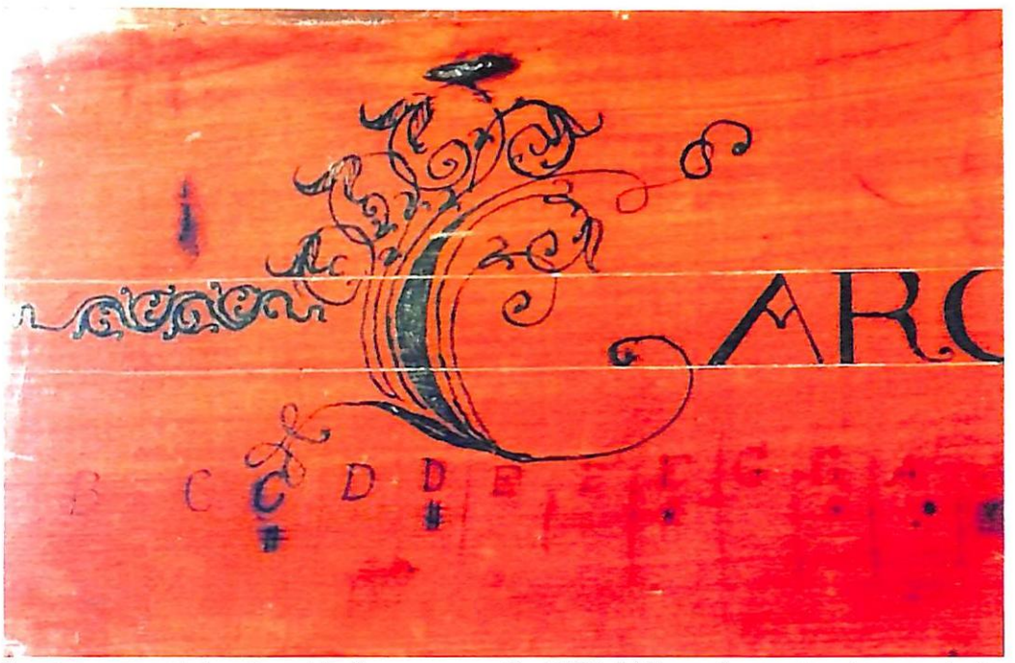


Figure 12. The two scratched guidelines, exactly 5/8" (16mm) apart, strangely have no traces of ink or paint in them; yet, they have to have preceded the lettering in order to position it. If the bottom note, just below 'C', were tuned as indicated, it would hardly have been justified: it had to be intended to be tuned down to GG. This lettering error was missed by Hipkins (Grove 1883;655-6) but caught by James (1931). It was unlikely to have been placed there by either a performer or the maker, who knew why he was adding this key.

Figure 13. The lettering in 'Fecit' is half the height of the lettering in 'Carolus Haward'. Note the candle for an 'i' – also found on the **1683** spinet. Note, also, the faint vertical lines throughout, together with faint letters in two places (not visible in the photograph), placed there when the board was vertical. It was a guide, necessary after it was removed and placed on a table top for lettering.

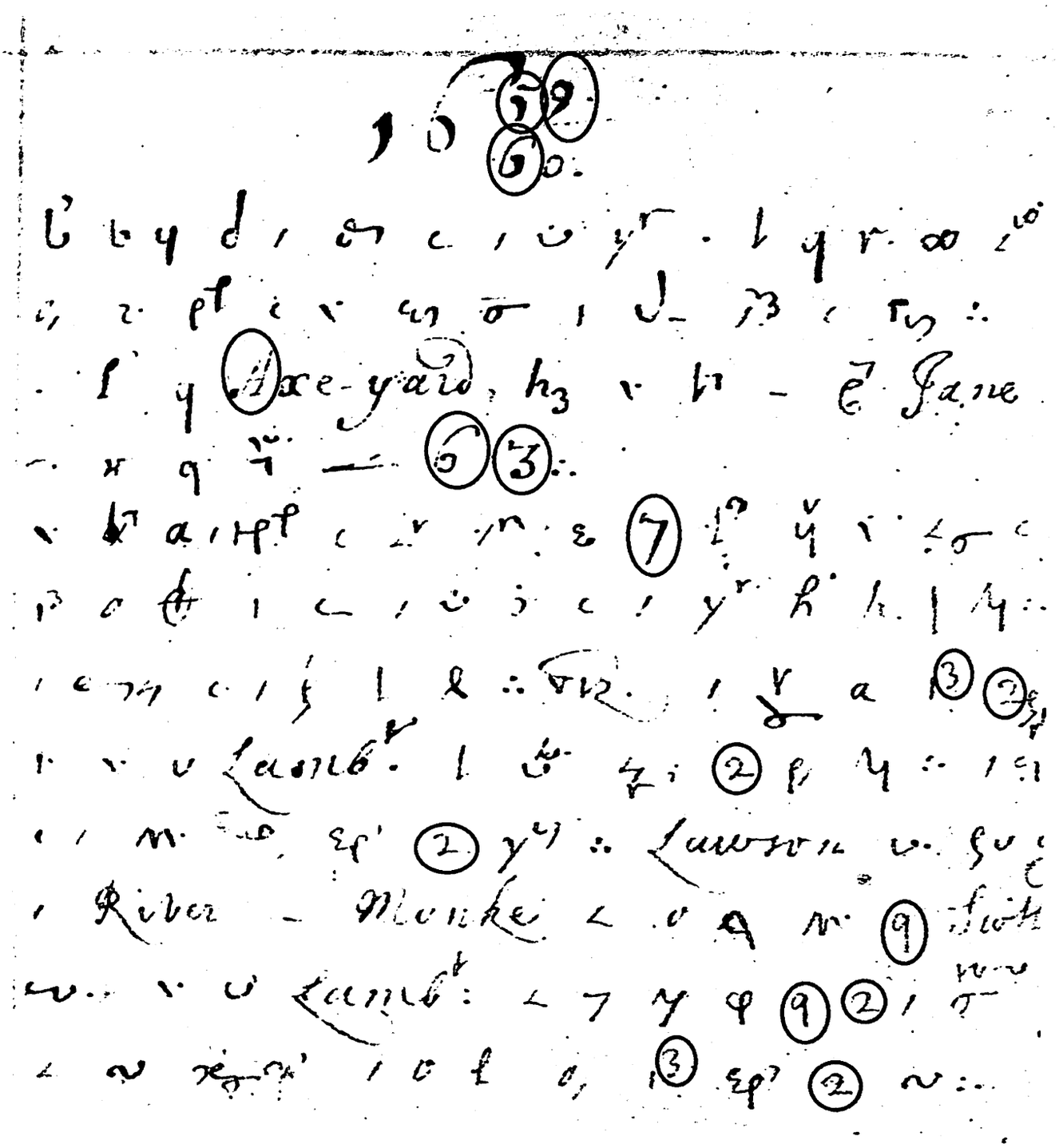


Figure 14. This is a portion of the first page of Pepys' diary, dated 1st January 1660. The diary was entirely written in code. The circles around seven numbers are my additions. Although the style of the 'A' is not atypical of the period, note the striking resemblance of the giant '3' to the 'E's and 'F's on the nameboard. Also, note the marked difference in Pepys' '6's and '9's, both here and on the keyboard cover. Others in this period invert their '6's for their '9's. This dis-similarity shown here could be unique.

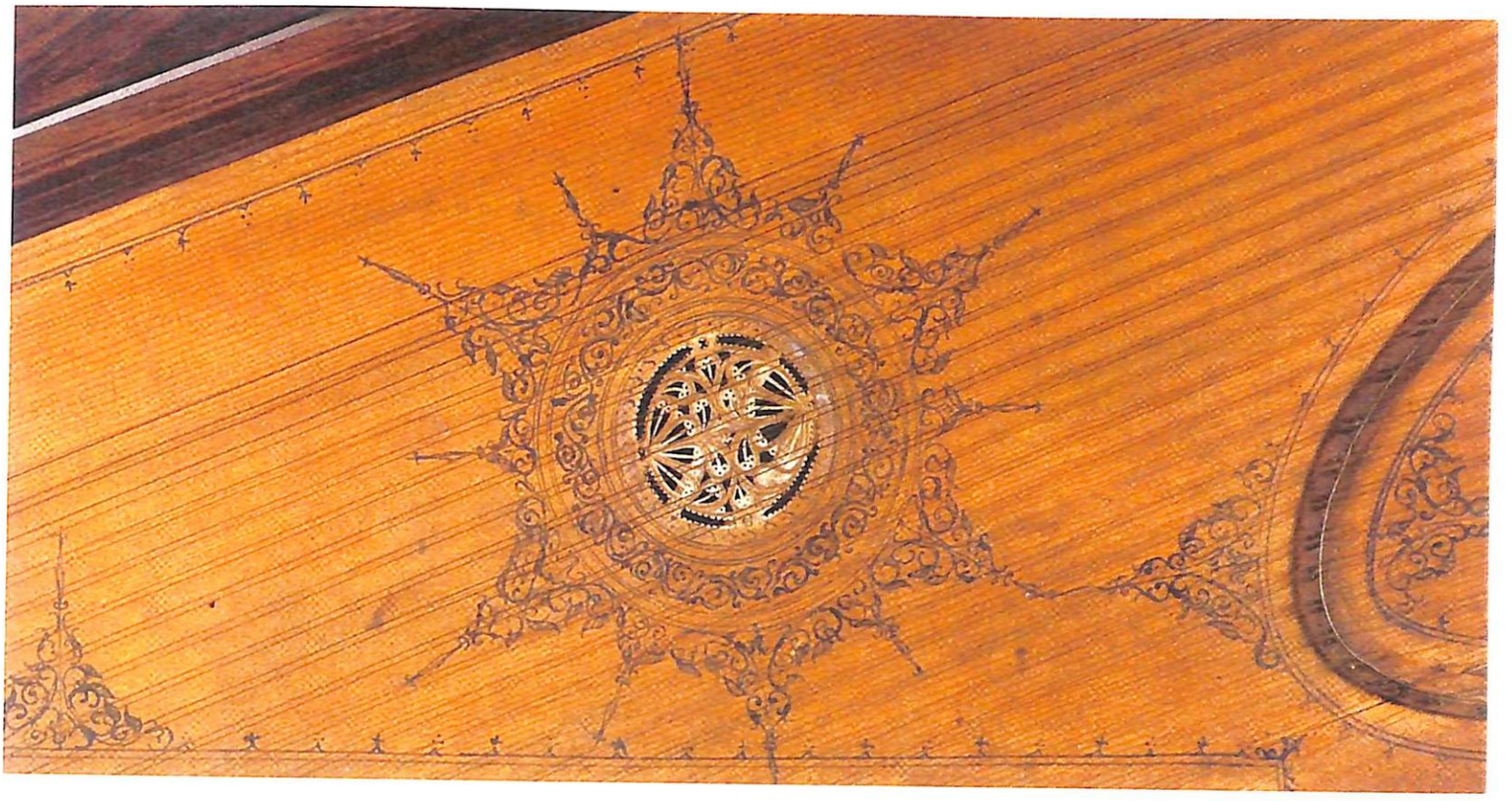


Figure 15. Note the bi-colouration of the rose. The brown is wood, the cream-coloured webbing is parchment. This dual-colouration is on three of the four surviving Haward spinet roses and, presumably, on his 1683 harpsichord roses as well.

Figure 16. On four Haward spinets, the second cutoff bar is visible through the roses. Because of this, its angle can be accurately determined.

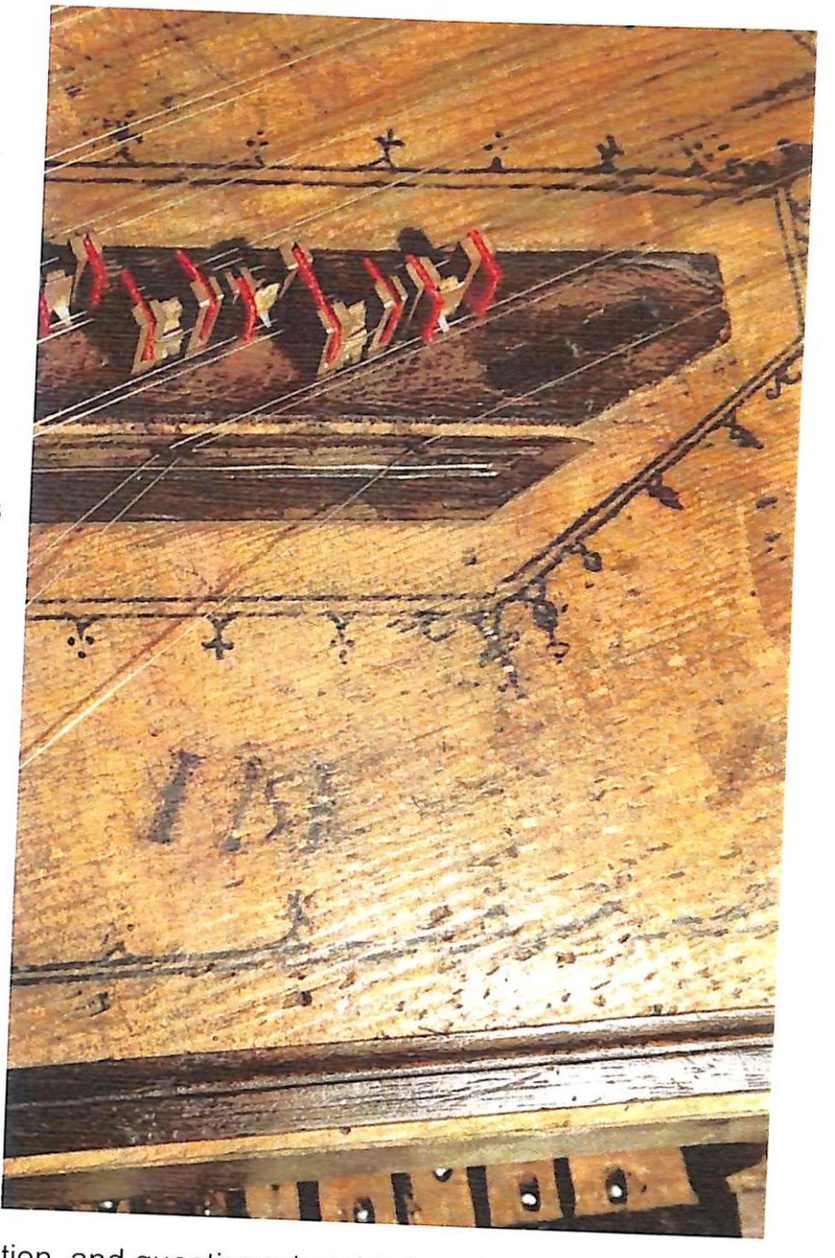


Figure 17. Starting at the bottom and moving up: Note the scribed line across the pivot pins, locating the natural mortises. Two other lines (not visible here) mark the sharp mortises and the balance points. Both these triple lines and these square mortises are unique to this Haward spinet. At the edge of the soundboard-covered wrestplank, note the complex, cyma-curved edge to the black walnut moulding – the design dominated by its coved component. This shape can be found all over this spinet and there is no other design found on the instrument. Note the narrow growth rings at the proximal portion of the soundboard that widen towards the spine. This grain-selection practice may be a characteristic of, at least, some Hawards. The brass wire shown on the nut is too far from the nut pins to have any acoustical benefit. Notice the decorative dotting around the three verticals of what I believe is the combined, 'IH'/ 'IHS' monogram. While Boalch (1956:47) assumed it was a serial number, I find it difficult to imagine a serial number receiving decoration, and question what this 'number' could be. James (1930:) believed it to be a monogram and Dale believed it to be a Christogram. I agree. The leather cover on the soundboard, forming the upper register, shows two terminal cuts at both of its ends – one perpendicular to the spine; the other parallel to the closest string. Both of the two top-most jacks were removed for this picture. The top jack, facing right (c3), plucks the shorter string of the long-short pair. The jacks are of exceptional quality. They have staples, dual dampers, and leather bumpers. They are also tapered. But since spinet jacks typically seem to be weighted whereas these are not, they must have been substituted for the originals after the spinet period. They were made for this instrument and not removed from a harpsichord, which is discussed later.

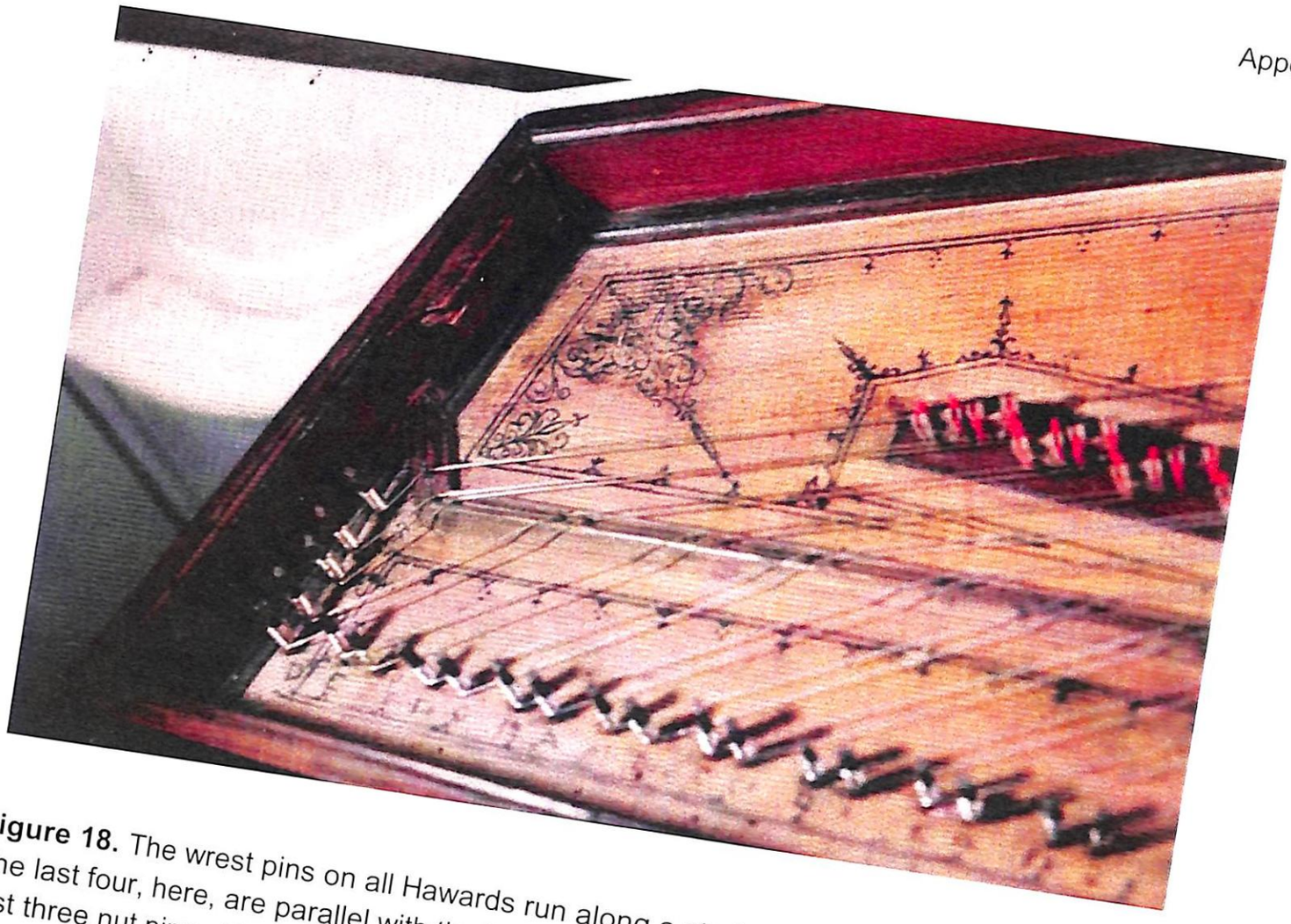


Figure 18. The wrest pins on all Hawards run along a straight line and are not staggered. The last four, here, are parallel with the LH tail. Notice the extreme string angle around the last three nut pins. Unlike the main nut, the mitred portion is extremely crudely carved. Just two strings run across it. Nevertheless, it appears to be original.

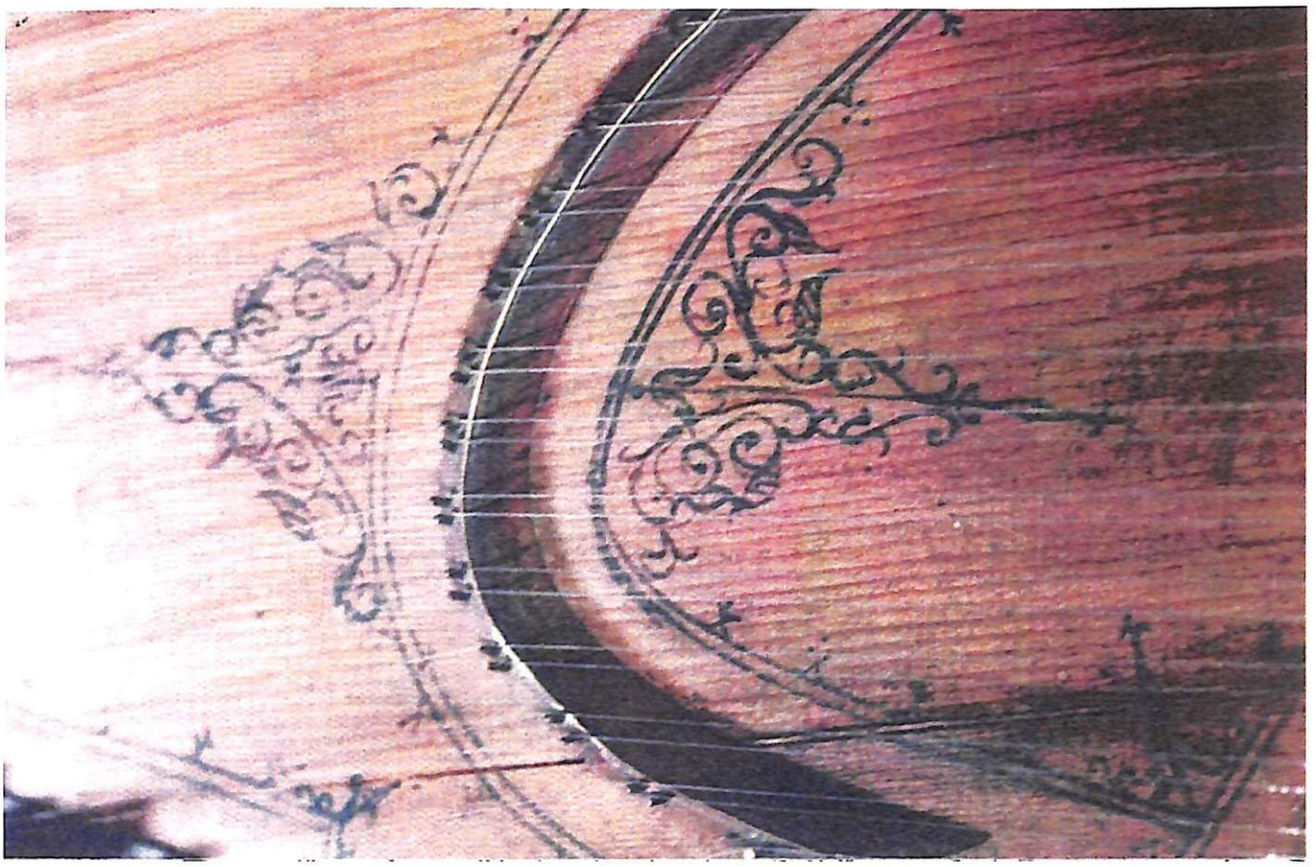


Figure 19. This is the proximal portion of the rear soundboard. Notice the significantly wider growth rings on this board – more than double the width of those in the treble portion. This would allow for a more pliable board – desirable in the bass but not in the treble. While the dulcimer-like brass wire shown here is certainly protective and could allow a later bridge break to be ignored, it is behind the bridge pins and would, therefore, seem to serve no acoustic function.

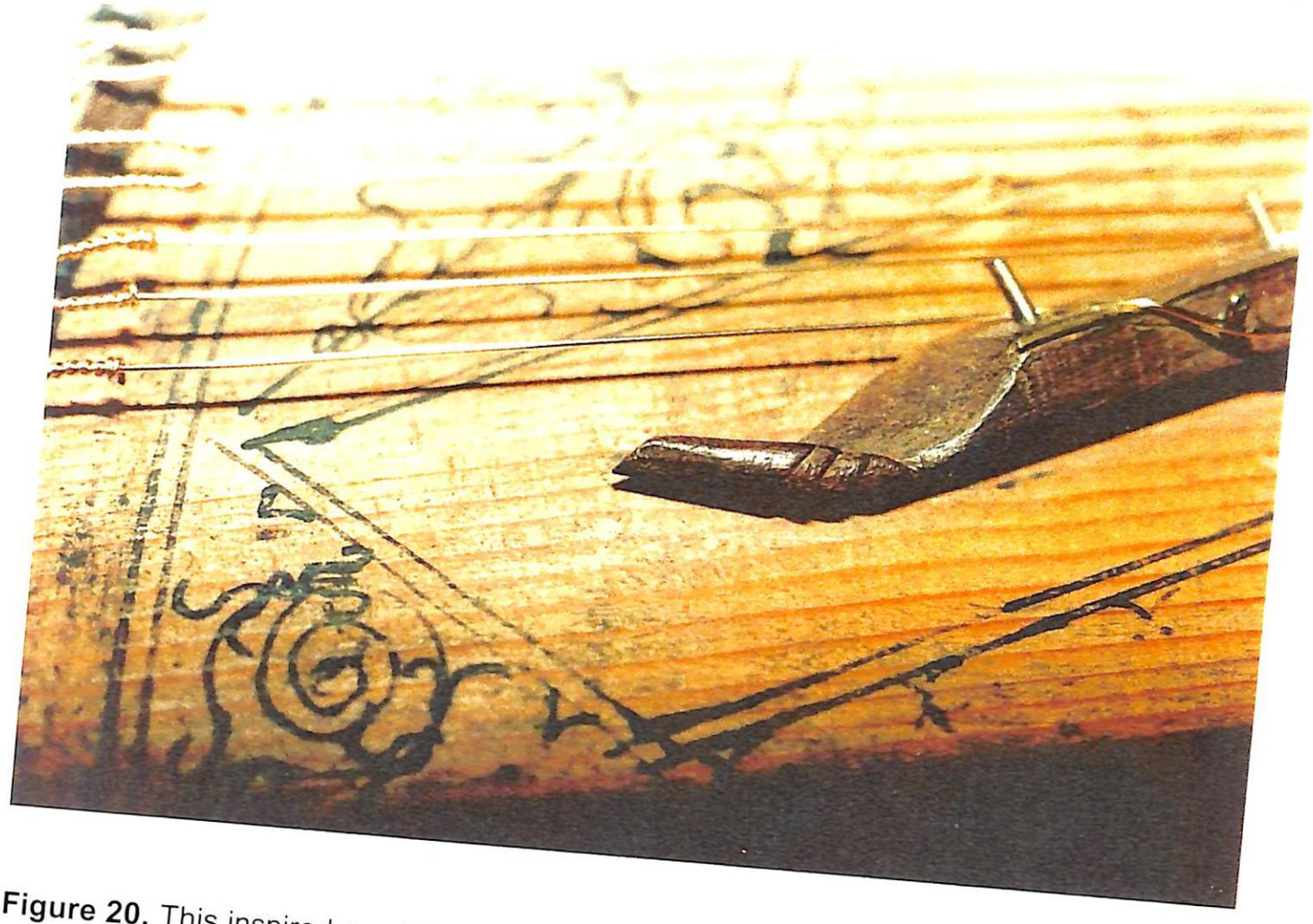


Figure 20. This inspired scroll is like no other bridge termination in an extant Haward instrument. It is my position that given the rather primitive overall quality of all the other Haward spinets, Chas Haward was incapable of such work. Note the wide growth rings on this soundboard's second board and the positioning of the GG/BB string as it passes over the bridge. The purposes of the second pin, shown here, are to reduce the need for side-draught and to reduce bridge-roll in the long straight portion of the bridge.

Figure 21. Although the wrestpins all appear to be original, their widths vary widely from 0.050" – 0.069" (1.27mm – 1.75mm). This is a variation of more than 15-percent. Their lengths, however, are fairly consistent and they rise to about 1-1/8" (29mm) above the wrestplank. Notice the lettering by each of the wrestpins - in the same style and the same brown ink as the faceboard lettering. As on the faceboard, the bottom note is marked 'B', and not 'G'.

Figure 22. This monogram has proven to be difficult to photograph. Here is an enlargement made with controlled lighting. The height of the LH vertical is 1/2 inch (13mm). A computer-enhanced tracing of this can be seen elsewhere.

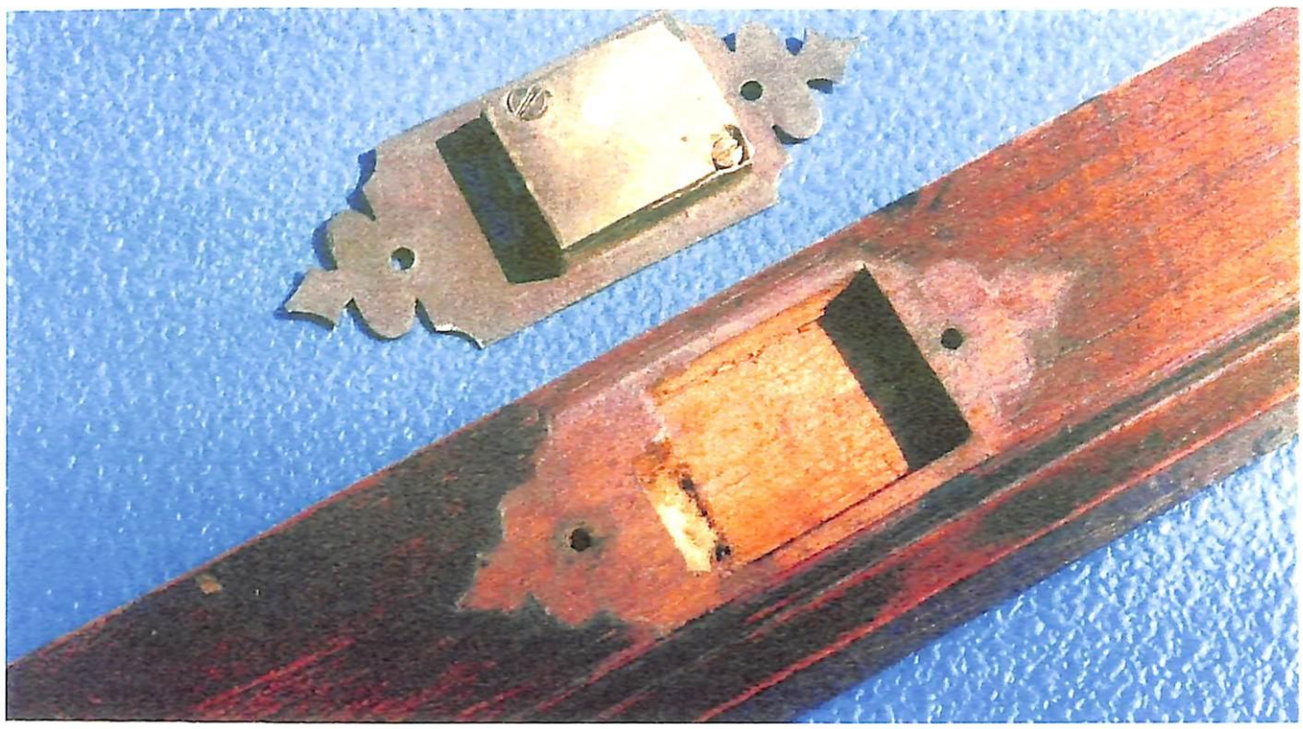
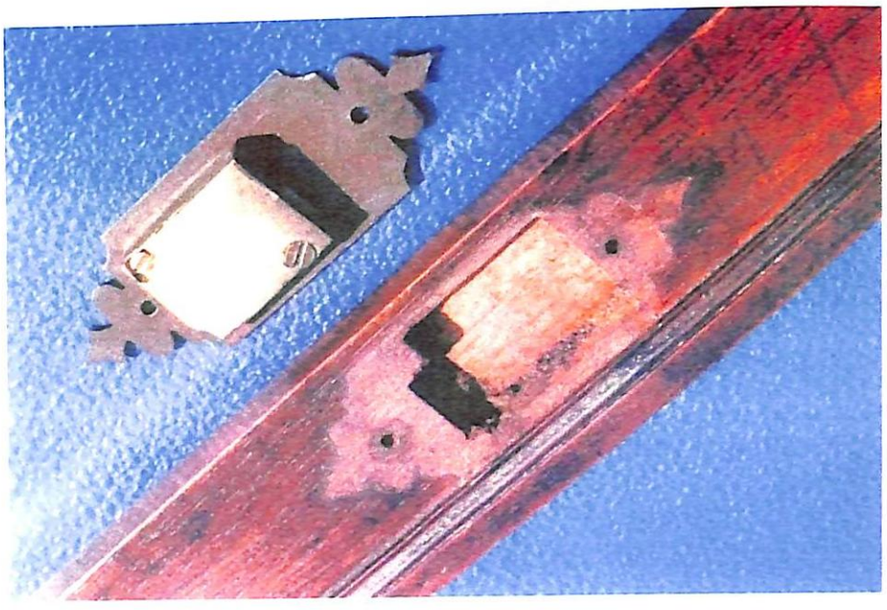


Figure 23. This picture shows that the lockboard was precisely cut to fit this lock and additional, rather crude cutting, was made to accommodate the projecting bolt. The aging on what is probably 19thC cherry (*prunus avium)* wood seems to match closely the coloration of the 17thC walnut. It may have been artificially aged a century and a half ago. Because of the four well-patinated yet gimlet-pointed screws, its restoration must post-date c.1850 when modern screw-thread design was introduced. Dale claimed he quilled it from "bundles of crow quills 120 years old", which he found in Burkat Shudi's attic (Dale 1913), but he seemed to be unclear about its restoration – for example, believing (erroneously) that the jack rail as well as just "one or two pieces of ironwork ornamentation" were "new". But why did Dale buy a spinet, newly restored, but in need of plectra? Did he discard what was there?

Figure 24. The brass on this lock box was analyzed in 2009 at Winterthur Museum. The proportions of the same micro-ingredients were found to be quite different on this brass than on that of the wire jack staples analyzed at the same time. They proved to be:



Copper (Cu) – 64.36%

Zinc (Zn) – 30.69%

Nickel (Ni) – 0.32%

Lead (Pb) – 3.10%

Tin (Sn) – 0.80%

Iron (Fe) – 0.73%

The impurities in early brass seem to vary widely. Goodway and Odell (1987:27-34) listed various impurities they found in early brass wire, but failed to quantify them or discuss their practical effects. A detailed breakdown can be found in D L Fennimore's book, *Metalwork in Early America* (1996) which analyzes the brass found on over 45 items dating from c.1670 to c.1900. Fennimore's findings seem to suggest that so many chronological assumptions found in other texts fall short with regard to the presence of micro-ingredients and even zinc content. Before the 19thC, perhaps all American brass objects were from melted-down artifacts from abroad. But Gentle and Field (1994:57) suggested that all English brass-making before the 18thC was from brass supplied from the Continent. Another book that breaks down brass impurities is Geo. White's *English Lantern Clocks* (1989). He has analyzed 24 brass samples from c.1600 to c.1705 clocks: Clocks can be closely dated. He shows a major nickel reduction in the brass he analyzed, but little change in other impurities over the 17thC. From the mid-19thC on, we can assume the micro-ingredients found in brass were placed there deliberately – and were not contaminants, as they may be here.

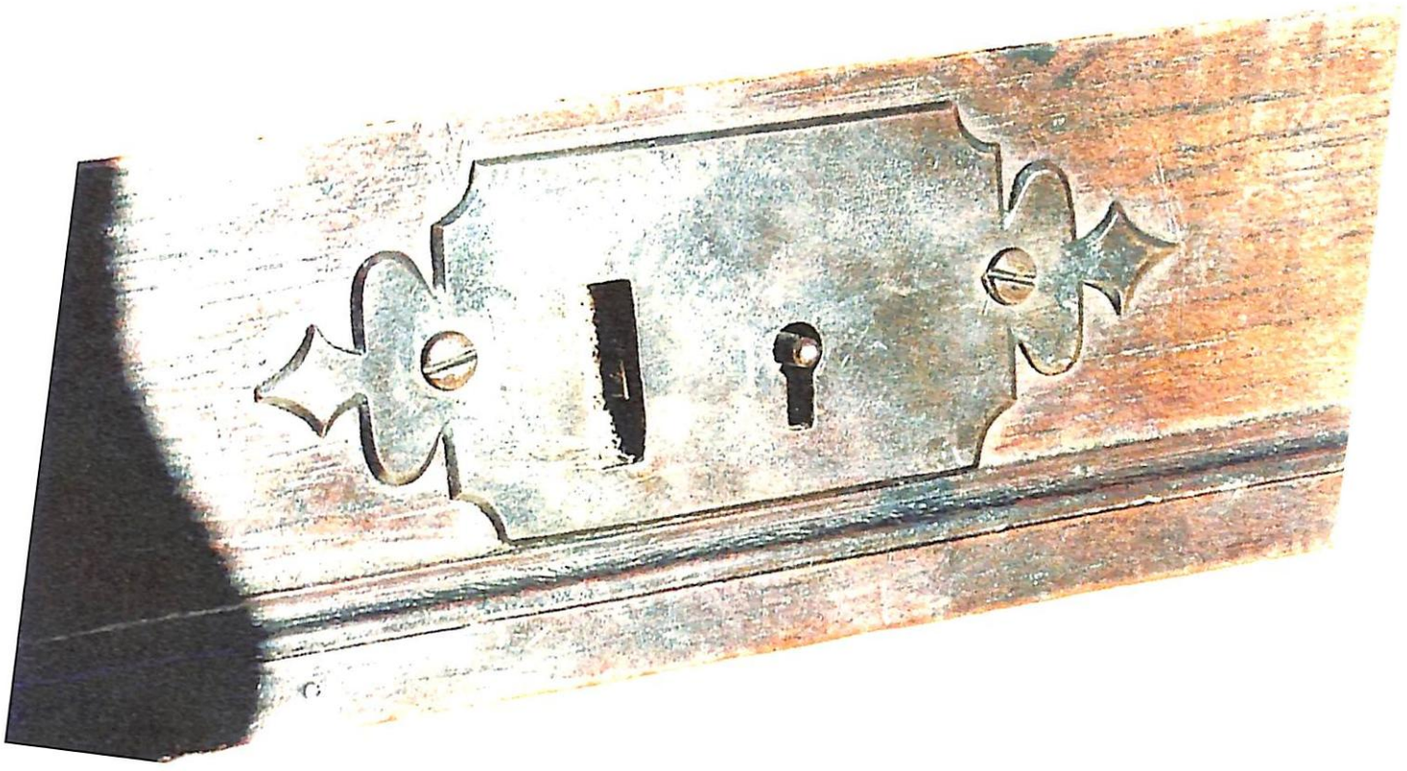


Figure 25. A fine iron lock plate such as this is not inconsistent with the expected quality of early guns, clocks, and other 17thC lock plates. But here, while its quality resembles that of the two added washers, the hasp, and the lid-hinge repair, it is inconsistent with the spinet's six original hinges, and its three original square washers. There are four screws on this lockboard that are perplexing. Although one or more may show slightly off-centred slots suggesting hand-made heads, all four are gimlet-pointed screws of about 1850 or later. This suggests mid-century restoration or screw-replacement from this period or later. The matching colouration of the screws and the lock plate – both iron – suggests a common date.

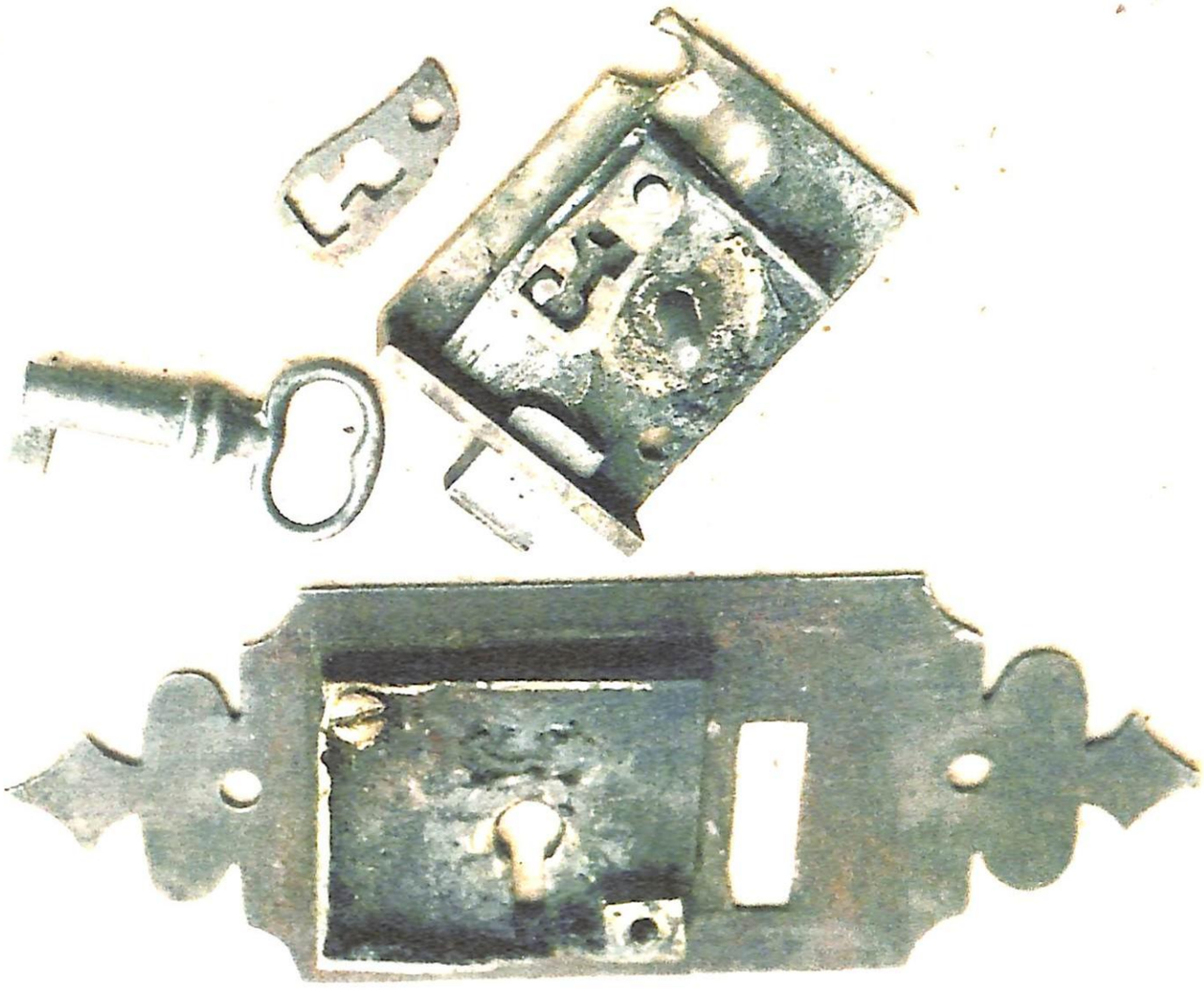


Figure 26. The date of this lock cannot be earlier than 1778 – the year Robt Barron patented its design. In fact, the layout (though not his theft-proof security feature) resembles Jeremiah Chubb's patented lock of 1818. The Barron-type lock pictured here requires a special key – not the one shown. His design, obviating the need for wards, used dual tumblers, as shown, to check the sliding bolt. Both tumblers had to be elevated to their required heights. Neither Haward's **1684** nor **1689** spinets had locks originally. But this one seems to bear evidence of an earlier hasp. Why this fixation on this spinet's security requiring an up-to-date lock in the 19thC? How do we account for the amount of dirt and corrosion on this lock over just c.150-coddled recent years?

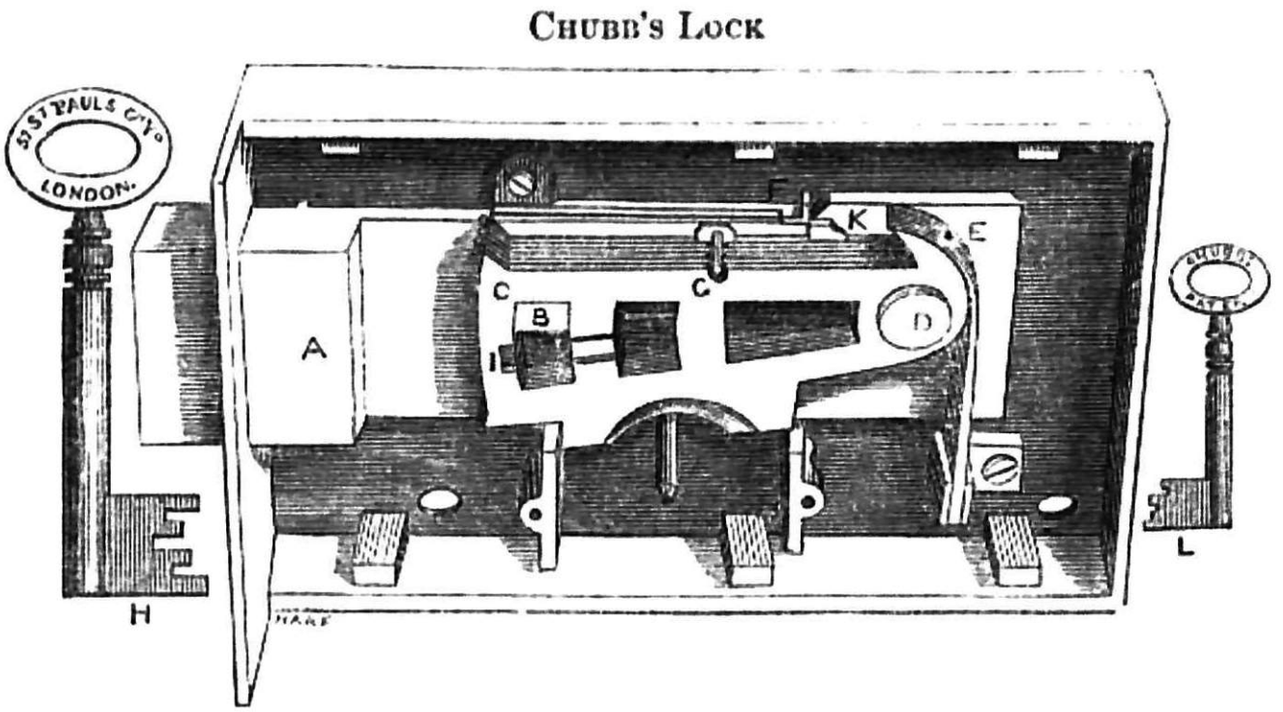


Figure 27. A stock photograph of a Chubb lock circa 1818 from Google.

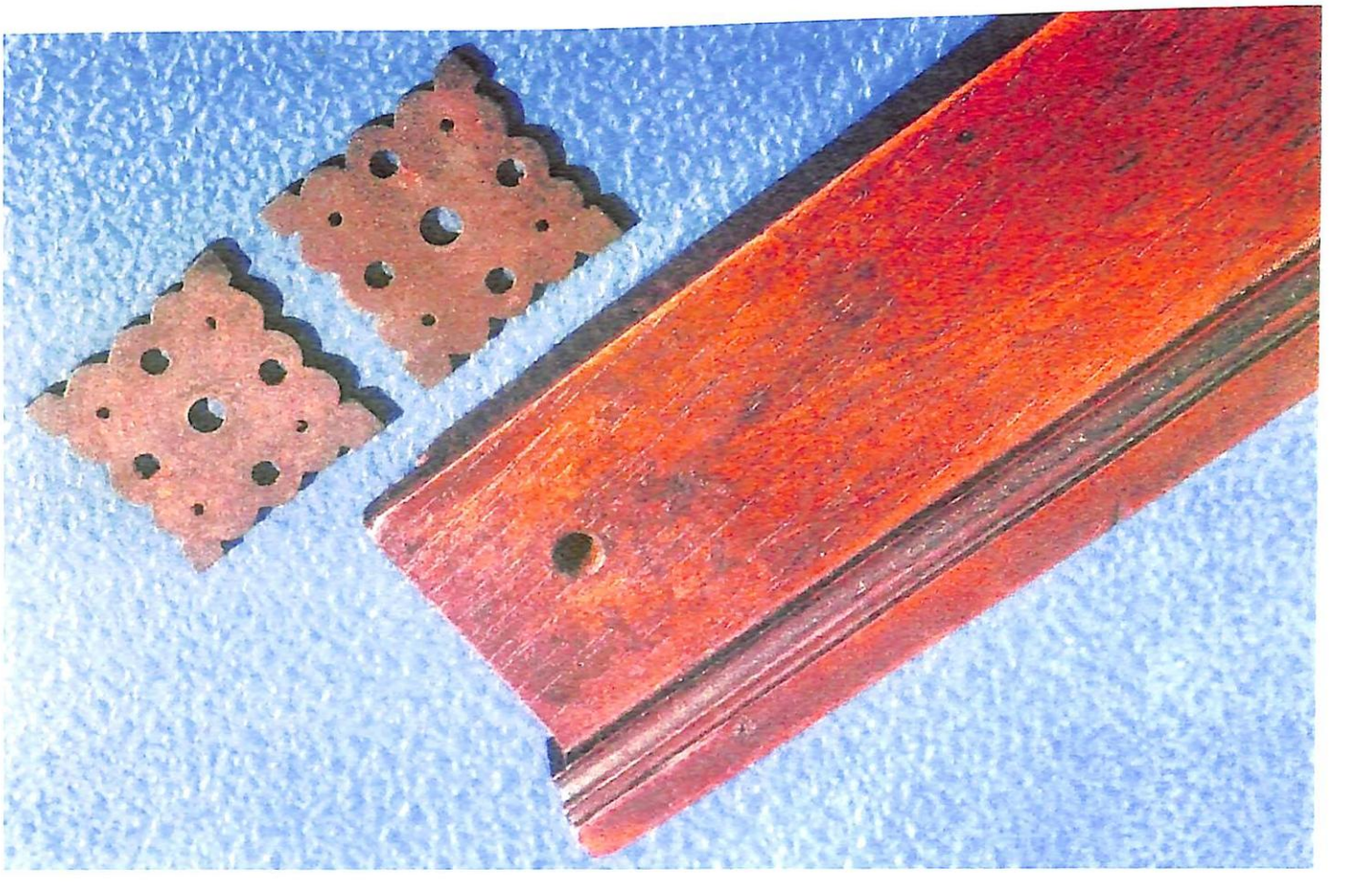


Figure 28. The measured thickness of these two washers is 0.075" – 0.082" for one and 0.072" – 0.077" for the other, and the lock plate thickness is 0.029" – 0.031". This sort of variation seems to show these parts were blacksmith-formed and not simply cut from sheet. The front-side bevelling of these washers matches that in the lock plate. Like the lock plate holes, these holes appear to have been punched and not drilled. This pair of square, decorative washers were probably additions, for any originals would undoubtedly have been saved and reused. Their fine surface (not shown here) reflects the unusual care taken in all aspects of this restoration. Note the plane's run-off at the left-hand portion of the front moulding. This moulding, being made of black walnut, would have been spared by the furniture beetle. I believe it is original and reused. There are round sprigs along all of the bottom moulding every five – six inches (c.150mm) – one is visible in this photograph. Their even, entirely circular shape suggests the 19thC.

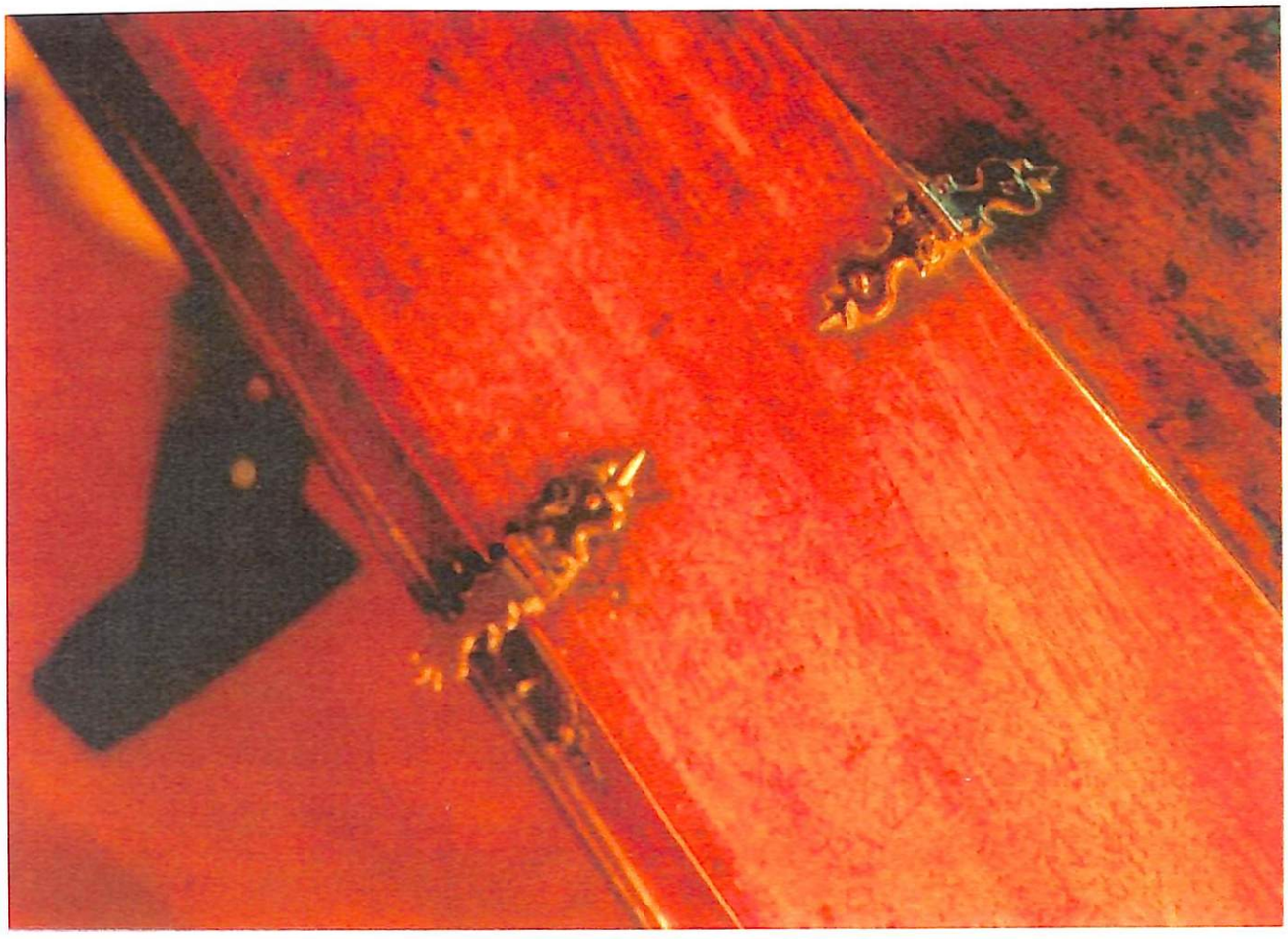


Figure 29. The upper hinge is original, complete with its early nails. The matching hasp is 19thC.

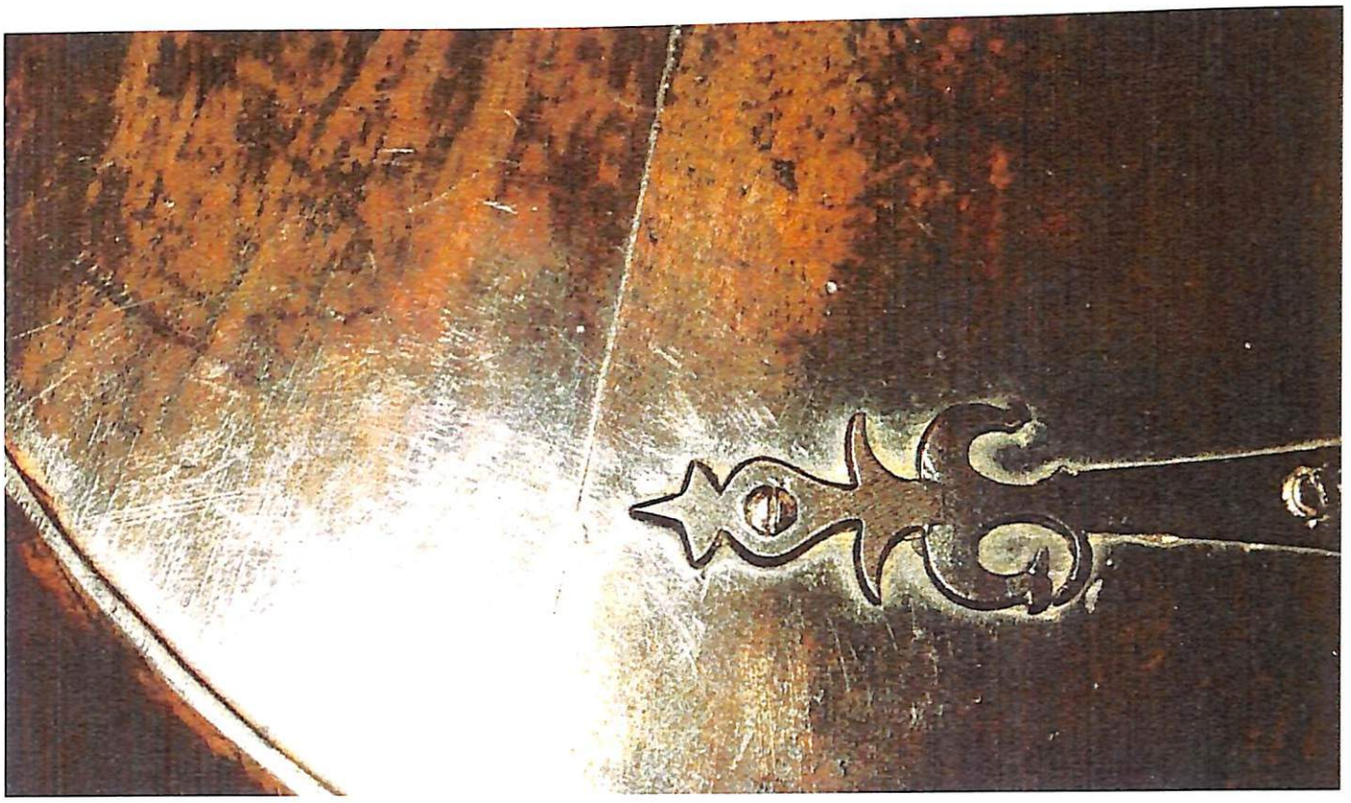


Figure 30. Notice the careful, painstaking repair to the tip of an original lid hinge. The finish and the hand-filed bevel corresponds with that on the lock parts and the lockboard washers. Notice, also, one of two lid board joins – European walnut on the right; black walnut on the left. Chas Haward evidently saw no problem in combining these two. The evidence of the origin of this combination is the similar cross-grain planing on the underside of all three boards. This undressed cross-grain planing seems to characterize Chas Haward's work: the case of this spinet is totally free from it, suggesting this lid was made by Chas Haward but not the rest of the case. On the **1689** Haward, it is particularly noticeable on all boards.

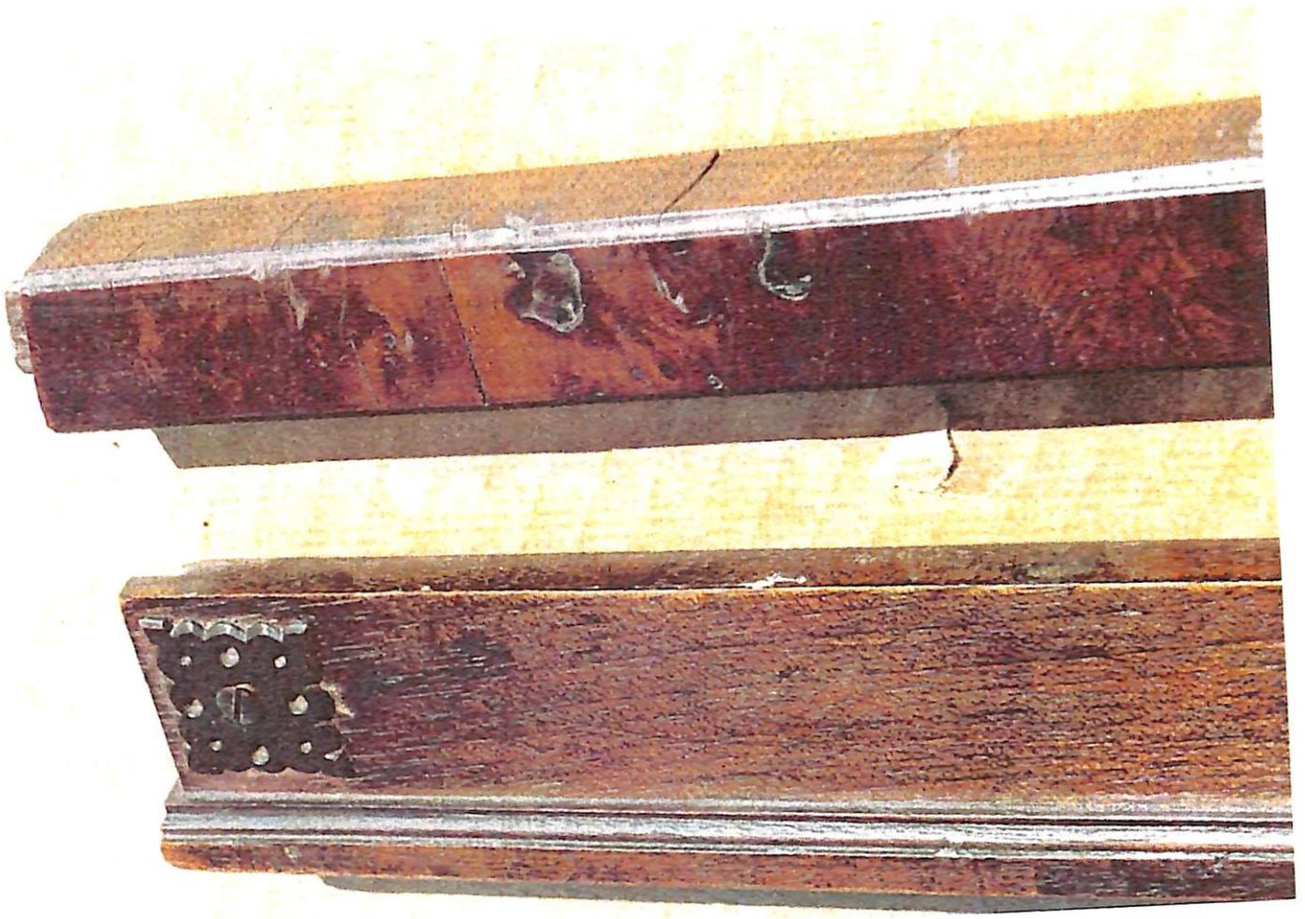


Figure 31. Wm Dale s*eemed* to have a problem understanding this spinet's restoration, which had to have taken place shortly before. He thought the jackrail had been replaced. In fact, this elegant Dutch elm burl (*ulmus hollandica)* jackrail was original. Note the edge moulding. On all Hawards, jackrail edge moulding seems to be identical to that found elsewhere in the case – here, cyma-shaped. Below is the replaced cherry lockboard with, I believe, its original black walnut moulding reattached. Future non-destructive wood analysis may prove this lockboard's wood is not cherry, but purpleheart *(peltogyne pubescens)* owing to its colour…and its prominent rays (Lincoln 1986:225).

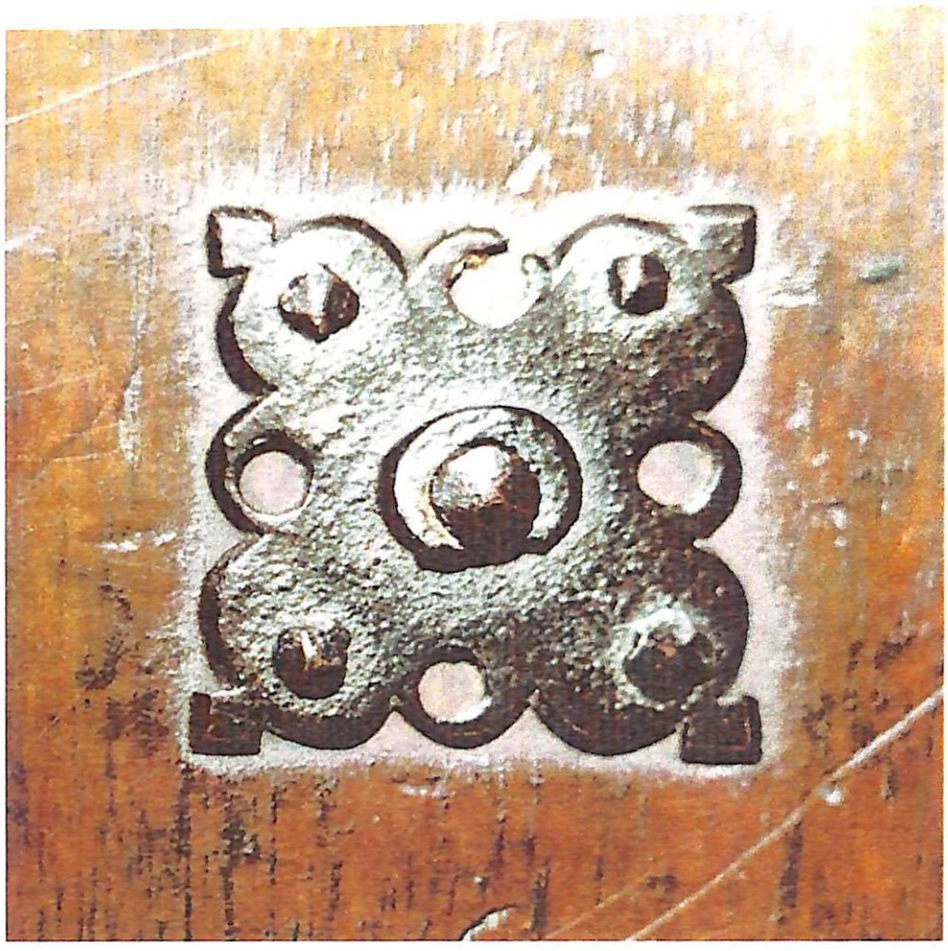


Figure 32. Notice the face-finish on one of the original iron case washers.

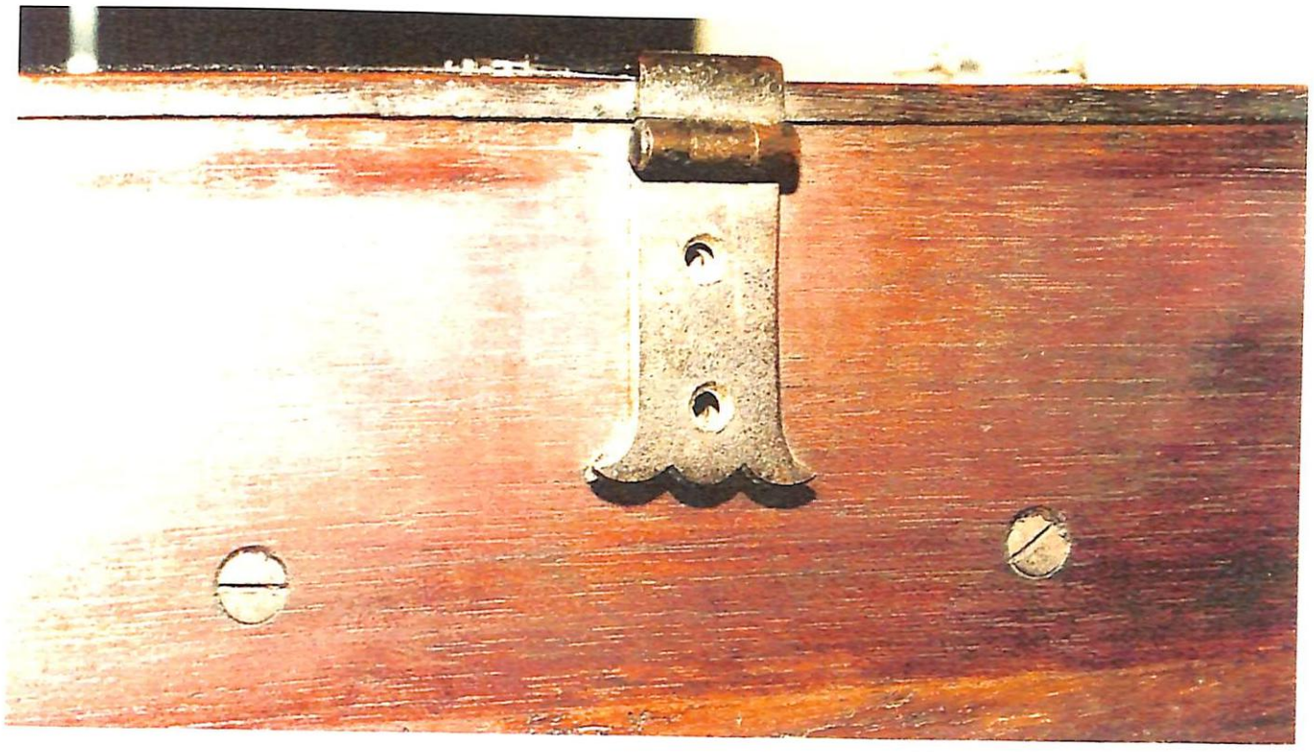


Figure 33. The upper portion of this spine board has been replaced with the same cherry found on the lockboard. The screws to the liner have off-centred hand-cut slots, however, suggesting either an earlier restoration date or reused screws. The lid hinges are original into the knuckle, but the tails appear to be replaced. Notice the neat bevelling at the tail sides – not found on the hinge tops. The tail holes are tapered for flat-head screws and not nails. The cupped taper may have been created with an oversized drill bit.

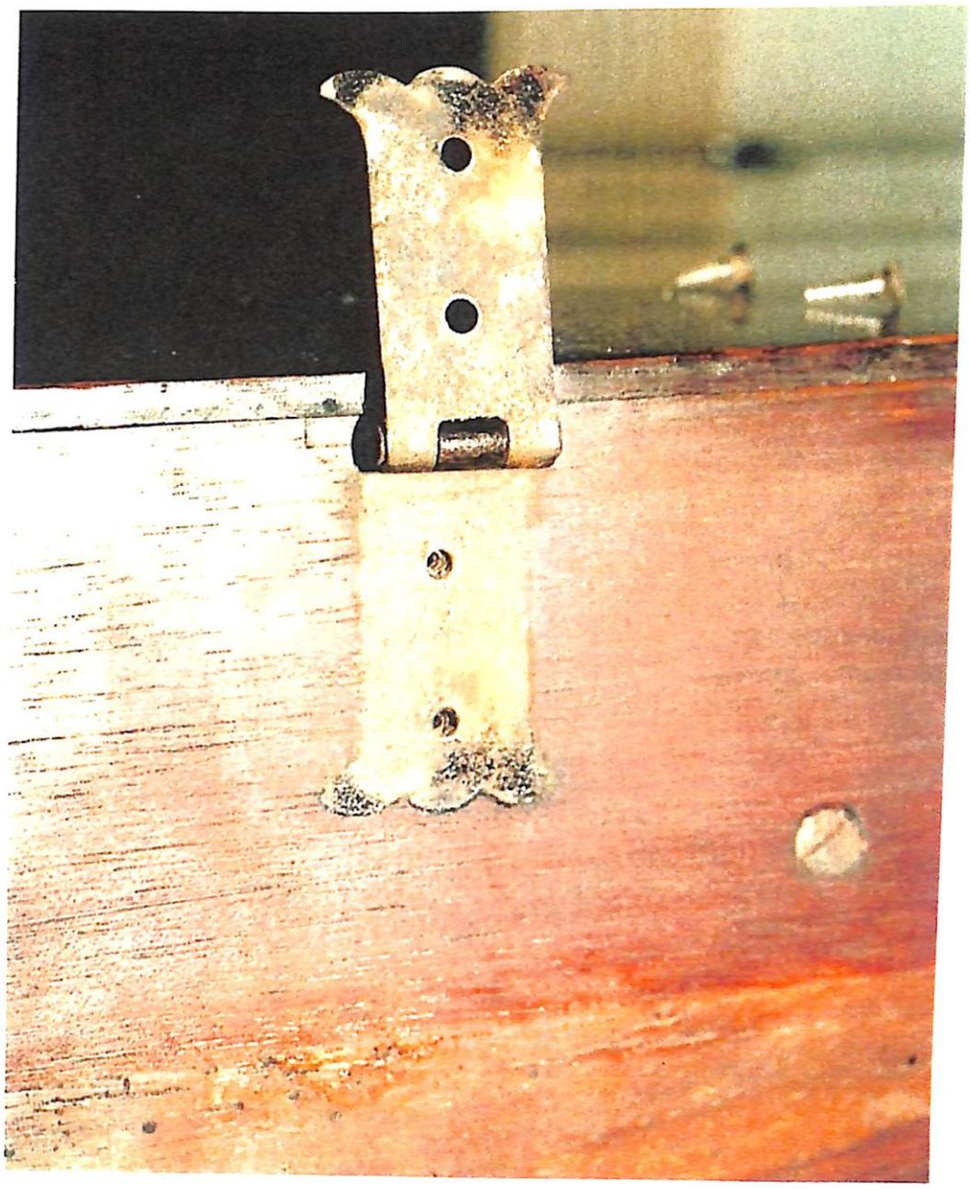


Figure 34. The worm holes at the top of the original spine board suggests there was more severe damage to the top 3-inches that was replaced. The colour of the cherry or purpleheart is a close match to the original spine wood, which is probably not Lebanon cedar, for this wood should be furniture-beetle-resistant. Evidently, this spinet had been stored on the floor of an attic in two positions: with its keyboard up against the wall and on its spine against the wall. Why was no other part of it infected? Why was the deal bottom not infected beyond its front? The black walnut could have protected the lid.

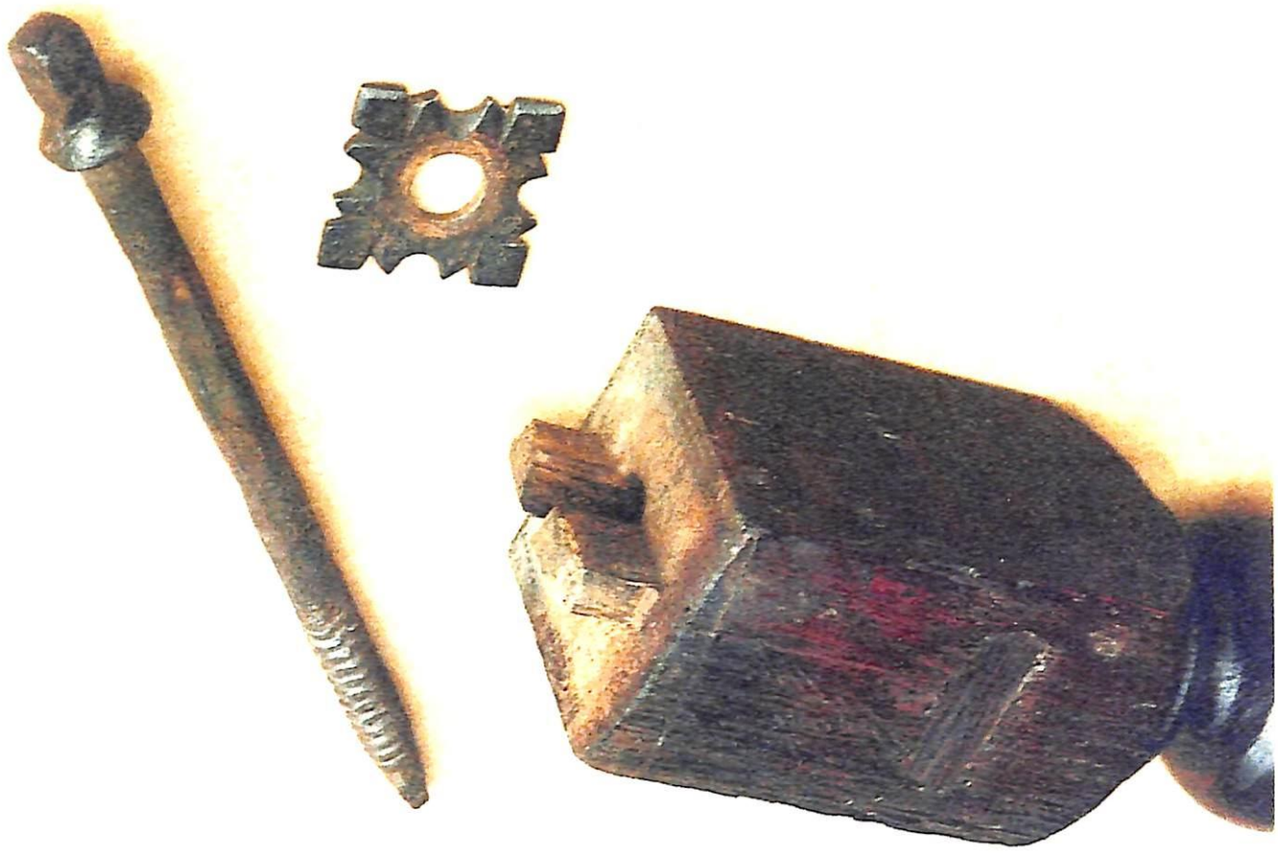


Figure 35. In common with bolts found on all spinet trestles, this bolt is secured with a captive iron nut buried in the leg (beneath the wood patch). The iron washers may have come from the same blacksmith as the square washers in the case. It adds a touch of unexpected elegance to this functional part.

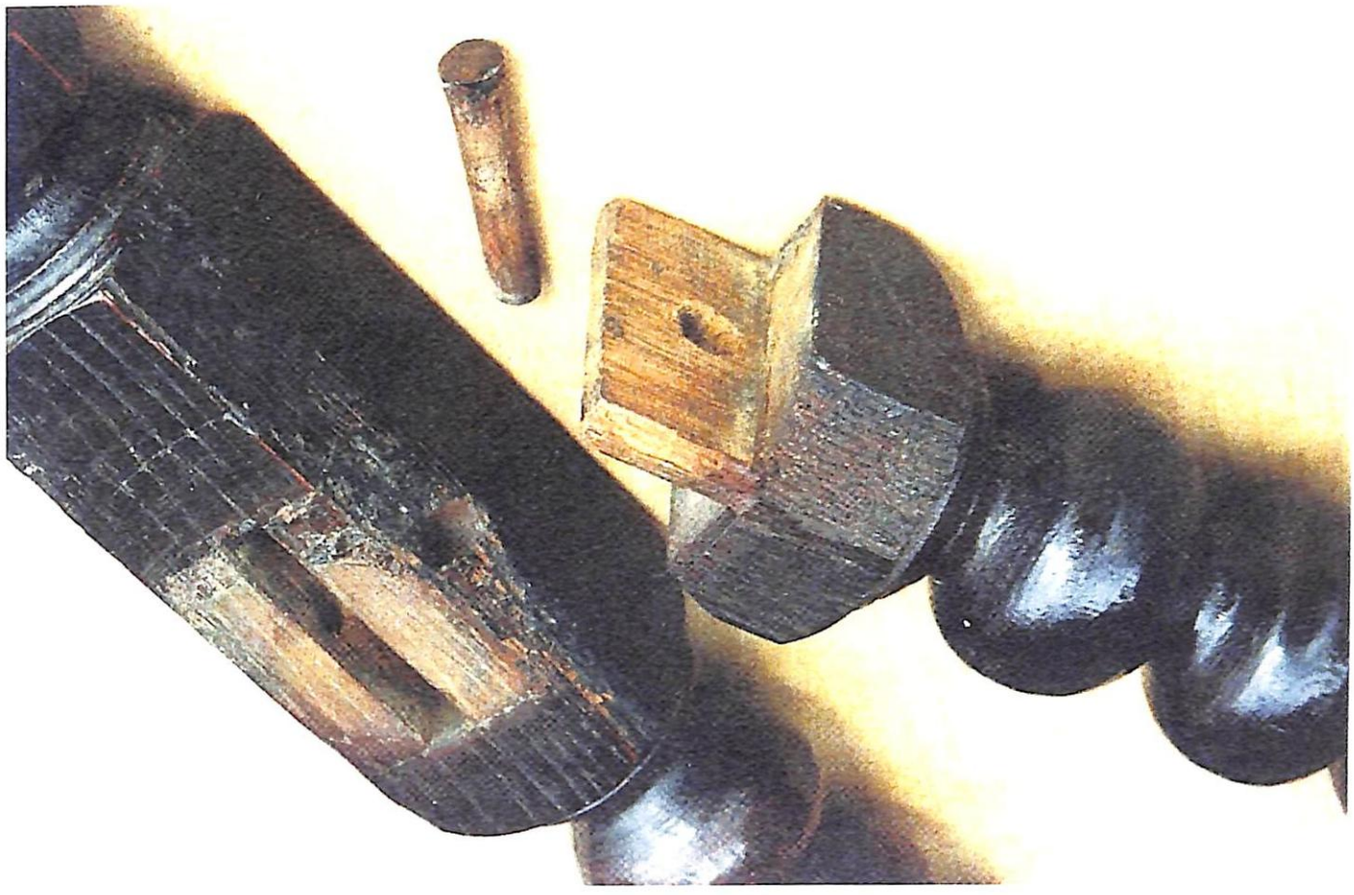


Figure 36. This shows one of the trestle's mortise & tenon joints with its securing trenail (often pronounced 'trunnel'). All three parts are white oak (*quercus*) – either wainscot from the Baltic or indigenous white oak. This may be the sole surviving oak spinet trestle.

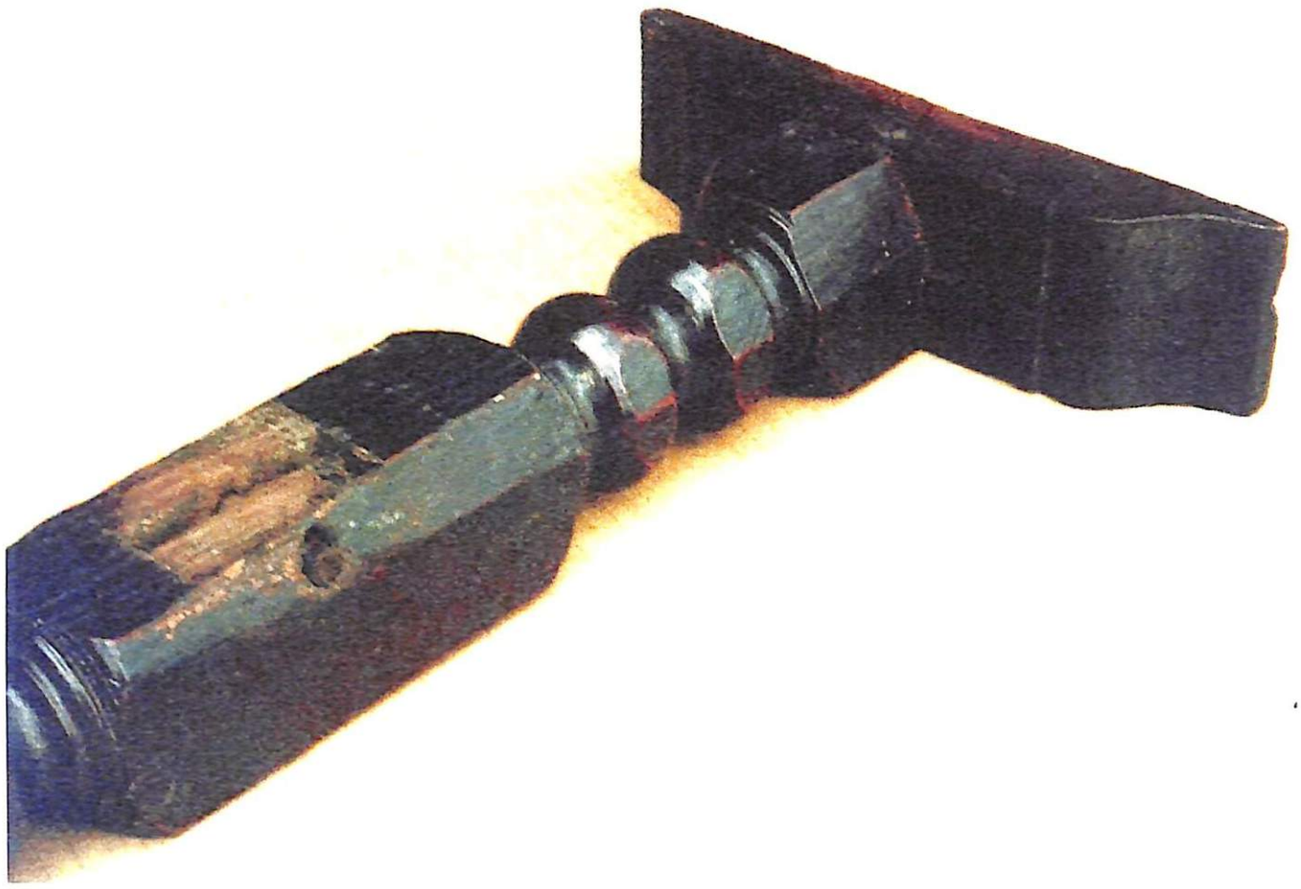


Figure 37. The present base of this Haward's unique, solitary leg is a worm-responsible replacement. However, it follows the design of this pictured wood plate seen at the top of the leg. The same foot design, in crossed form, can be seen on the three-legged stand under the 1720 Cristofori piano at the Metropolitan Museum as well as several extant Italian harpsichords: none of these had stretchers, however. Notice the unfinished protected wood on the leg block – possibly indicating its light original colour, assuming it had not been stained after it was first assembled. Notice, also, that the turner started with an oak block that was slightly pentagonal: he turned its chamfer towards the rear.

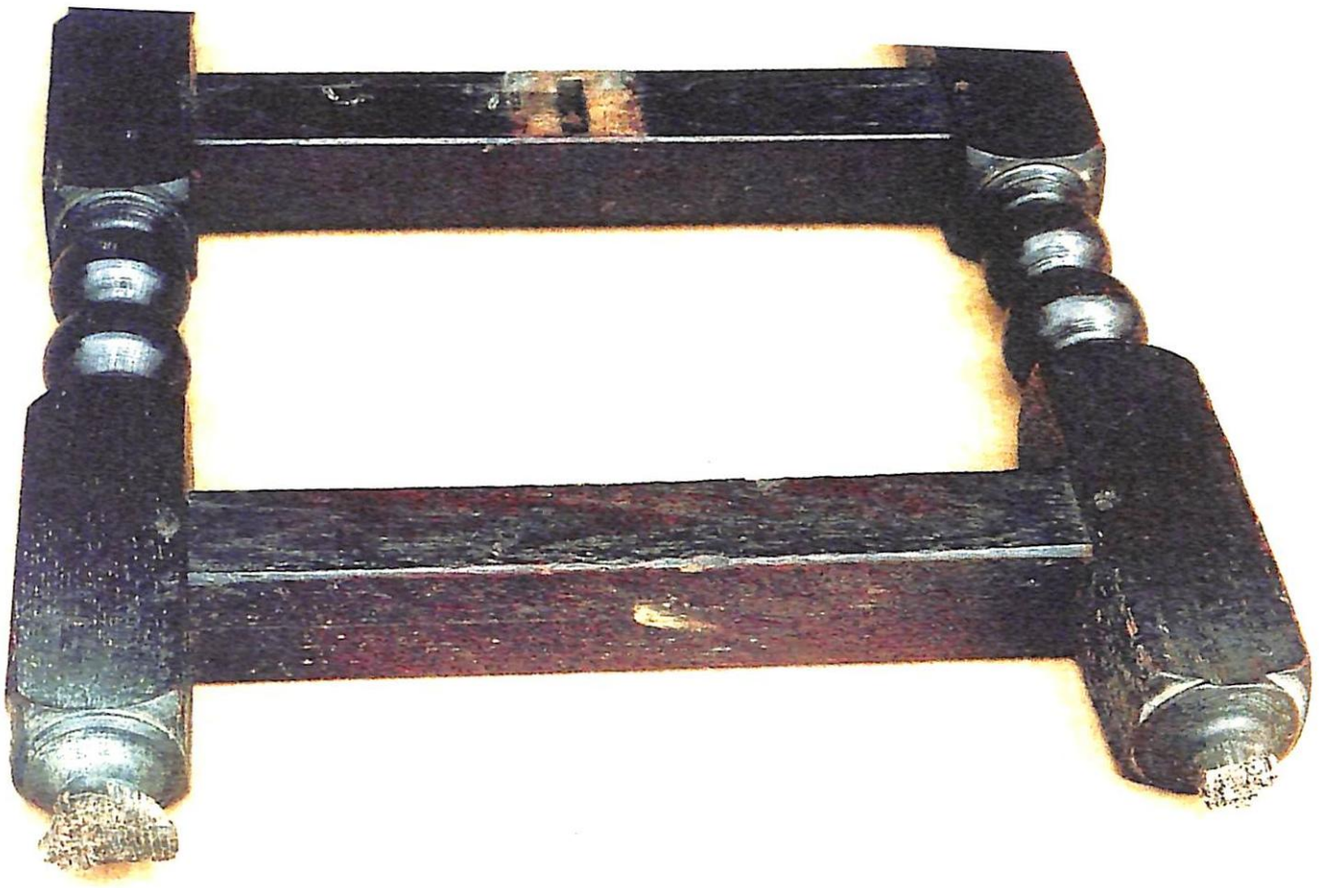


Figure 38. When the spiral-turned leg began to replace the 'Cromwellian' bobbin turning (shown here) in London around 1670, a new, continuously turning, high-speed, 'great wheel' lathe was required. Here, this older design was evidently cut on a slow-turning, reciprocating (cutting only on the down stroke) pole lathe. The lathe's slow speed left characteristic rotational marks that can be seen on this trestle. The changeover was relatively rapid in London, but the older design and the use of a pole lathe continued in the country and in America. Pictures of both types of lathe can be seen in Bowett (2002:75). Note the condition of the two feet.

Figure 39. Now a college student majoring in computer science, Ben Wesley, the lad in this picture, has recently given me considerable cyber assistance for this dissertation. A decade ago, he helped unpack it and he was the first to try its keys. He has always appreciated it.

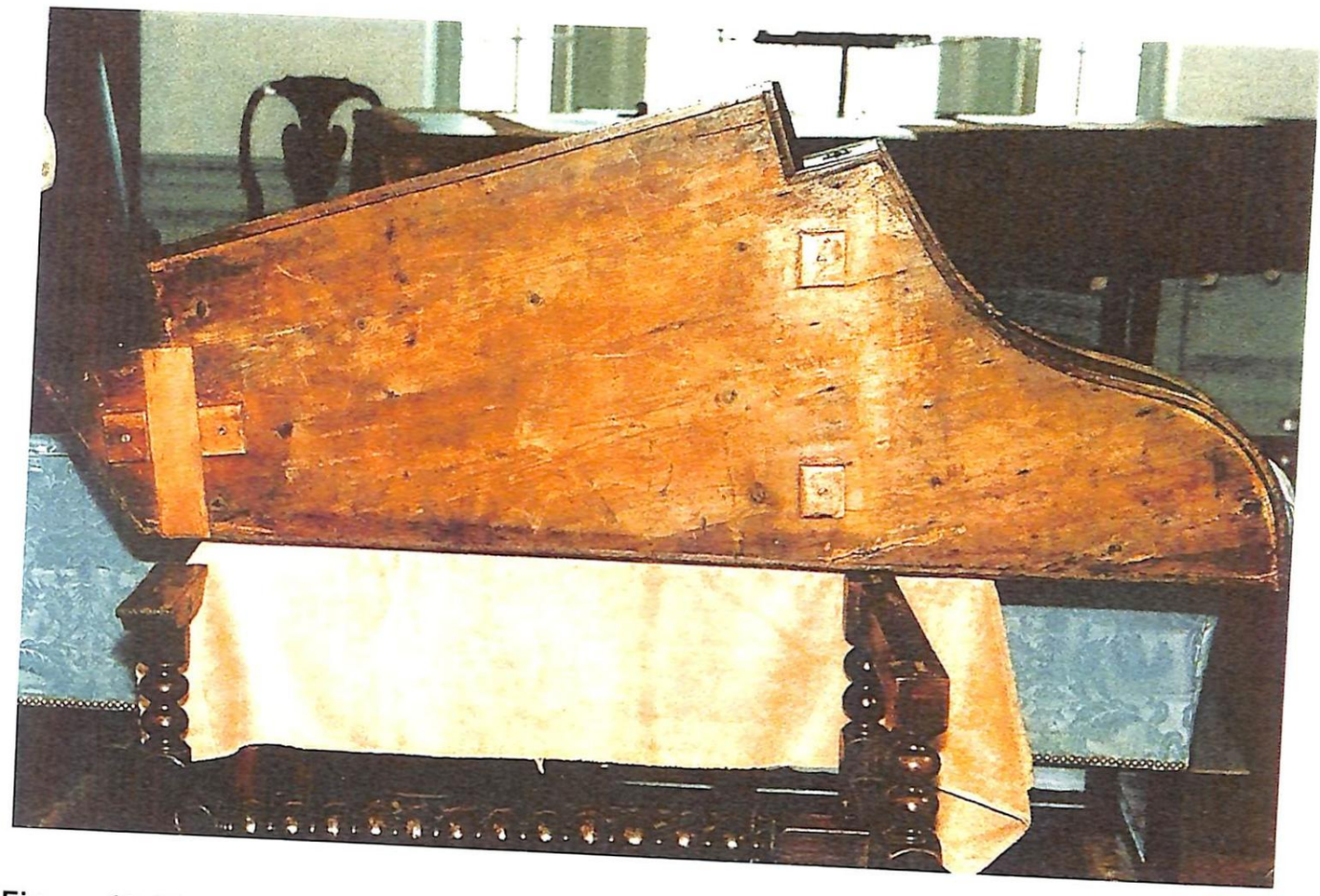


Figure 40. The following group of seven pictures is important evidence that this London-turned, pre-early 1670s trestle is original to this spinet. The bottom boards show, unequivocally, areas that have always been protected from air circulation and light in the essential places.

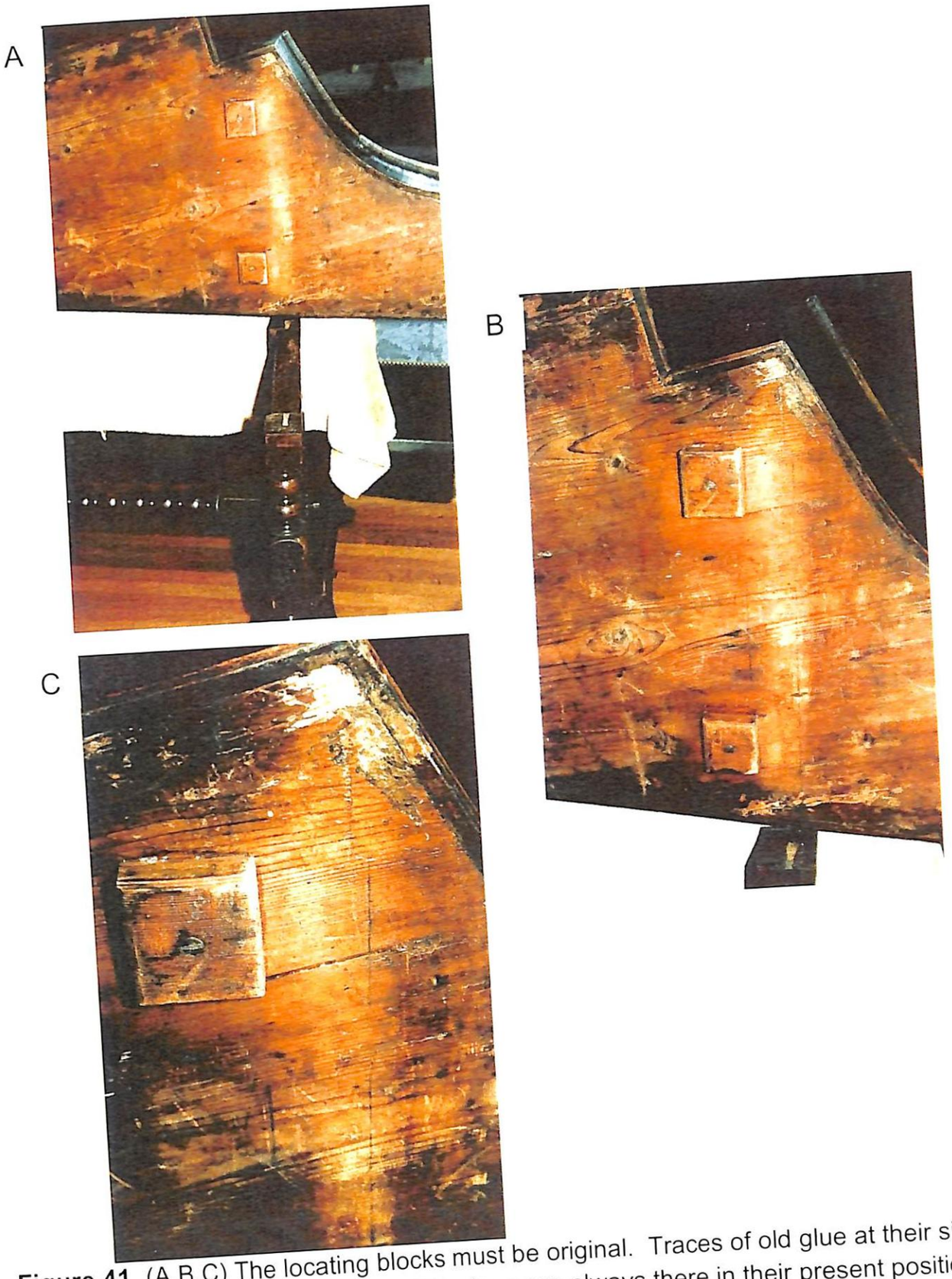


Figure 41. (A,B,C) The locating blocks must be original. Traces of old glue at their sides show that they, or identically-shaped blocks, were always there in their present positions and their grain and patination matches the bottom boards. Their gimlet-pointed screws, however, are later.

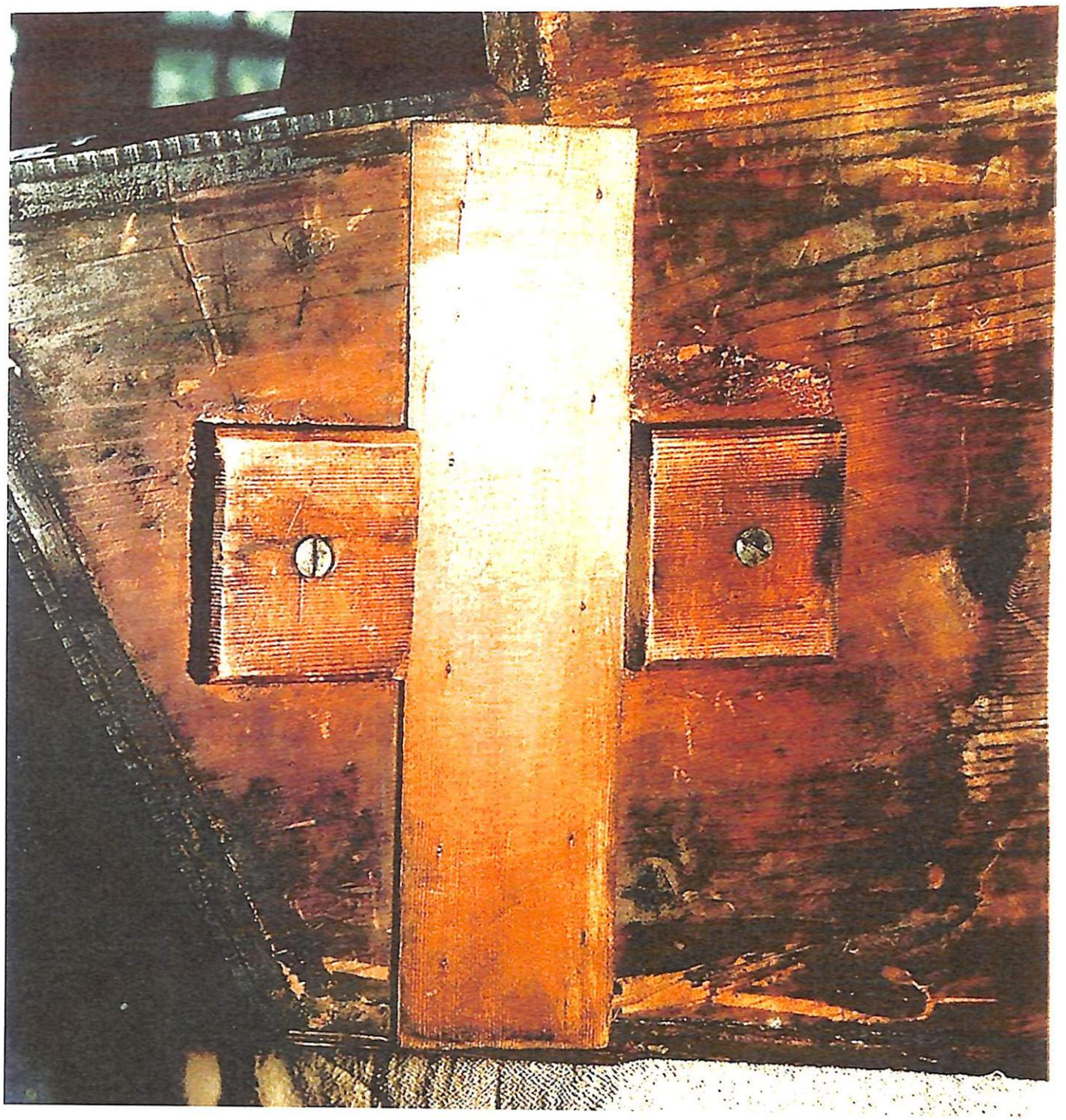


Figure 42. At the left end there is a late angle-correcting wedge that covers the second protected area. Note the interesting, unexpected spoon-chisel marks at the base of the lower moulding along the LH tail and LH face, not seen elsewhere. This could suggest a second maker of these two pieces, a later resurfacing, or a different era. Note, also, the prominent aged, crystallized glue-evidence around the pair of blocks.

Figure 43. Notice how, presumably, shrinkage had to have separated the baseboard from the back of the bentside in this area. This is not easy to understand. The shrinkage had to occur here at the end-grain where shrinkage would not be expected rather than across the grain where it would.

Figure 44. The replaced lockboard of what is, perhaps, cherry is free of the worm damage that probably necessitated its replacement. The original was, undoubtedly European walnut, susceptible to wood-worm. The original black walnut edge moulding would have been spared, and it was probably reused. Note the restorer's cleanly-finished bottom of the combined boards in contrast to their visible separation elsewhere along the bottom. Notice that the worm holes can be seen only a couple of inches back from the lockboard. Most of the deal baseboard is worm-free.

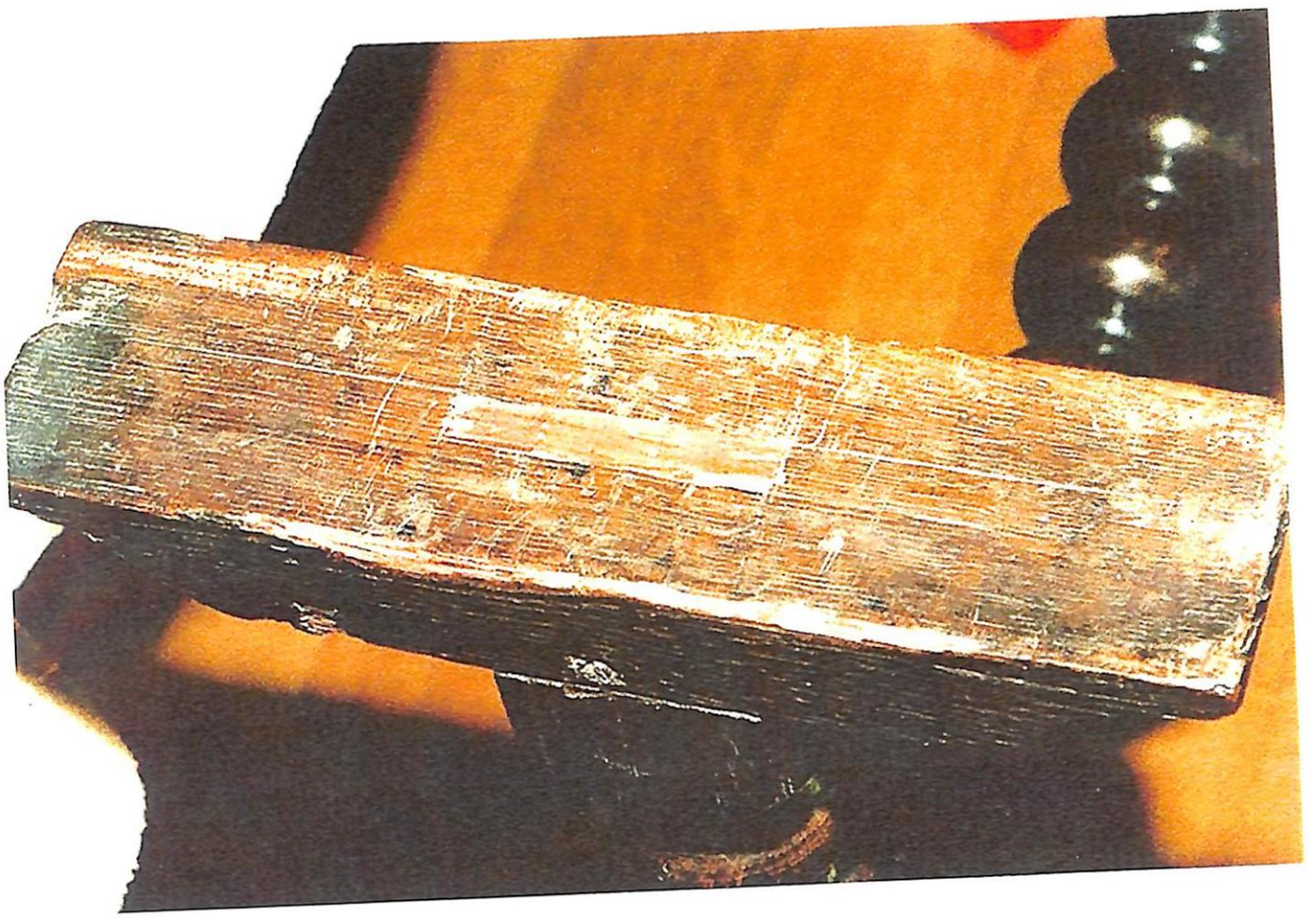


Figure 45. Trestle leg turning would probably not have been done in the Haward shop: turning, after all, was a specialized trade. This picture, though, suggests that if the legs were sub-contracted out, they were then assembled by Chas (or John) Haward. Note the tooling similarity here and on the case bottom.

Figure 46. Like the **1683** Chas Haward harpsichord, this one has a rail over the rear rack as a key depth-limiting device independent of the jacks. Notice its unique side supports. This spinet also has a third, front rail that accomplishes the same thing. This front board, however, is either a replacement or an addition; it is not original. Notice the cleanly-cut key levers resembling Keene's and Player's work rather than Chas Haward's. Unlike Keene and Player, Chas Haward probably never had the training he would have received with a formal seven-year apprenticeship. In 1660 he was admitted to the Joiners' Company by 'Patrimony'. John Haward was probably his father. Three scratched horizontal lines marking the balance point and pivot point positions of each lever can be seen. The black natural tails are individually but cleanly cut. However, because of the slight angle of these cuts, the greater key front-to-pivot length in the treble compared to the bass is not apparent in this picture. On most keyboard instruments and on the other Hawards we would expect to find the reverse: bass levers longer than treble.

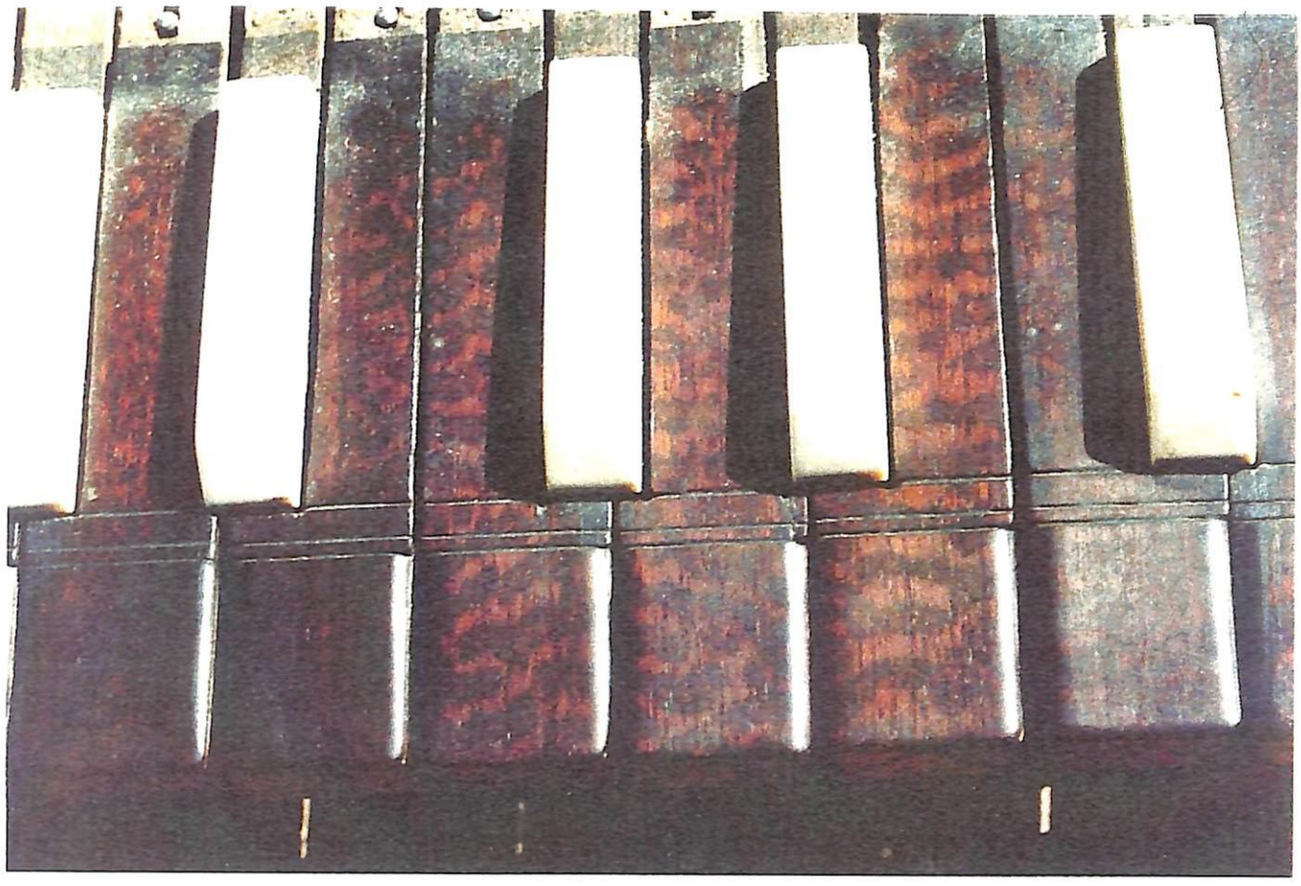


Figure 47. This is a close-up of snakewood *(piratinera guianensis)*. **16XX** appears to be the sole-surviving English spinet and, perhaps, the sole-surviving English keyboard instrument with such keys. Beginning in 1667, when the Dutch captured Surinam, the point of origin for this wood, England's imports were cut off. This lasted until the end of the century when England recaptured this colony. Because of amber striations, some ebony has been confused with snakewood. But ebony's colouration will follow the grain – not cross it or show it in spots as it does in snakewood. Two people have erroneously believed the **1689** Haward had snakewood keys and Martin reported seeing snakewood on three virginal keyboards – one dated 1685. His identification, of course, may not be mistaken, for a supply of pre-1668 snakewood might have been available to the makers several years later. Notice the black-painted areas behind the sharps and the even line behind all the keys; the smooth surface of the keys, and the bevelling of the sides of each keypad that terminates precisely at the first scribed line. When cleaning these keys, I was careful not to disturb the dirt in the break and the scribed lines – important for future analysis.

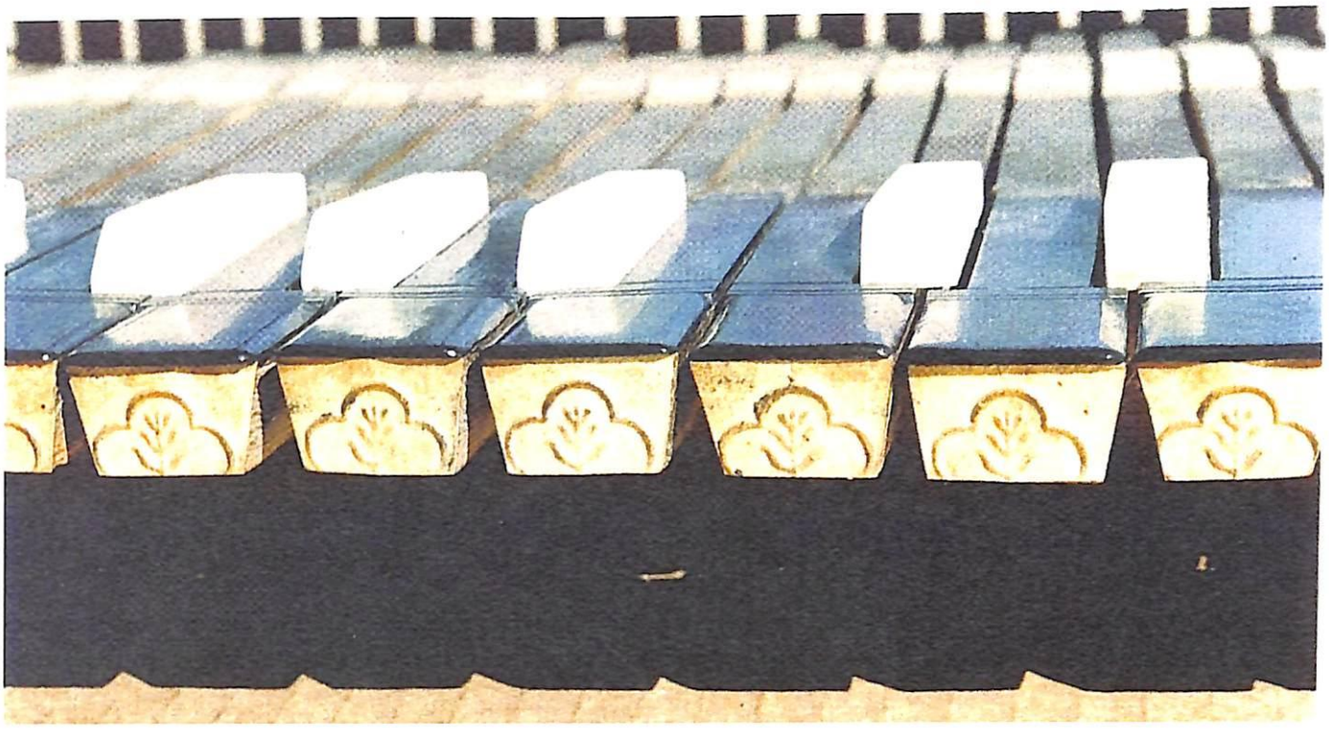


Figure 48. Unique among the six Haward spinets, these black natural key-fronts were filed to smooth points. All of the others were vertically sawn and not cleaned up afterwards. Notice the evenly-cut trapezoids; their uniform shaping is, likewise, unique. The parchment key fronts were attached with far less care, however.

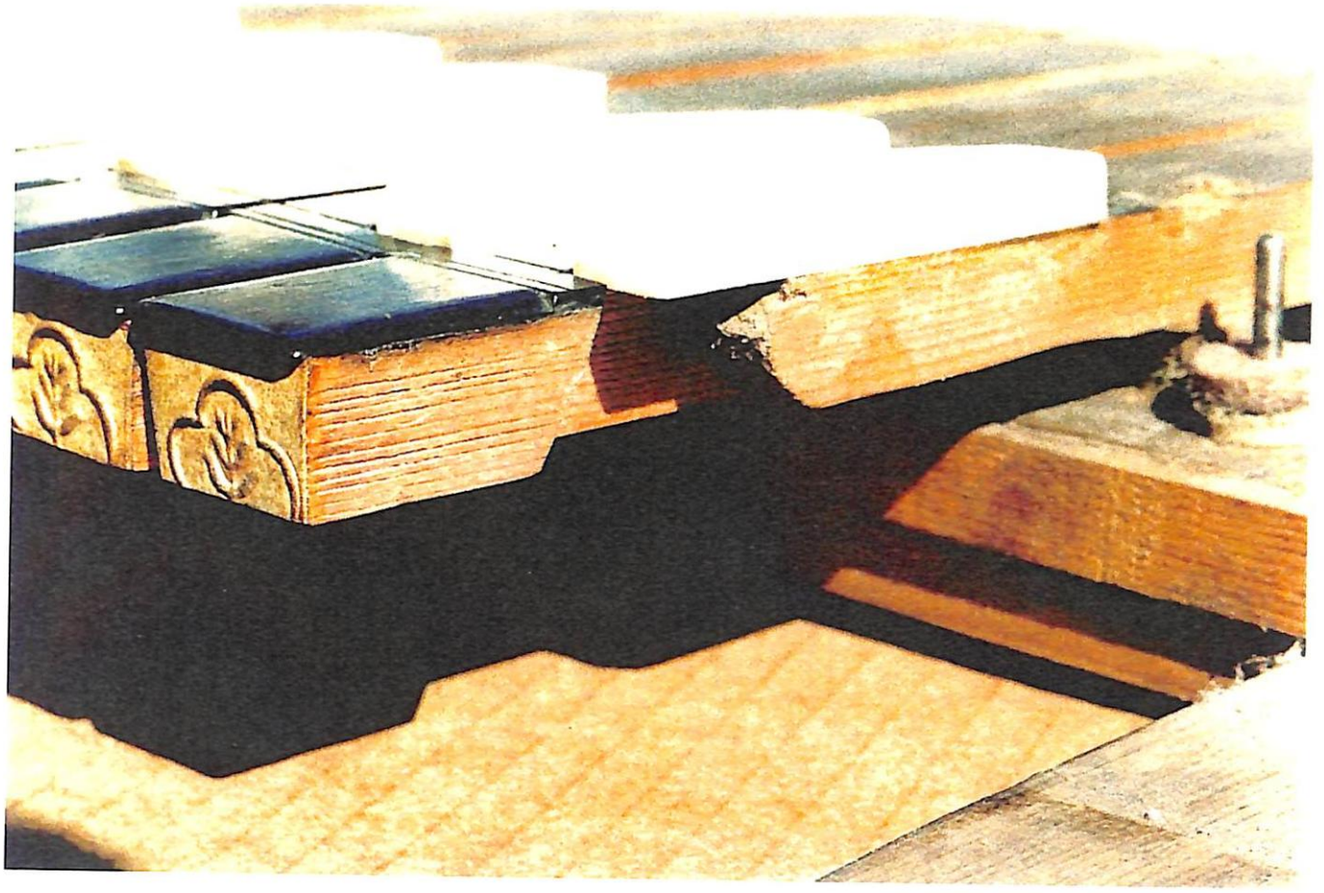


Figure 49. This picture shows the striational tool marks found at the trapezoidal key sides. Note the thin parchment key fronts.

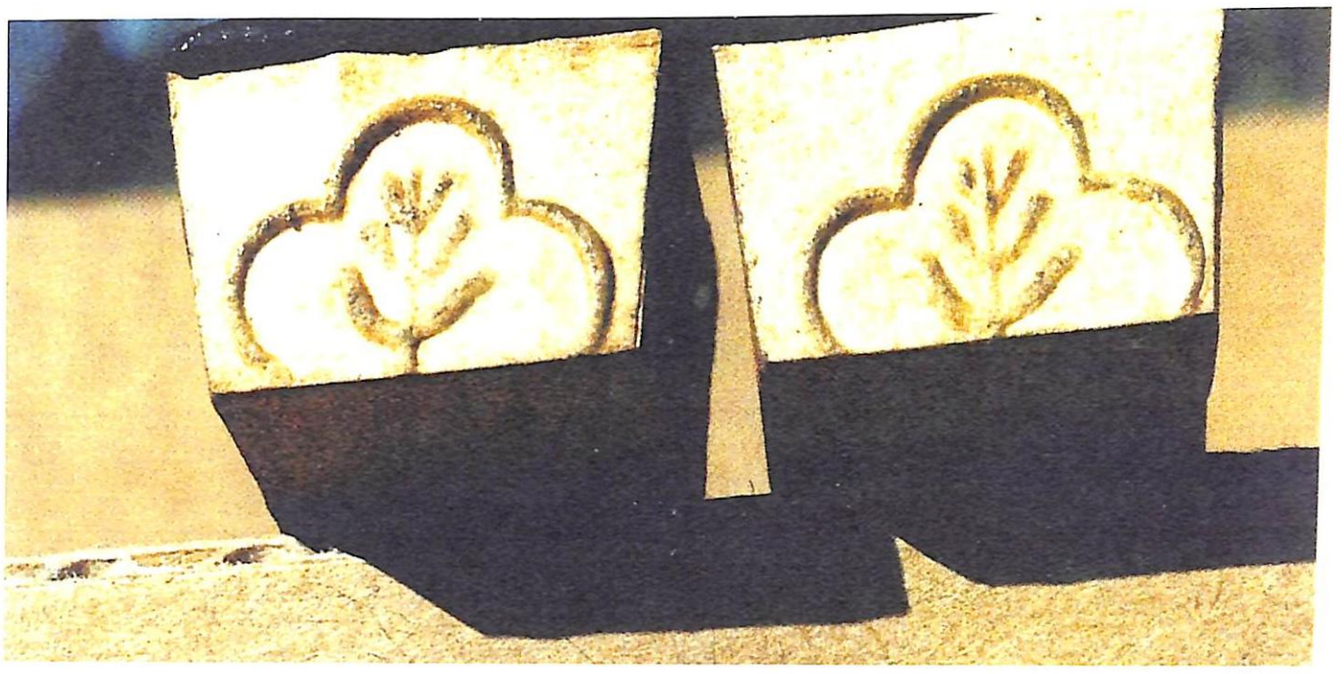


Figure 50. A close-up of the gold-painted parchment key fronts. The trefoil arch can be seen on the three Haward key fronts, but this design is unusually simple: just an unbordered, six-branch tree with plain spandrels. This same design can be seen on the **1689** Haward.

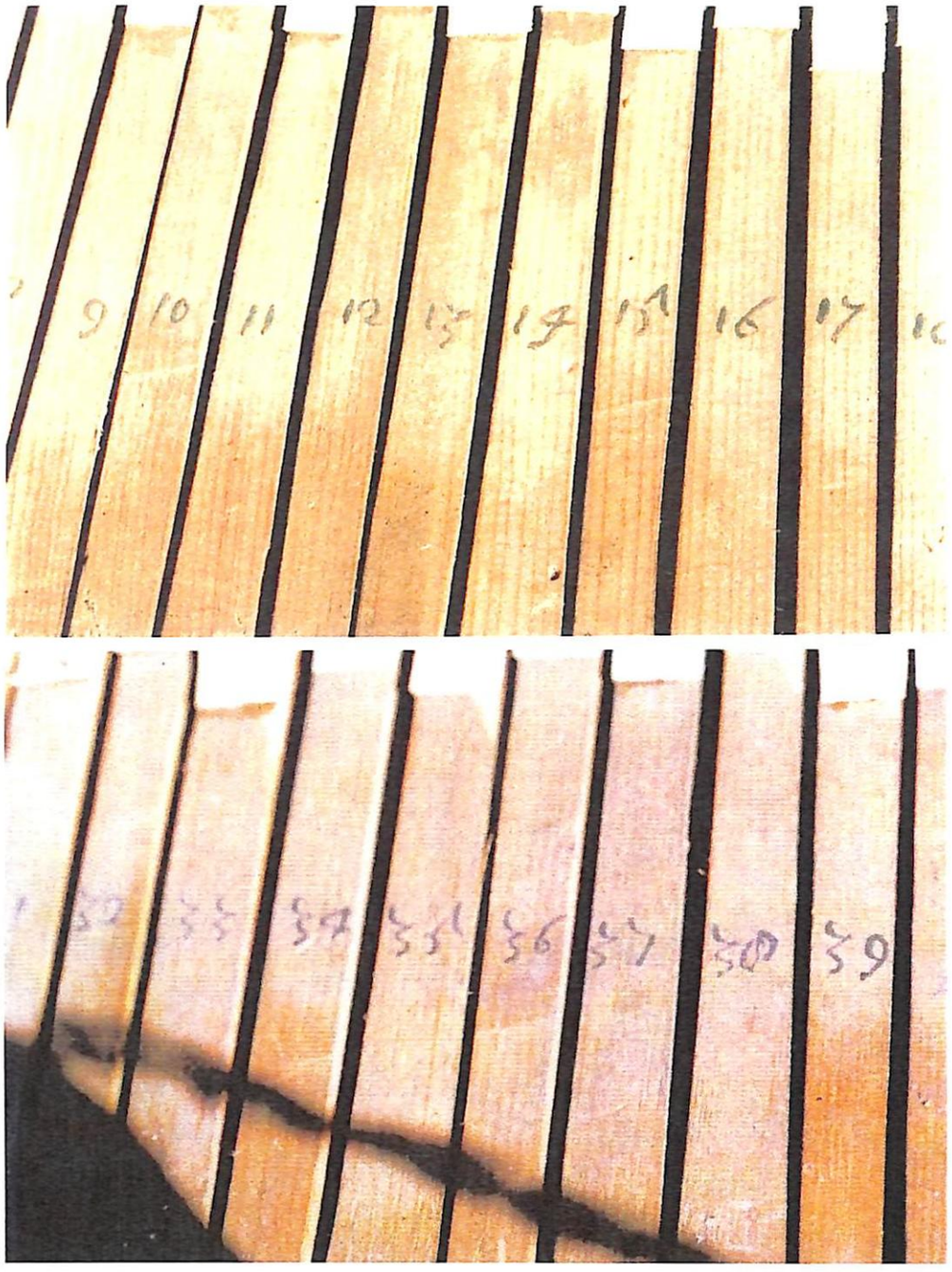


Figure 51. These two key-lever photographs show clearly Chas Haward's key numbering style. We can be certain it is by Chas Haward because it can be seen on several of his other spinets. Note his distinctive '5's, '8's, '3's, and '7's. Less distinctive are his '0's, '1's, '2's, '4's, '6's, '9's, '10's, and '11's. Notice again, the evenly-cut key levers on this spinet.

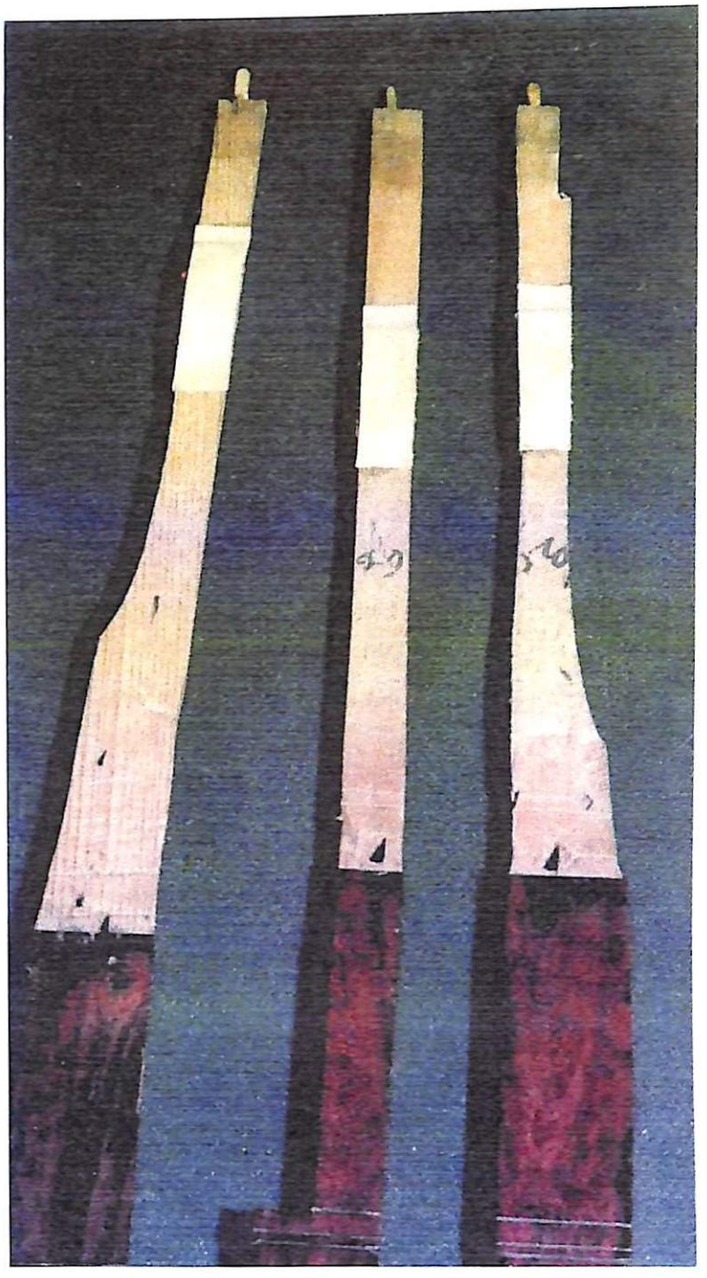


Figure 52. This spinet's outer key levers are straight and not splayed outward. Notice the neatly-shaved concavity on this pair (#s 1 and 50). The scribed locational lines for both pivot and balance can be seen. Most important: notice the rectangular pivot-hole mortises – unique to this Haward spinet. All the others are drilled and round. Because of this, the pivotting point here is at the bottom, rather than at the centre of the key levers, which should reduce the drag against the pivot rail felt.

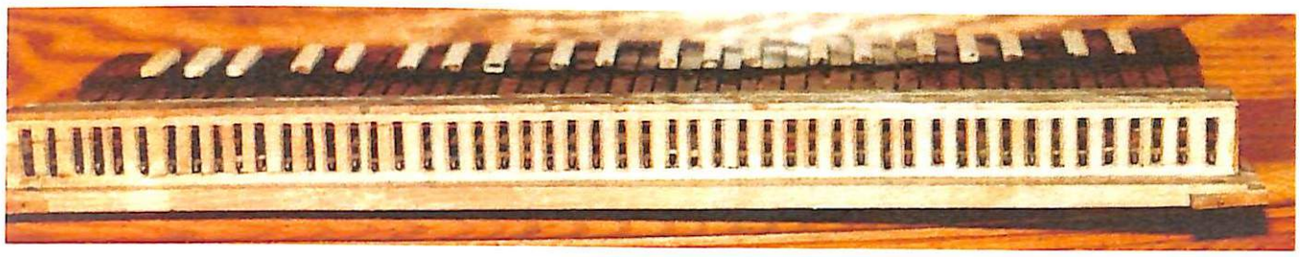


Figure 53. This shows the rear of the back rail and the side of the attached over-rail. The sides of the rack openings were treated with graphite and, perhaps, like all wood registers, each opening was angled.

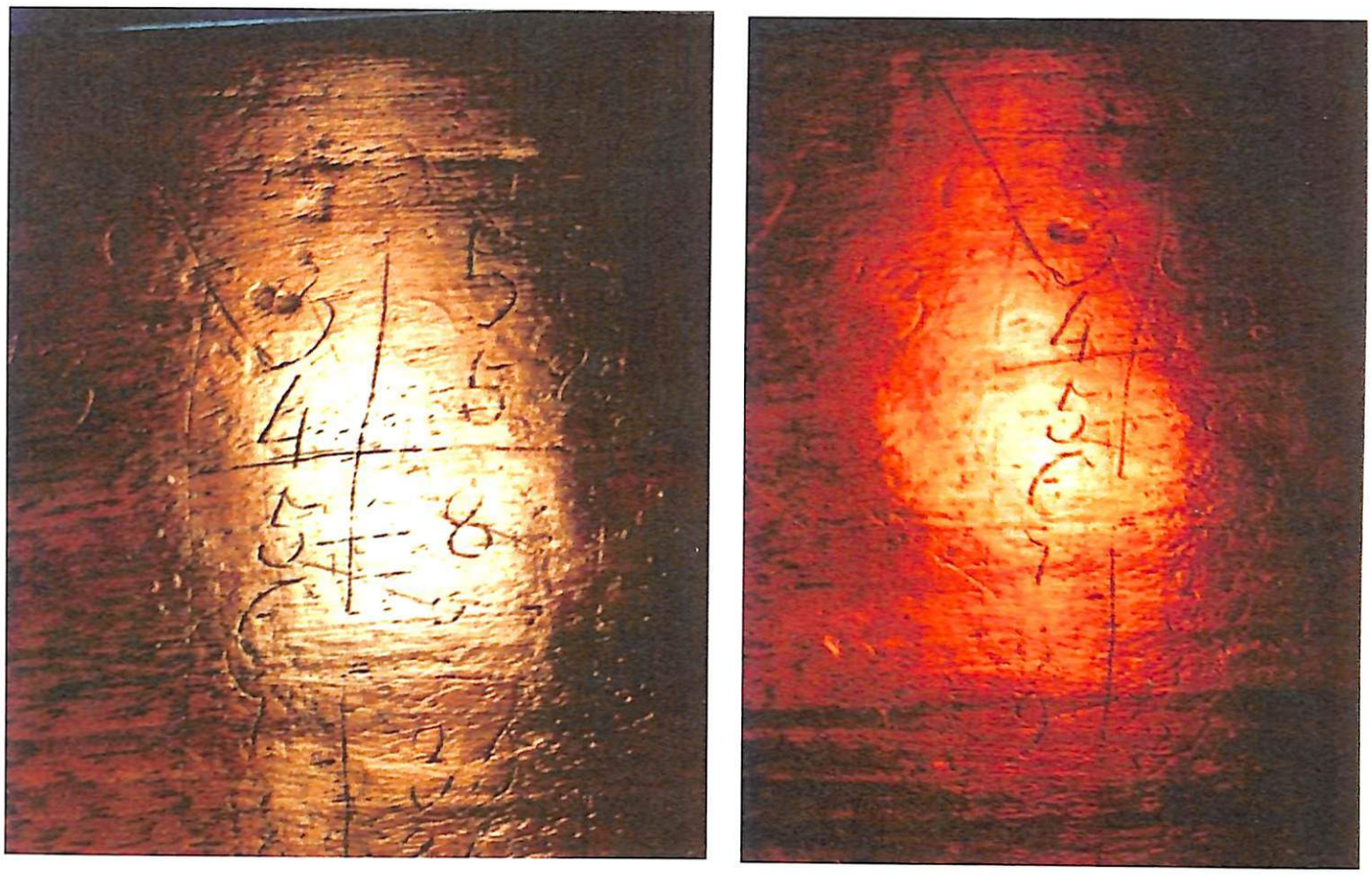


Figure 54. Barely visible on the back side of the key cover are two grids that I believe can be attributed to Samuel Pepys and might allow us to try to understand his "Finding out of chords". The first of these two photographs shows, I believe, his attempt to harmonize an ascending array of notes – an idea he would have adopted from a similar rack that he would have seen in Descartes' *Compendium* (pictured elsewhere), purchased the day before his first visit to Chas Haward's in April 1668.

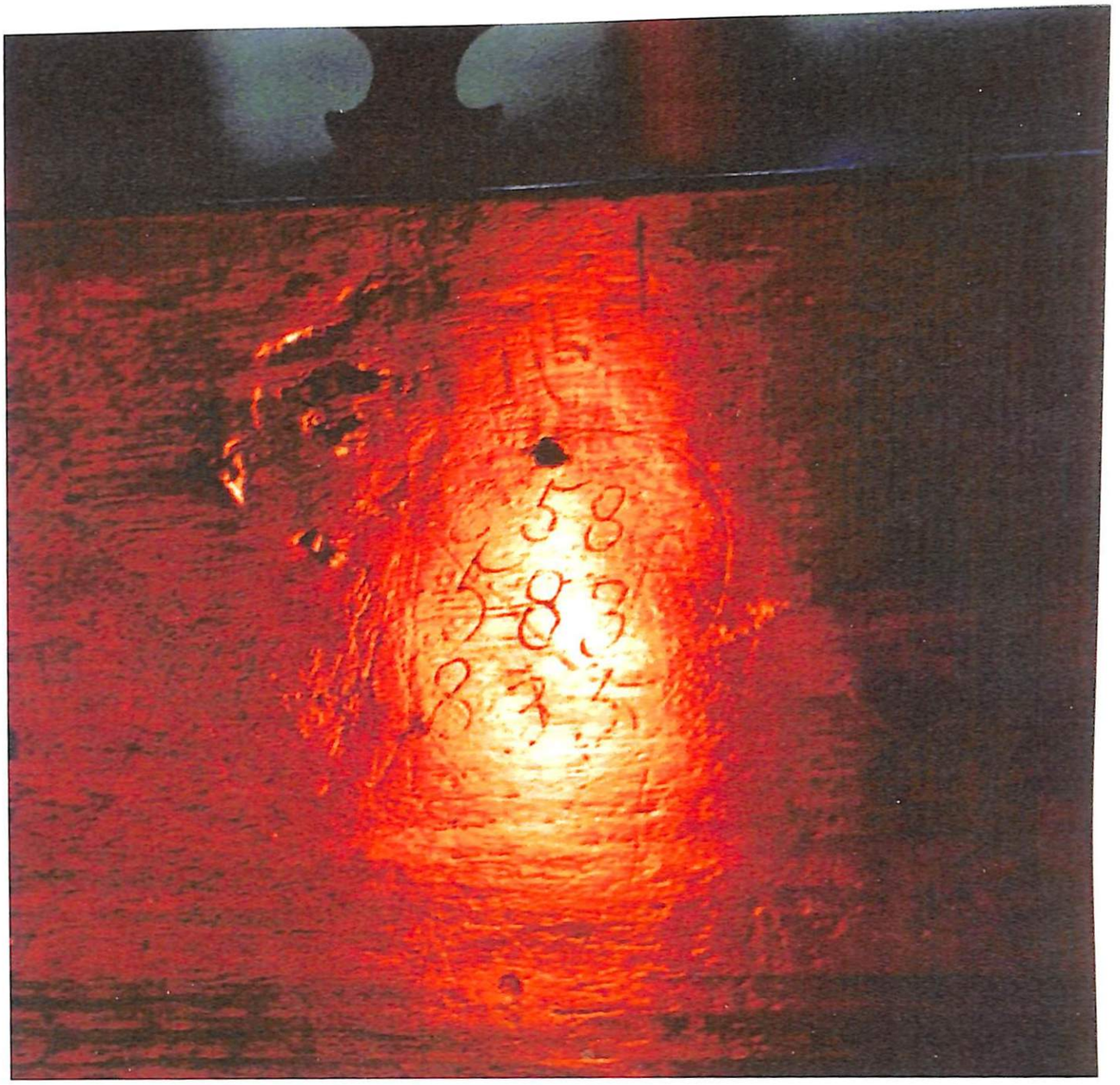


Figure 55. This third keyboard cover photograph may show his attempt to turn the three triadic notes into a 'magic square' where all verticals, all horizontals, and both diagonals are equal when added. In this he was seven-eighths successful – he missed one diagonal. The lettering style appears to be his own. Although cup-shaped '5's were used by Pepys and others in the mid 17thC, a Pepys peculiarity is the major difference between his '6's and his '9's. Whereas others in this period inverted their exuberantly topped '6's to form '9's; on this cover and on the diary page, Pepys treated them quite differently.

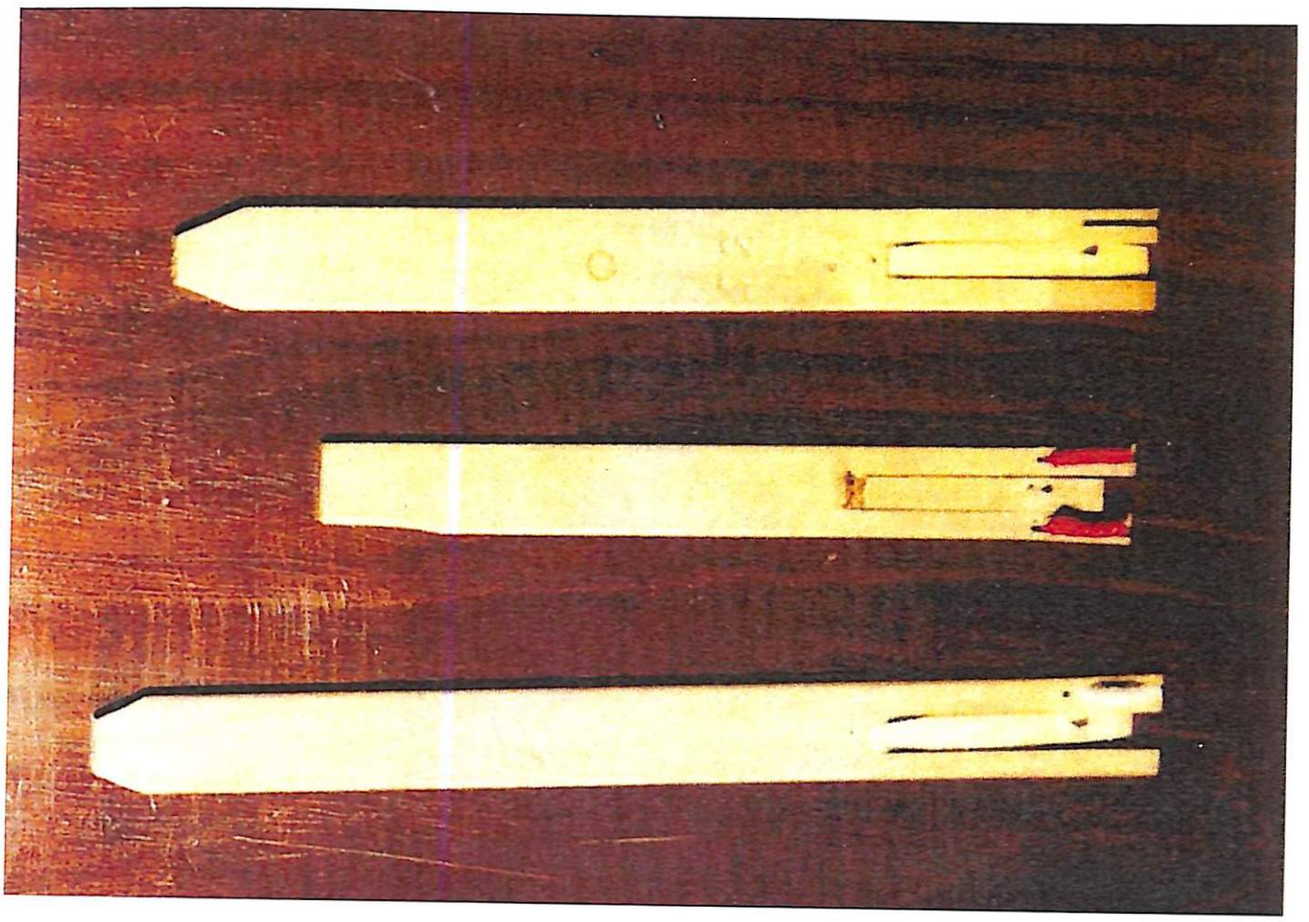


Figure 56. A replacement **16XX** jack is shown between lute jacks from a 1791 Kirkman (top) and a 1773 Shudi-Broadwood (bottom). Notice the absence of a weight, normally expected in spinet jacks. Harpsichord lute jacks never had twin dampers, always found on the 8' jacks of later English harpsichords and Shudi-Broadwood 4' jacks.

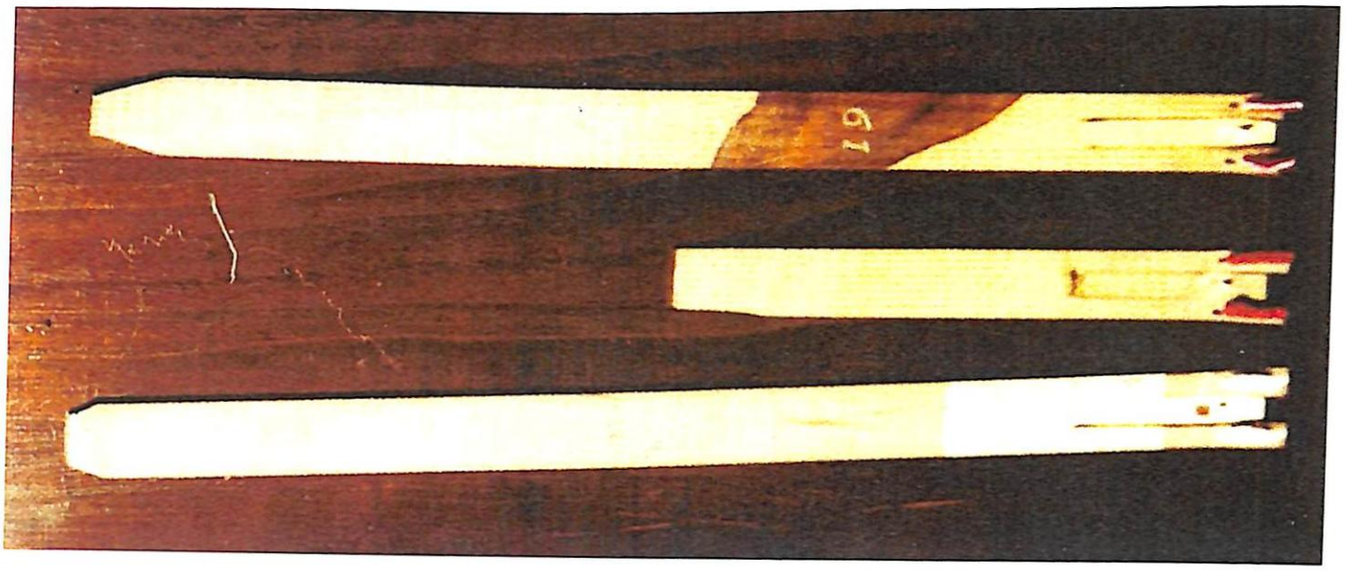


Figure 57. The same replacement **16XX** jack is shown between a 1791 Kirkman back-8' jack (top) and a 1773 Shudi-Broadwood 4' jack (bottom). The Haward jack, at the base of the tongue mortise, measures: width, 0.463" (11.8 mm) and thickness, 0.115" (2.9mm) – or just under 1 /2" x 1 /8". Measurements show that the Kirkman jacks, both 4' and 8', are about 12-percent wider, but about 45-percent thicker than the Haward's. It is significant that all of these jacks show a 6-percent thickness taper along the jack's length, but little width taper. Because of the major thickness difference between the jacks, it is unlikely that the 19thC restorer of **16XX** salvaged the jacks from an earlier harpsichord. Thos Culliford, however, was using stapled, dual-dampered, leather-stopped jacks of outstanding quality in his spinets made in the 1780s – perhaps others were as well. But a 1785-dated Culliford spinet jack I own and inspected was Kirkman-like in its cross-sectional dimensions. The explanation for this is the string-gap difference between the two spinets: while the Culliford keyboard-to-spine angle was 30-degrees, the Haward's was just 17-degrees. 30-degrees would allow for a gap slightly greater than a harpsichord's, whereas 17-degrees would not. Space-saving was required. (This is discussed elsewhere.) The Haward jacks showed no evidence of having been sanded. The most likely explanation is that they were custom-made at the time of the restoration by an elderly jack-maker who remembered how to do quality work. It should be pointed out, his plectra-gap was cut for quill and not the leather that might be expected in the 19thC.

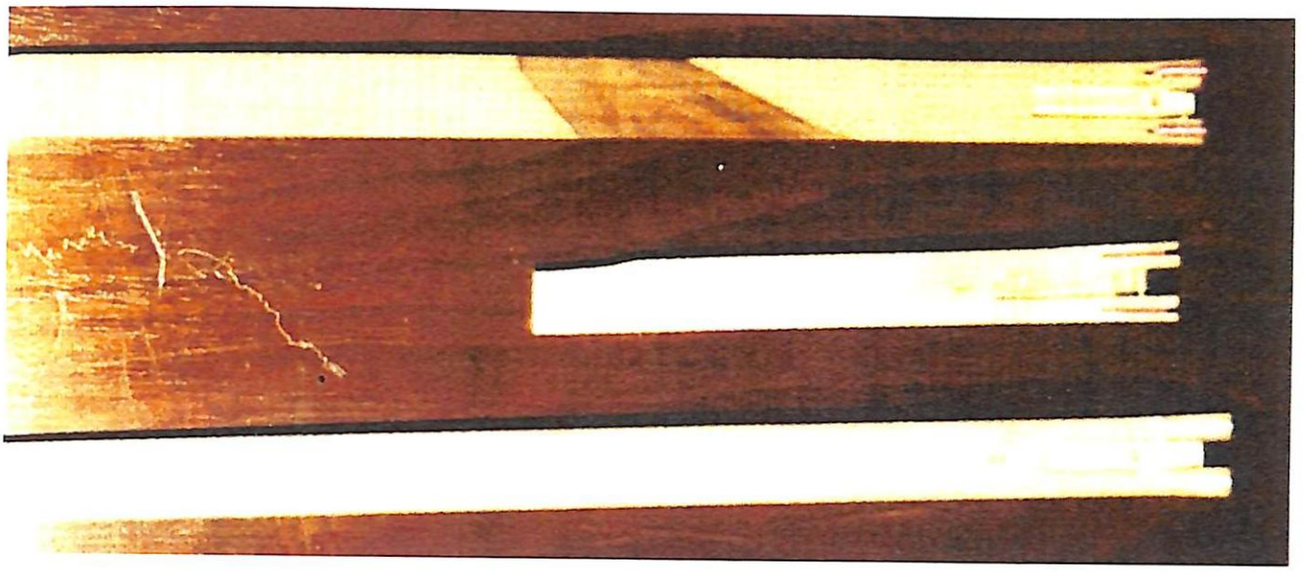


Figure 58. The backs of the same three jacks are shown with their brass wire staples. The Haward staple, measuring 0.185" (0.47mm) across, was analyzed along with the lock box (pictured earlier) in 2009 at Winterthur Museum. Except for the similar zinc proportion, the results were notably different:

Copper (Cu) – 69.80%

Zinc (Zn) – 28.63%

Nickel (Ni) – 0.06%

Lead (Pb) – 0.80%

Tin (Sn) – 0.38%

Iron (Fe) – 0.32%

While the lock box's total micro-ingredients were about 5-percent, they were just 1½-percent in the wire. The nickel and lead were a quarter or less in the wire than in the lock plate and the tin and lead were just under half. These wire proportions may represent those expected in at least some of the brass music wire available in the early- to-mid-19 century. It is important to keep the proportions of these trace elements, and not just their presence, in mind when assessing the breaking strength of period brass wire. For example, while we know that lead does not really mix with brass and tends to make it brittle, we expect to find it in some proportion to facilitate drawing. Other elements, such as iron, may have a beneficial, strengthening effect. Brass metallurgy is discussed elsewhere.

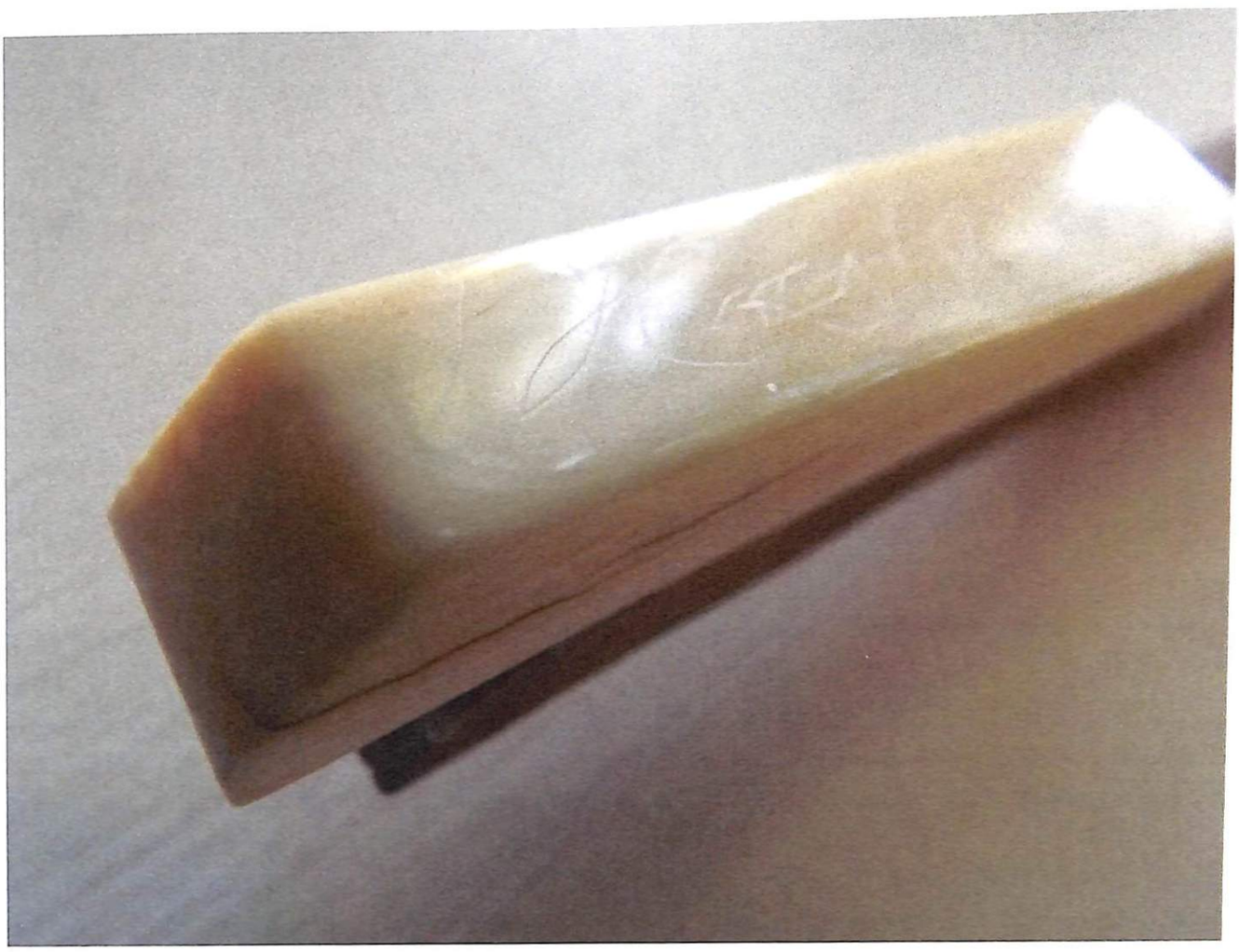


Figure 59. This faint, worn inscription on the top of key No.12 is, what I believe is the second piece of direct evidence of John Howard's work on this spinet. If the 1622 Knole harpsichord was not made by him, this spinet, unfinished at the time of his death in 1677, appears to be the sole extant example of this titan's work. Over 30 attempts were made to photograph this key's scratched inscription, made difficult by the key's slight curvature and 350 years of wear.

Figure 60. This image is actually a composite of two photographs joined together. A computer-enhanced tracing of this mark can be seen elsewhere.

1683

Figure 61. This **1683** Haward is, I believe, England's earliest extant dated spinet. It has what has to be its original trestle. Note the spiral 'barley-twist' legs - a leg design expected, perhaps, on all London spinets of the 1670s and '80s - a design used earlier on the Continent, but in England not until, at least, the mid '60s. Note, too, its mortise & tenon, the 'trenails' securing the tenons and, with four rails, creating a box-like section above the legs. Also, note its low-mounted, moulded-edge 'H'-stretcher - a functional design element. This trestle was strongly influenced by other furniture forms of the period. There are several similar examples pictured in Bowett (2002). A particularly good example is on p.115 - with a date-estimate of "1670 - 85". Unfortunately, we have few surviving original trestles from the 17thC to compare this one to. This spinet's bentside shows cross-grain plane marks that must have been made before it was bent to shape. At its centre is a decorative square washer made of brass - not iron.

Figure 62. This photograph shows the front of the cased top of the trestle. Unlike almost all trestles on English spinets, harpsichords, and early pianos, this one is not designed to be dismantled for transport. Its legs, nearly full-height are permanently secured at the top and at the bottom. Ordinarily, English trestles have legs divided by a very prominent, bolted, centrally-located stretcher, holding the assembly together as on **16XX** and acting as a strong visual divider. Even the 'French stands' (the contemporary term for English square piano trestles of the 1790s), were supplied with music trays that visually substituted for the stretchers they would have had earlier. The full unbroken height of those slender, Hepplewhite corner legs was apparently not always appreciated. The stretcher-divided style persisted until about 1810 on grands and many squares; it had prevailed for close to 150 years on English keyboard instruments.

Figure 63. This faceboard must have been decorated by the same artist who painted the faceboard on **16XX**. Here, he has added the important date. Note the block capital letters in the name and the half-height lettering in 'Fecit' - as on **16XX.** But here, note the less-even character-spacing than can be seen on **16XX.**

Figure 64. The low, rounded-top lock board appears to have been permanently attached, requiring the keyboard assembly to be raised whenever it was removed. Note the busy design of the multiple-ribbed base moulding.

Figure 65. This shows most of the keyboard with its largely square, crudely-cut, key fronts. Those on Haward's 1683 harpsichord, made the same year, appear to have been more evenly finished.

Figure 66. Notice the inspired, upper termination of the artist's '6' and the lit-candle for his 'i'. The scratched lines, 5/8" (1.6mm) across have no ink or paint in them. Yet, they must have been placed there as guidelines beforehand.

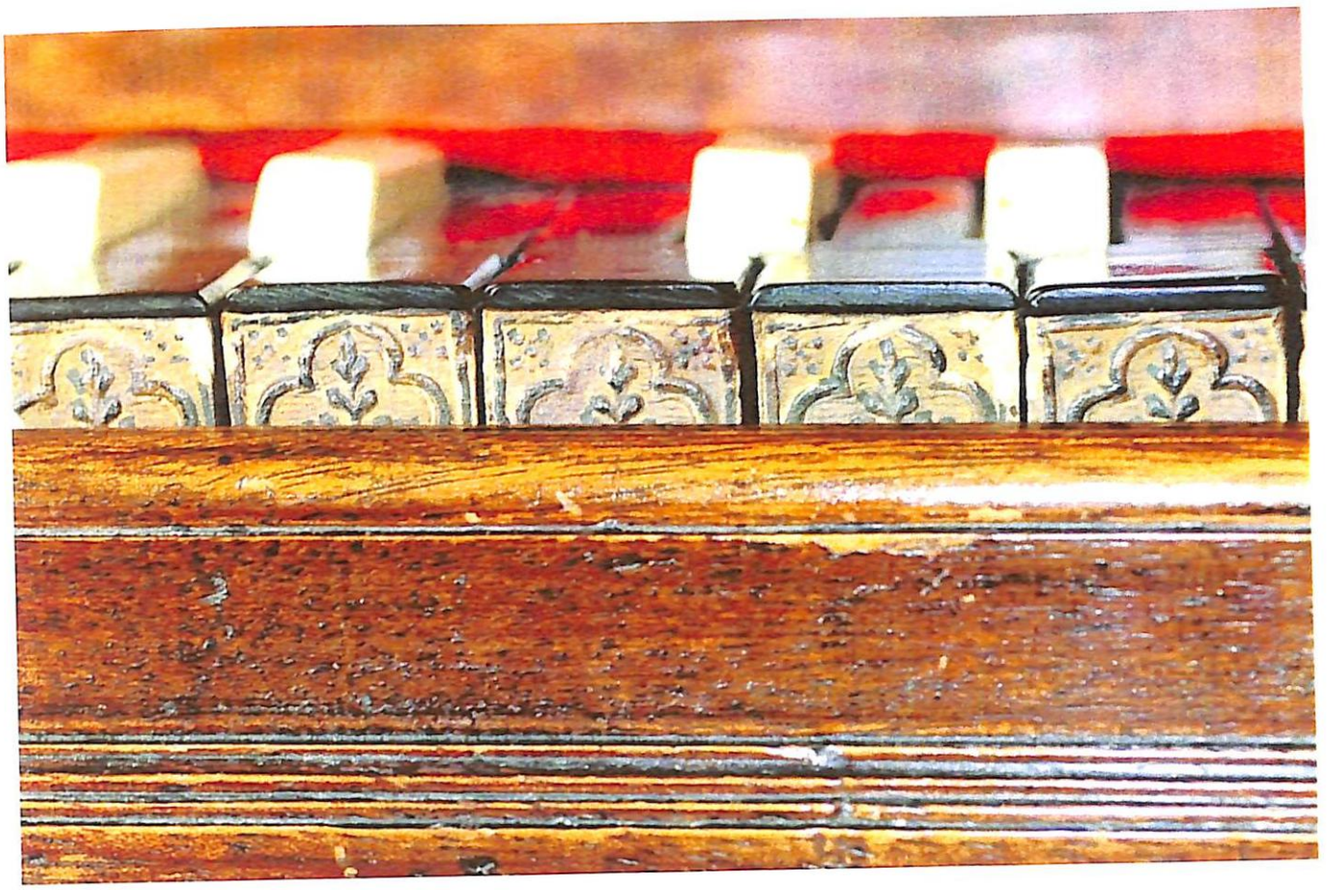


Figure 67. Note the borders and the spandrel rosettes on these parchment key fronts. Because of their borders, they had to be applied with greater care than the simpler fronts seen on **16XX.** The blackened raised portions would have dramatically enhanced the complex design, originally. Since this design can be seen on some surviving Keene spinets, these key fronts must have come from the same supplier.

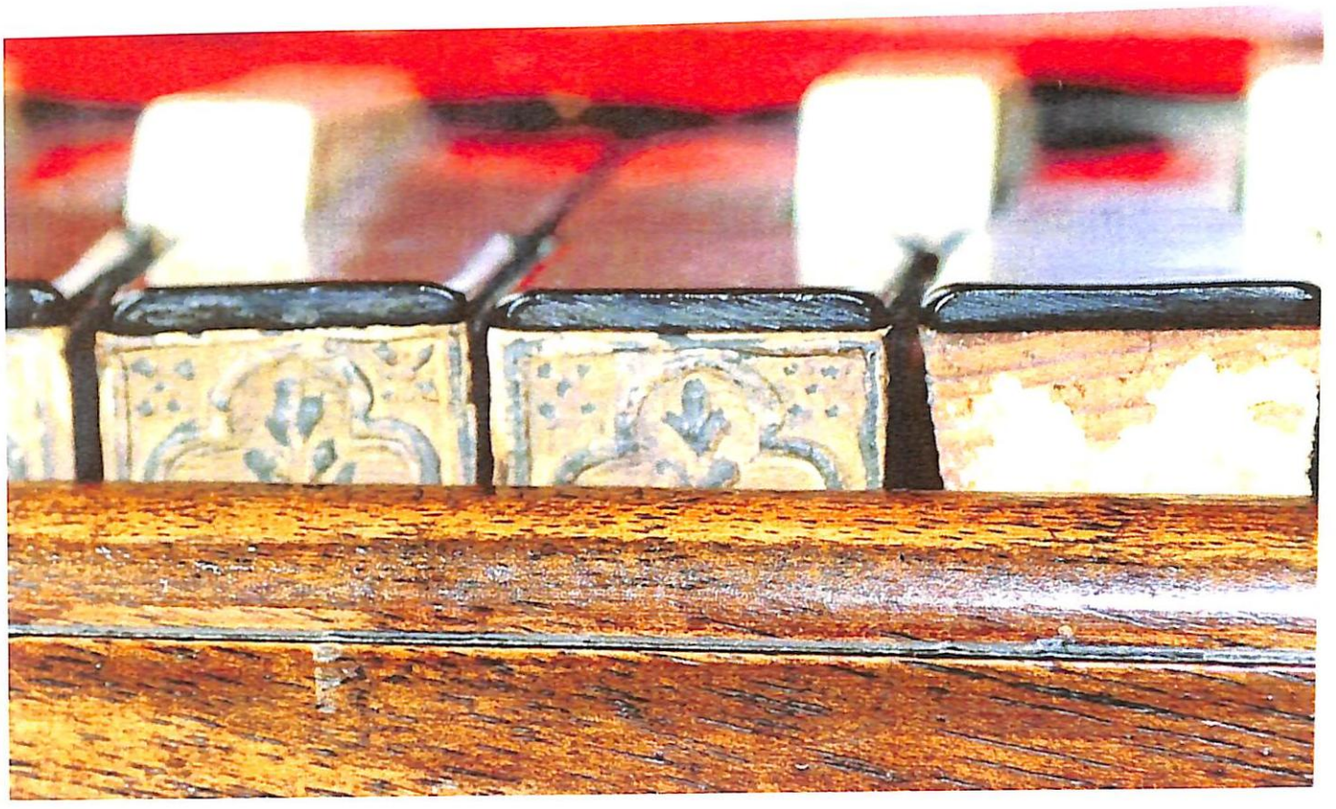


Figure 68. This photograph shows the crude, unfinished, sawed-off ends of the keypads in contrast to those on **16XX**, but identical to those on all the other Haward spinets. Note, too, one of several trapezoidal key fronts found on this spinet. Most of its key fronts, however, are somewhat rectangular.

Figure 69. By 1683, the Dutch aesthetic - much of it oriental-inspired - was beginning to displace the French fashions of the 1660s and '70s. Much of England was looking towards its Protestant neighbour for new design ideas. This salient brass escutcheon, with its design suggestive of an oriental chrysanthemum blossom, must have been an exciting, up-to-date focal point in 1683. It would have been extended by the two then-lustrous brass washers close by and topped by the black and gold key fronts. Unlike **1684** and **1689**, however, this spinet originally had a lock.

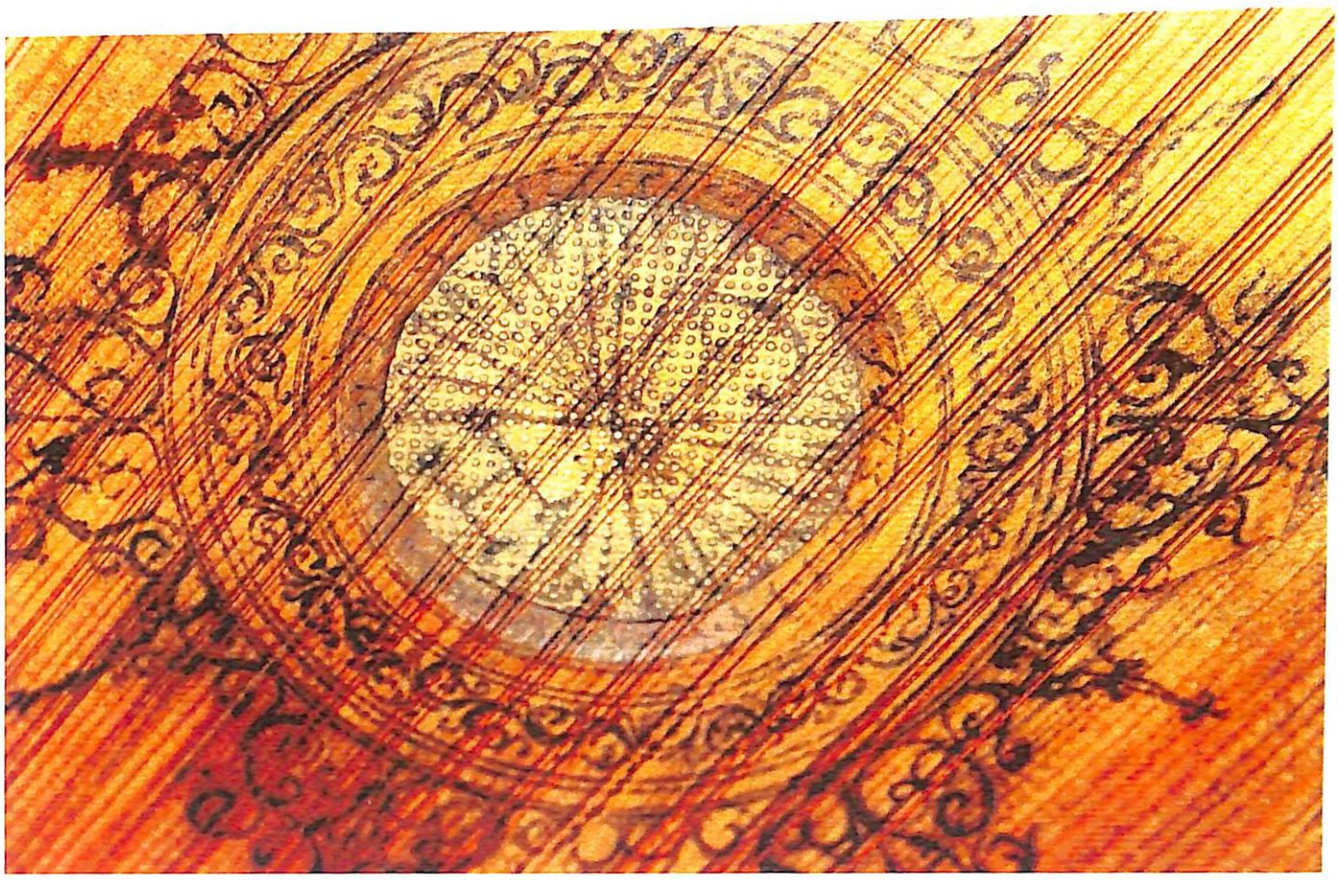


Figure 70. While this rose, itself, has been replaced, notice its surrounding ink decoration and its bevelled border similar to that found on **16XX.** This rose design may be Taphouse's. Since it had to be mounted from the back, bits of the original are unlikely to have been left in the case.

Figure 71. This shows the right-hand rear-corner cap moulding with two corner cuts - one mitred; the other, square. Notice the kerf cuts on the bentside cap and liner mouldings - each, half-depth. This triple-reed moulding design can be seen all over this spinet; there was no other design used. What could be significant is this: this same unusual design can be seen on a small, surviving piece of moulding inside the cheek of the Knole harpsichord. However, it appears nowhere on **16XX**.

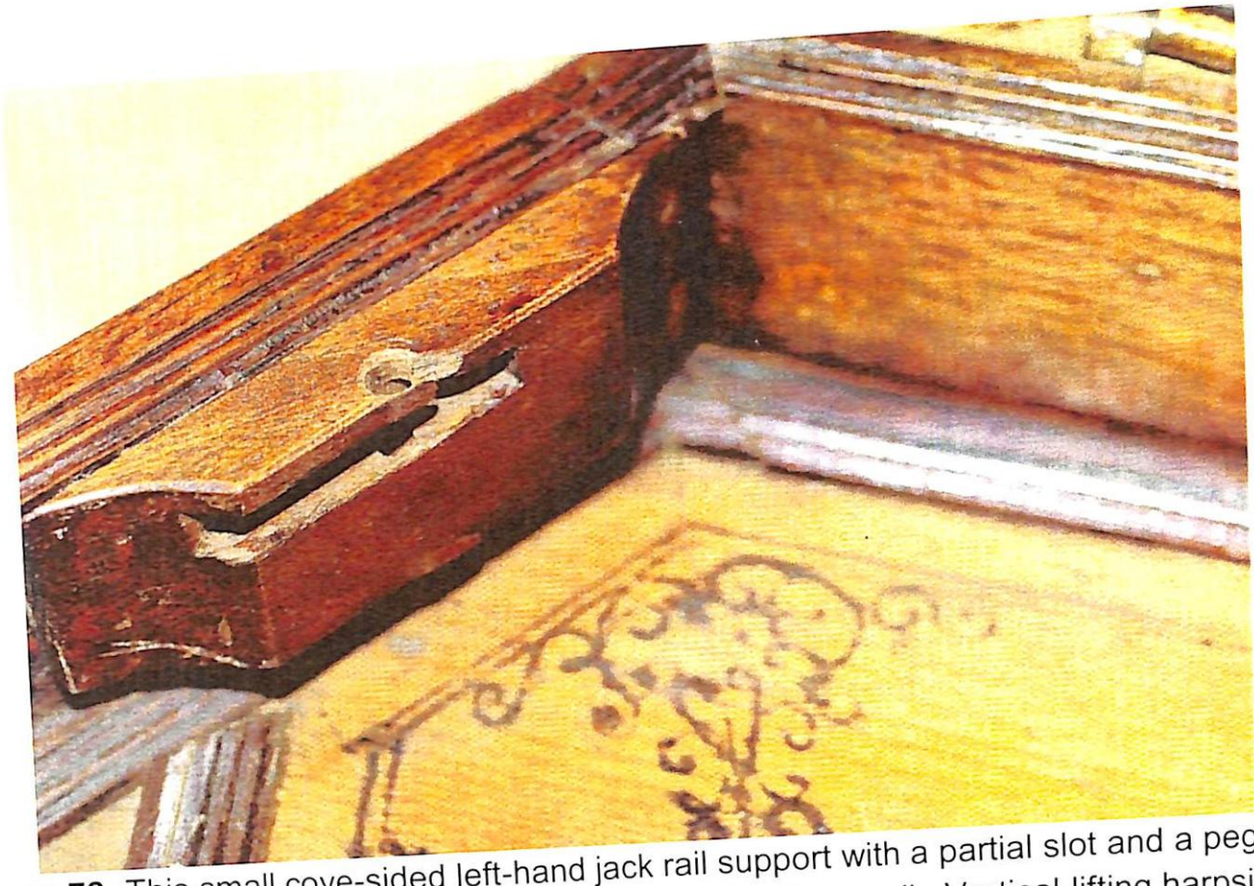


Figure 72. This small cove-sided left-hand jack rail support with a partial slot and a peg hole is the same as on **16XX** and, probably on **1684** and **1689** as well. Vertical-lifting harpsichord-like jack rails were not found on spinets until the mid-18thC.

Figure 73. This shows the left-hand front corner showing the same combined cut on the cap moulding as at the rear.

Figure 74. Unlike **16XX**'s, this angled nut-extension has been as carefully planed as the nut. Note the brass crestwire sharply bent at the mitre.

Figure 75. This jack rail, like **16XX**'s and perhaps others, shows edge planing that corresponds with that found elsewhere in the spinet. The shape differs on the two spinets, however.

Figure 76. The two ends of this face board were cut at 45-degree angles and were meant to fit into similarly-shaped case slots.

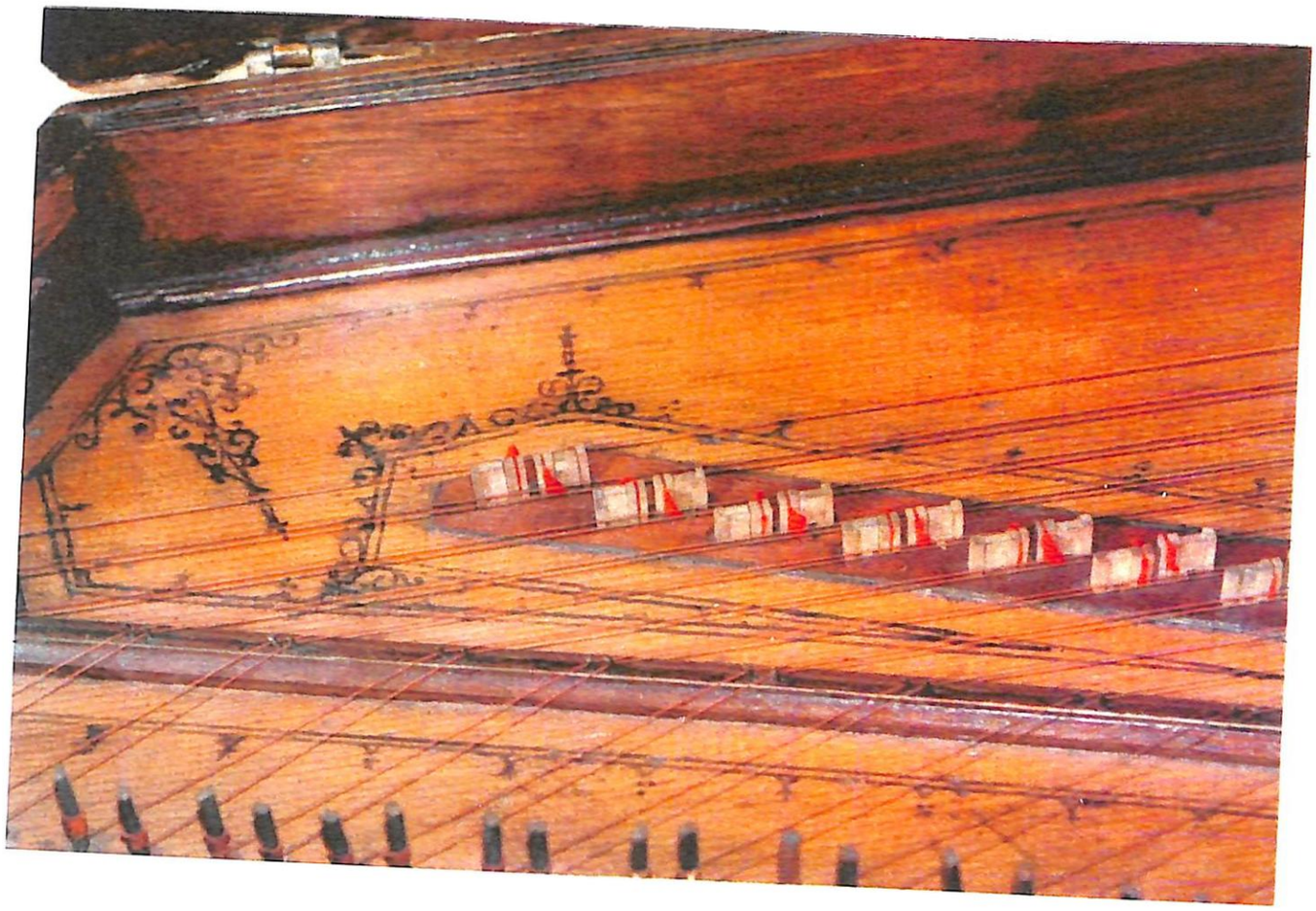


Figure 77. Note the similarity of this soundboard decoration to that found on **16XX**. Also, in common with **16XX,** the nut and moulding wood appears to be black walnut.

Figure 78. This soundboard decoration is helpful in confirming angles. Note the clear angle shown between the nut and the register here.

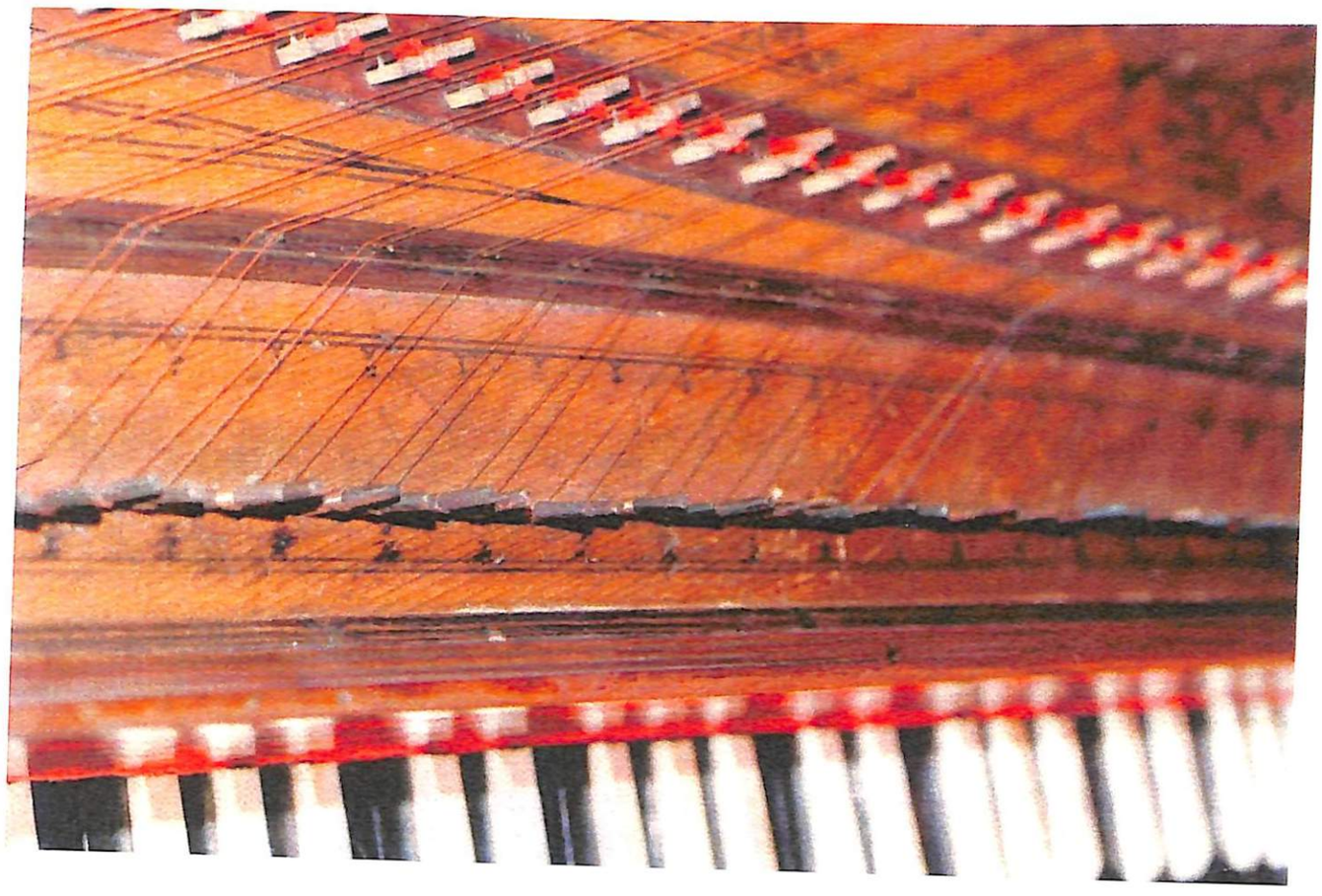


Figure 79. What appears to be note-lettering by the wrestpins here is actually an inversion of the soundboard decoration seen on the proximal side of the nut.

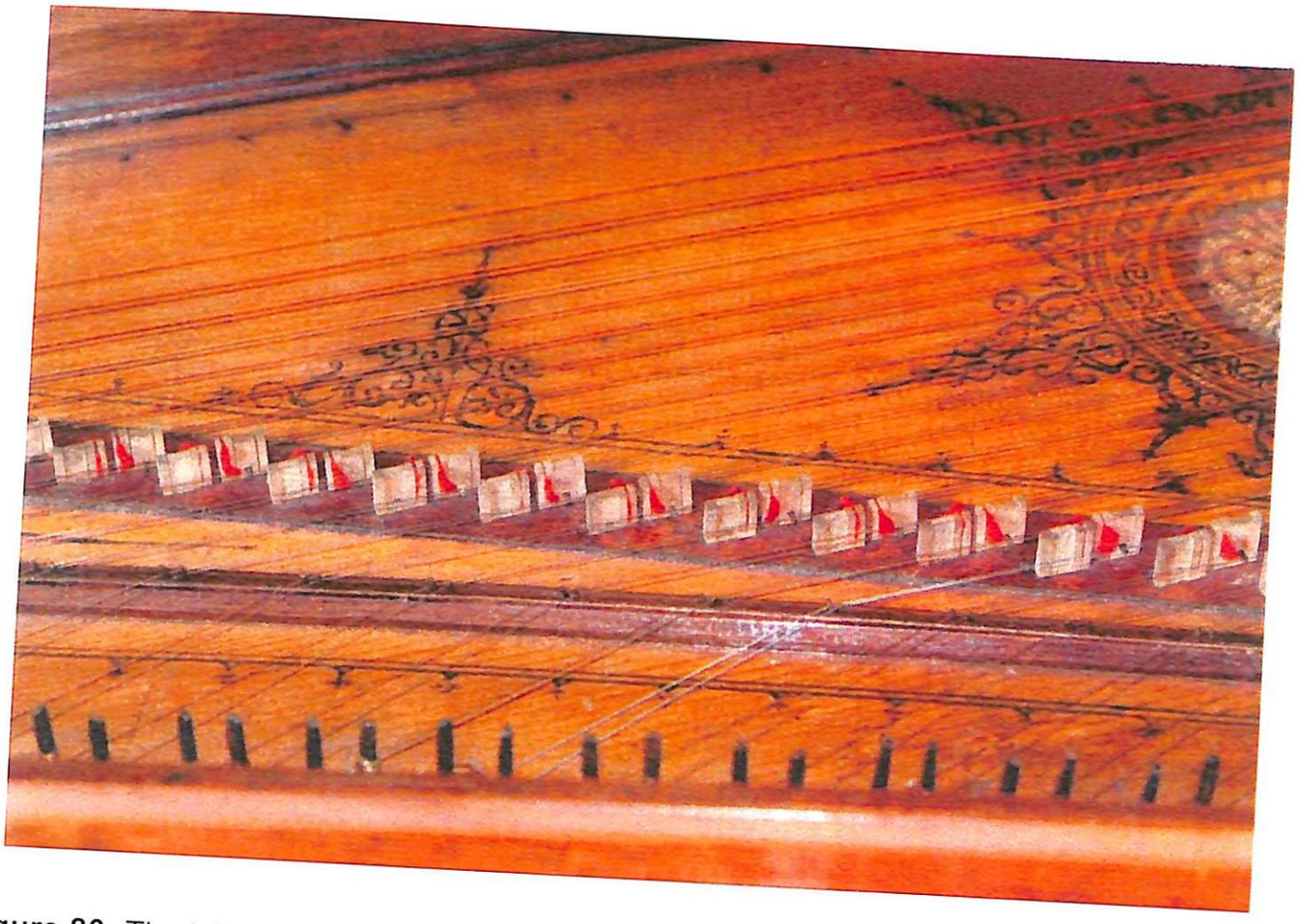


Figure 80. The inked soundboard decoration on this spinet is particularly well preserved.

Figure 81. The nut-register angle on this spinet is just 2-degrees. Note the fine-quality replacement jacks.

Figure 82. The nut and bridge on this spinet, both evidently black walnut, are in particularly good condition. Both have what appears to be their original dulcimer-type crest wires.

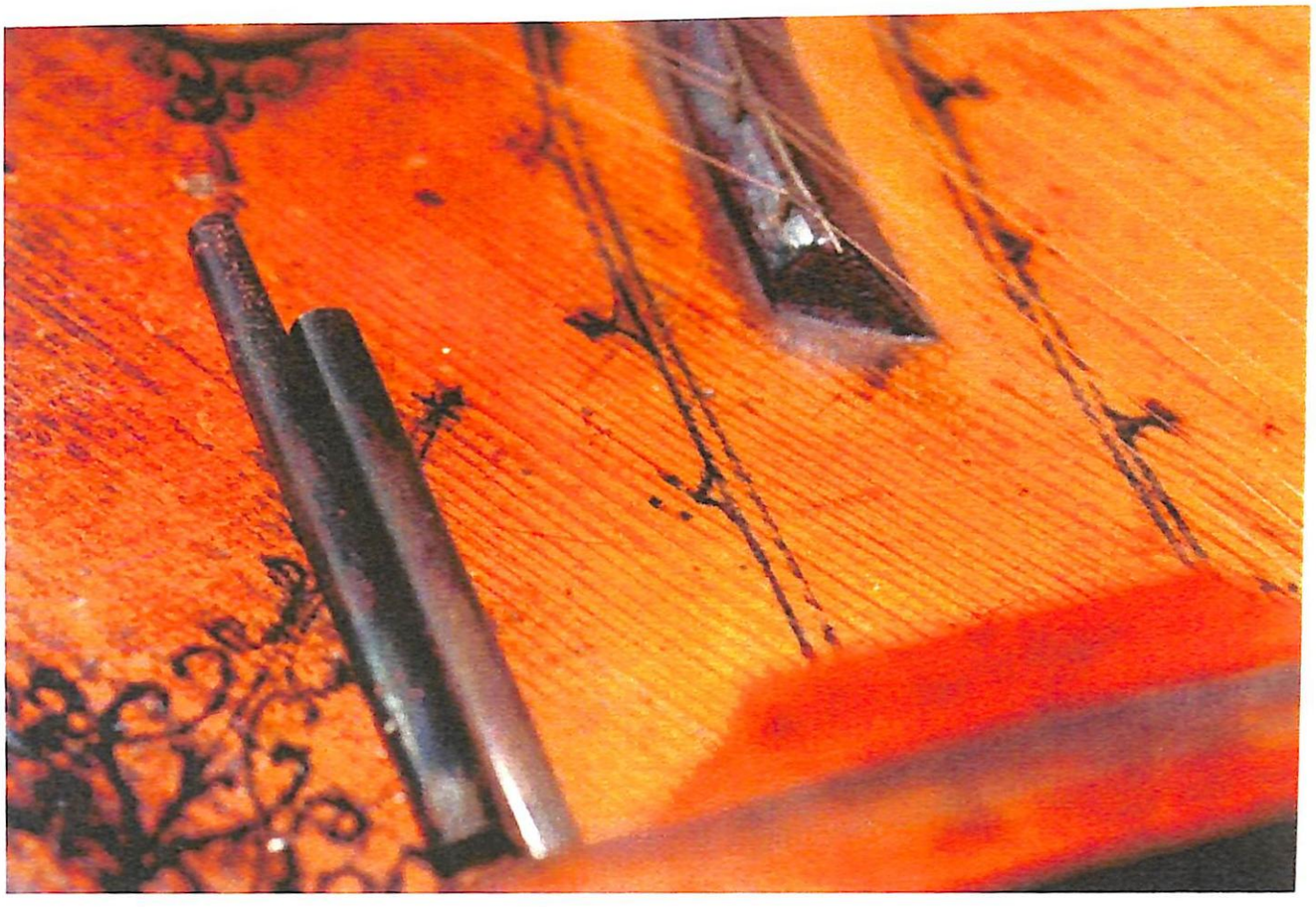


Figure 83. Note the bridge termination-cut in the treble - parallel to the top d3 string. While these photographs seem to suggest rather widely spaced grain-lines in the treble of the spinet, Dr Orum Stringer, who studied, measured, and photographed this spinet, reported that these lines were noticeably narrower in the treble than in the bass.

Figure 84. The base of the bridge was cut at an angle midway between the string angle and the bridge perpendicular. The decoration has followed that cut line. The soundboard growth lines here seem to correspond in width with those in the treble. Note the slight angle change on the planed right side of the bridge.

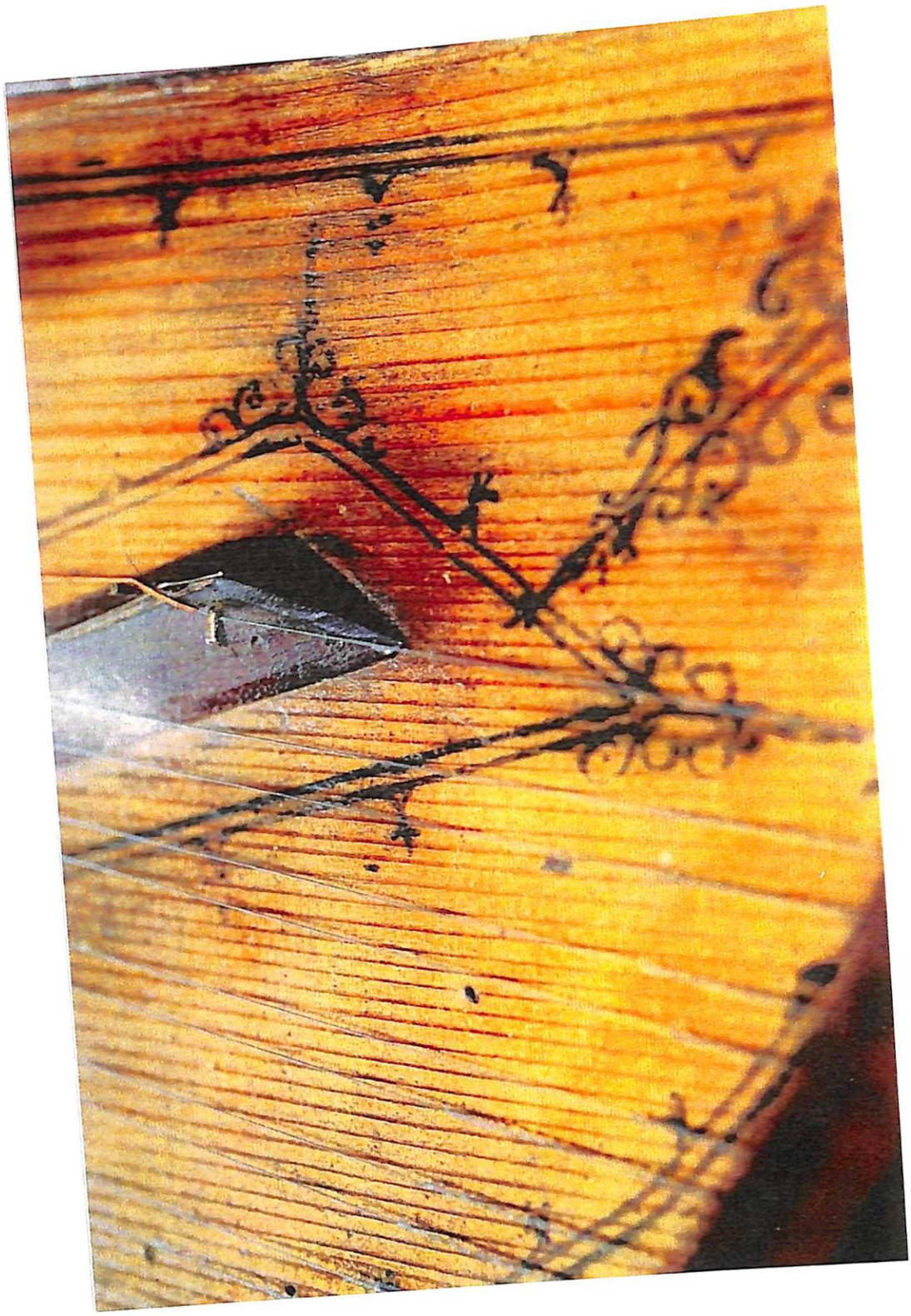


Figure 85. This close-up photograph shows that the cut made at the base of the bridge was made at an angle. It also shows what could be a pencil mark on the soundboard - perhaps to mark the cut-off point. The soundboard was probably decorated before it was glued to the liner, but the bridge and nut had to be positioned - if not yet glued in place.

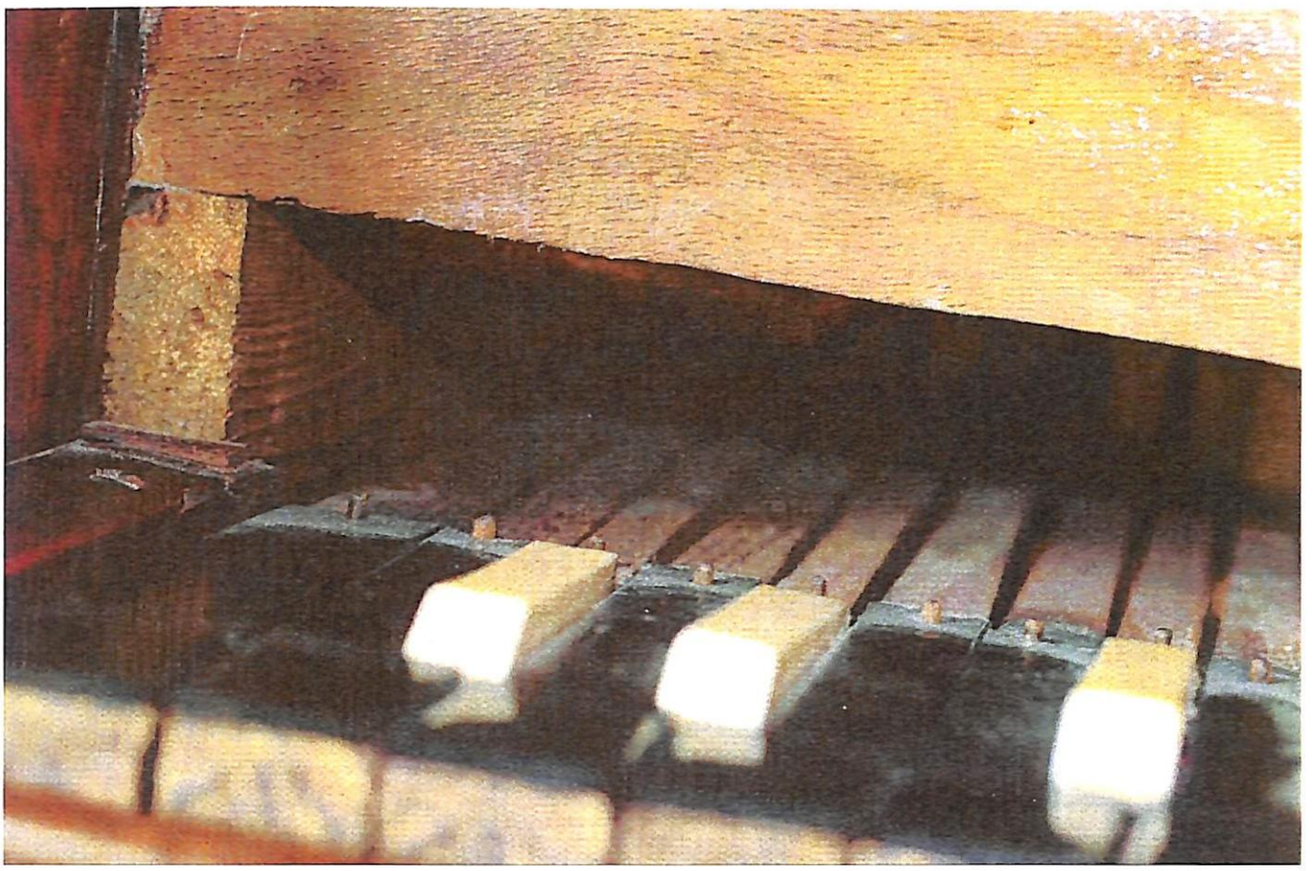


Figure 86. The left end of the wrestplank shows short, dark markings that suggest European beech (*fagus sylvatica*). This same wood seems to have been used on several Haward wrestplanks. Is it beech? Is it American beech (*fagus grandifolia*)?

Figure 87. This picture shows the single-scribed line for balance-point location, but no pivot-point lines. As a consequence, note the extreme unevenness of the line of natural pivot pins.

Figure 88. Note the drilled, round holes to accommodate the pivot pins. A 5-inch pin-to-front length for a key lever will mean a key rotation of just 3-degrees, assuming a ¼-inch key deflection. This could be achieved by forcing the levers back and forth against the pins. This practice would elongate their bottoms, leaving a round pivot hole in the centre. Note, also, the indifferent fit of the key covers on three of the six keys.

Figure 89. Another view of the balance-point scribed line. Notice the crude key-lever cutting for several naturals and sharps.

Figure 90. This spinet was once owned and restored by the pioneer collector, organologist, and Oxford city mayor, Thos Wm Taphouse. In 1886, he seems to have upgraded his "repaired" to "restored" when more work was, evidently, required. Taphouse's lifespan (1838-1905) almost exactly corresponded to the period of Queen Victoria's reign. Note the spruce soundboard edge between the wrestplank and the walnut moulding.

Figure 91. Another group of crudely-cut key levers and badly-located sharp pins. Note that the sharps on this spinet were not blackened behind the ivory blocks.

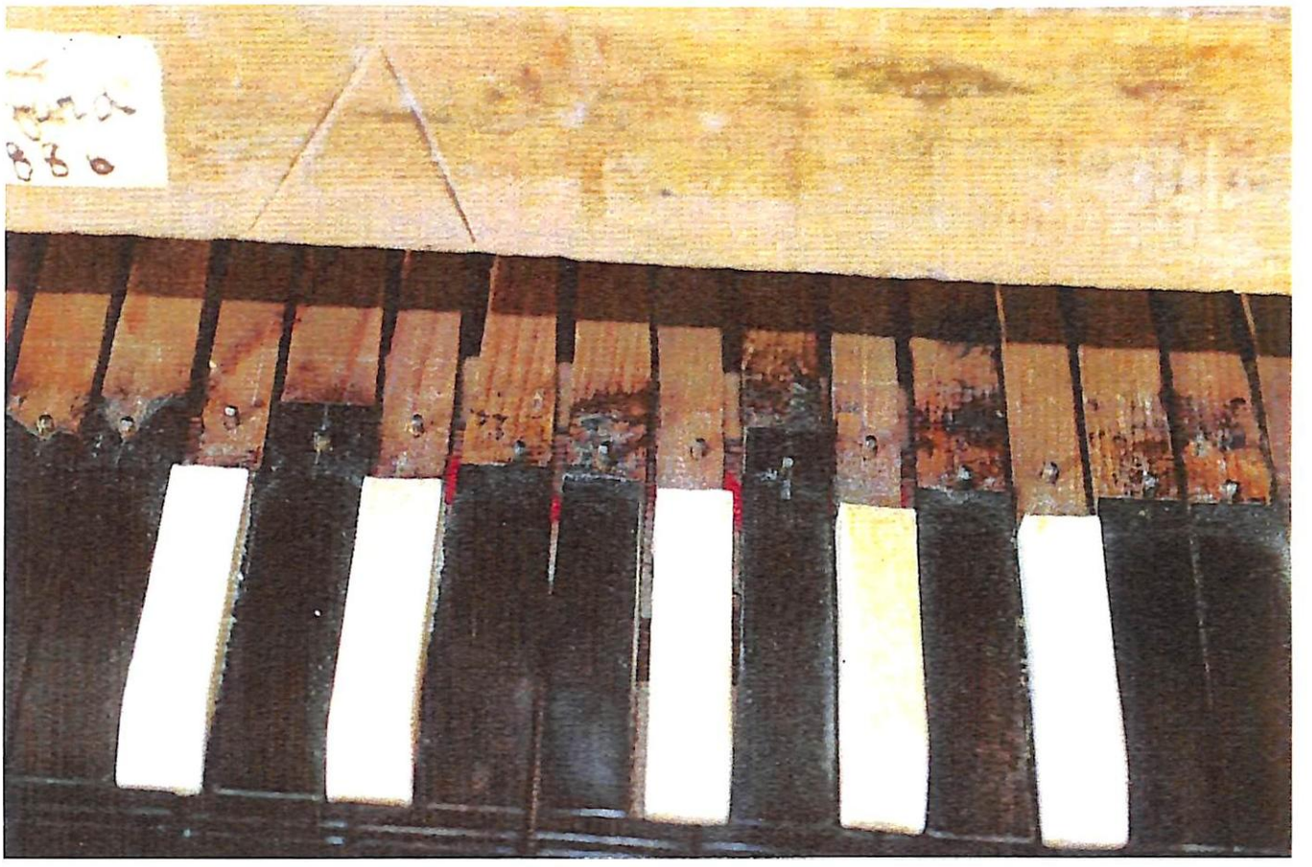


Figure 92. Wood with various grain configurations was used for the key levers showing they were cut from several boards. The natural tails have varied lengths.

Figure 93. If this wrestplank is European beech, it is surprising that it has had no worm infestation – European beech is particularly prone to worm attack and this spinet has probably always been in Great Britain. Note the varying angles of these treble wrestpins. The pins are vertical on most of the instrument.

Figure 94. This pair of screws securing the keyblock show rotational marks of wholly machine-made screws. They were probably added by Taphouse. These ebony tails, unexpectedly, seem to show a sanded finish here on these bass keys, but not elsewhere.

Figure 95. Compared to the keypads of **16XX**, notice the varying termination of the key-pad side-bevelling on this spinet. Also, notice the strangely rough surface on all parts of these ebony naturals; for this reason it cannot be explained by use. We can expect to see amber colouration on certain types of ebony, but it always follows the grain. The excess wear on the G here is interesting.

Figure 96. Note the unexplained rough surface on the ebony - back as well as front - on most of the tails and pads. For this reason, this cannot be explained by use.

Figure 97. Note the interesting 'kick-up' at the proximal ends of this spinet's key blocks.

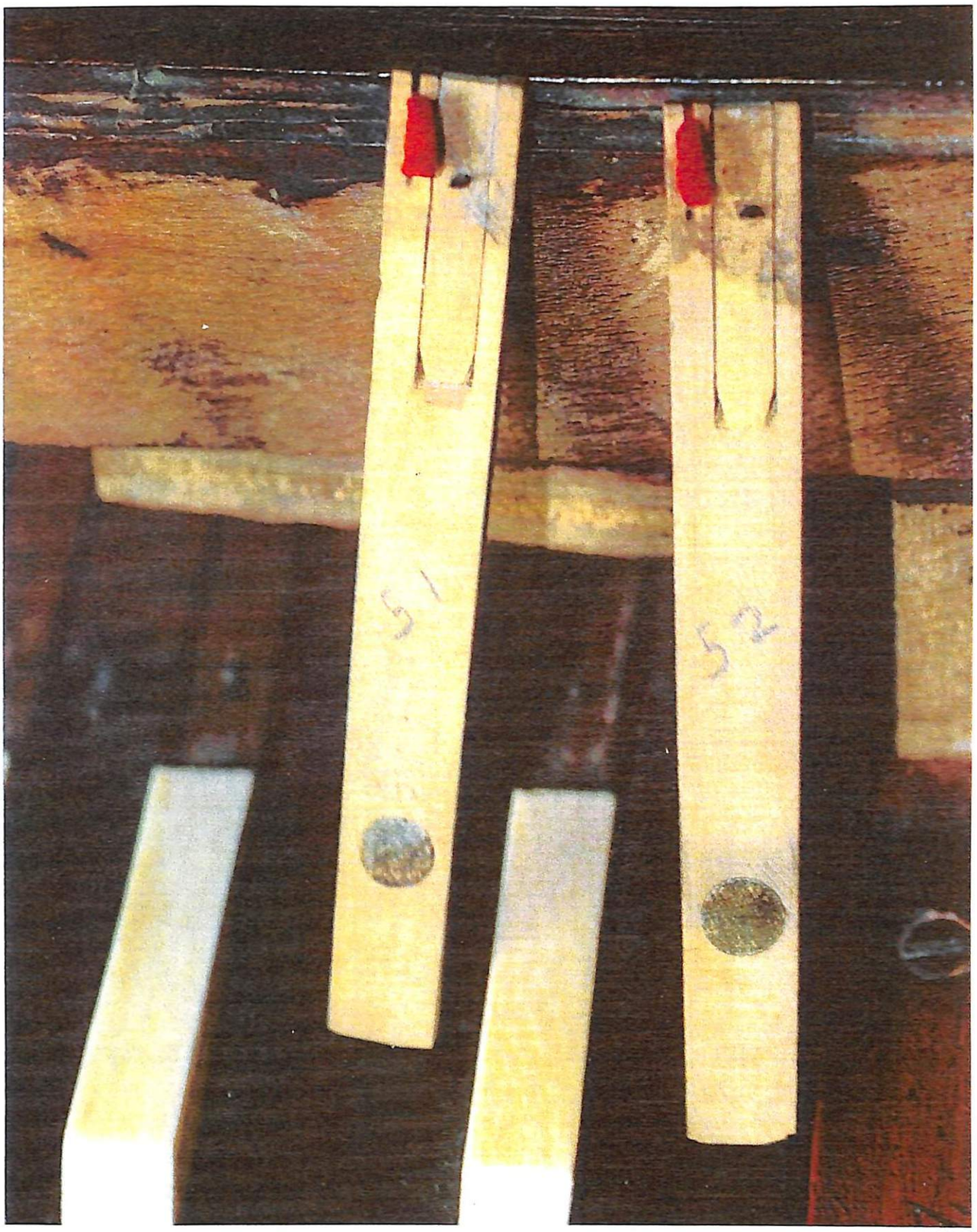


Figure 98. These fine-quality, weighted jacks must have been replaced by Taphouse in 1886. The tongues were cut for quill – not leather.

1684

Figure 99. This spinet is important in showing that in the year 1684, as he had in 1683, Chas Haward raised his top note from c3 to d3, but he had not yet split his short octave in the bass. As on **16XX** and **1683**, he used three decorative square washers on his walnut case, but unlike on **1683** he omitted a lock. It is reported that the faceboard on this spinet was lettered with gold paint and the coniferous spine was veneered in walnut, but today the key fronts are just black-painted - they have no parchment covers. Based on its design, the trestle seen here appears to date from the mid-19thC.

Figure 100. Several people have examined this Haward. One observer has referred to Haward's interesting wrestplank wood (not visible here) as birch; another observer has called it "maple or sycamore". The same wood may have been used on all the Hawards. It was also reported that the bridge and nut were grooved for crest wires, but not the hitchpin rail. Note the angle to the spine of the bass string.

Figure 101. Because the upper portion of the bridge is split and detached from the soundboard, original string length measurements can only be approximated on notes 2 - 9 (=44 - 51). It should be slightly longer than today's measurement. With the dulcimer-like crest wire in place, the bridge break could be ignored. But because of this spinet's 'bottom-first' construction, re-gluing the bridge to the soundboard would ordinarily require soundboard - not baseboard - removal, and on all early spinets the soundboard runs without a break, out to the face board (see the restoration photographs for **1689**). Despite its apparent light-colouration, this bridge wood has been identified as walnut.

Figure 102. This picture shows evidence that the soundboard was ink-decorated in the manner of **16XX** and.**1683.** Like these two, the rose edging is bevelled. The rose design is identical to that on **1689.**

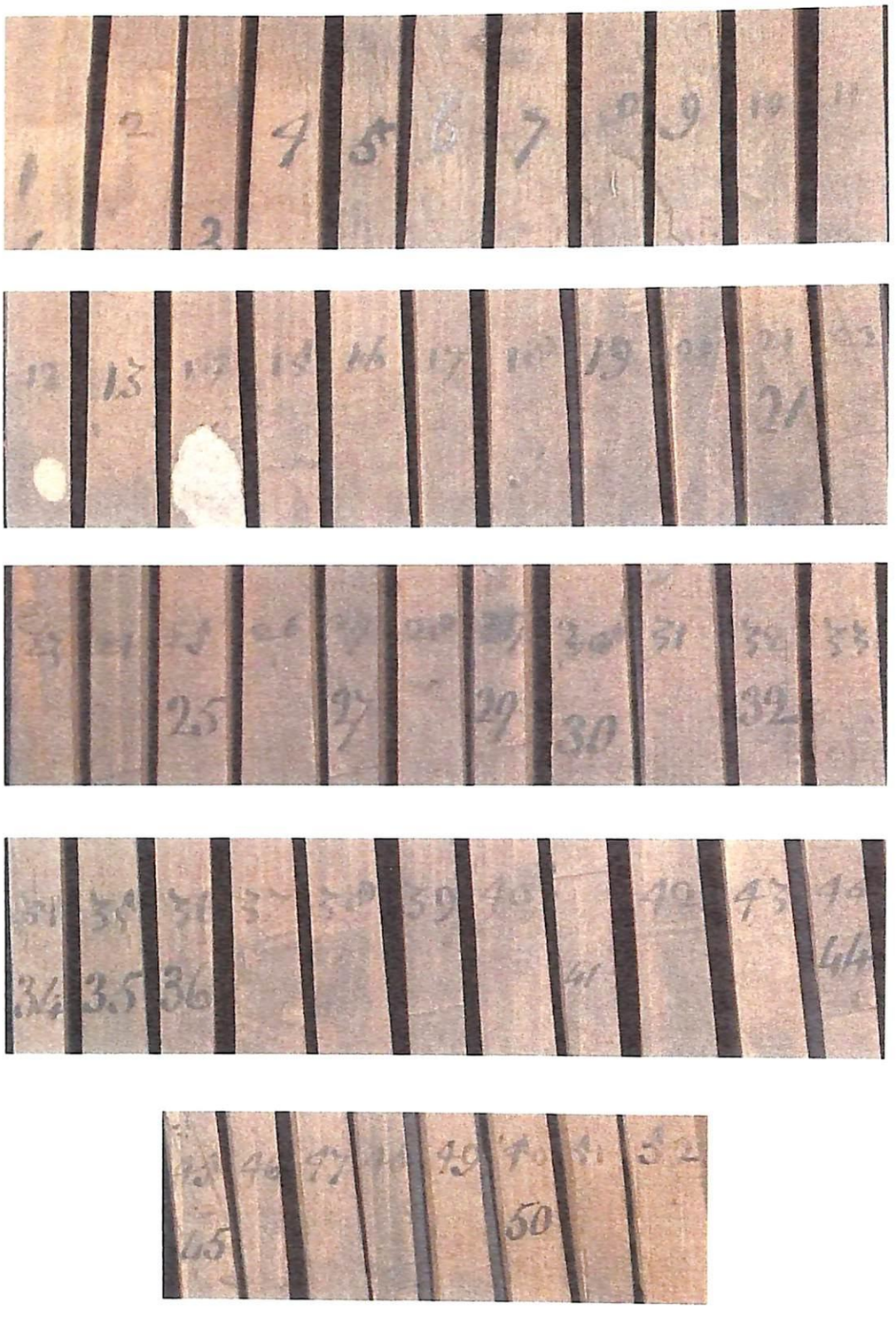


Figure 103. These pictures show the key lever numbers on all 52 keys. All of them show Chas Haward's characteristic number style. Note, particularly, his '3's and '5's. There are also bolder, later numbers on some of the keys. Note the highly uneven cutting of the lever sides.

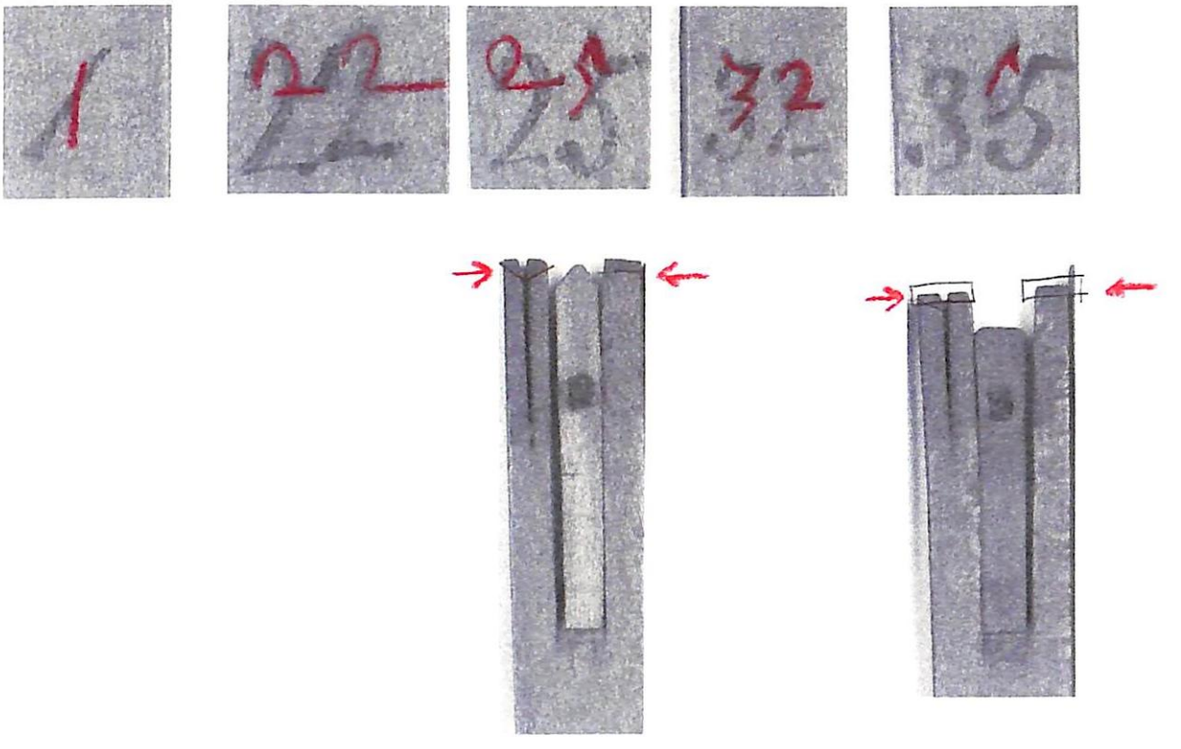


Figure 104. Because surviving jacks from all other Haward spinets have been replaced, these photographs are historically valuable. This picture shows Chas Haward's numbers on Jacks 22, 25, 32, and 35 - half hidden behind later numbers. The red numbers were placed there by Susanna Caldiera at the Metropolitan Museum, who traced his numbers.

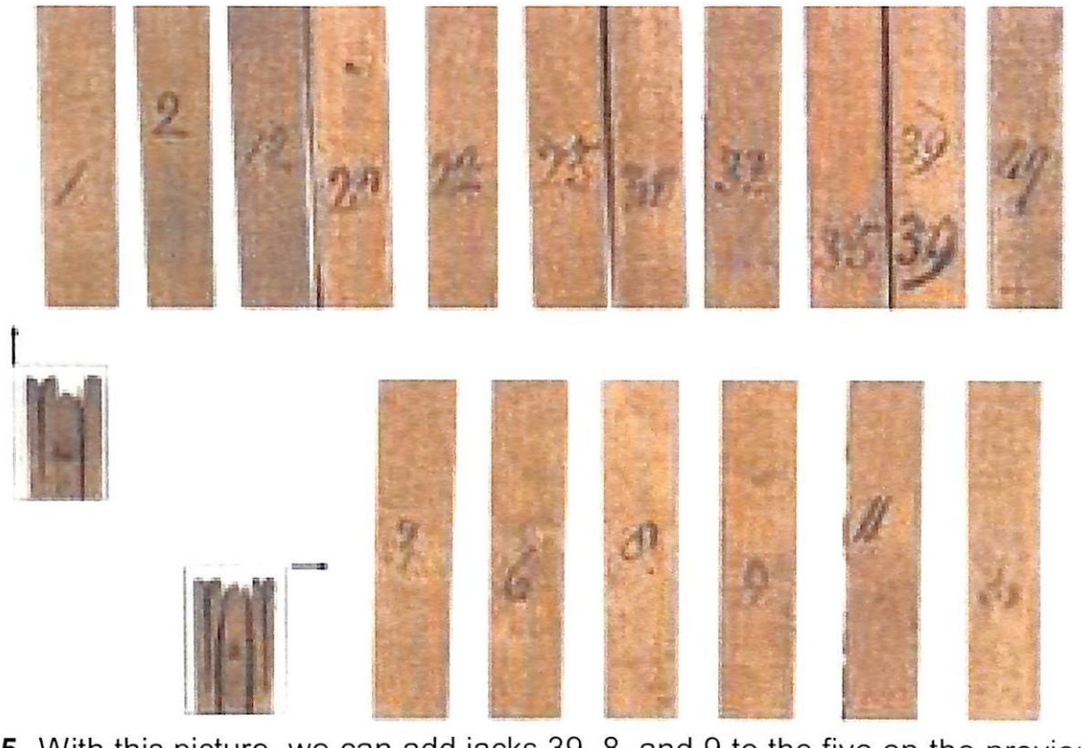


Figure 105. With this picture, we can add jacks 39, 8, and 9 to the five on the previous picture.

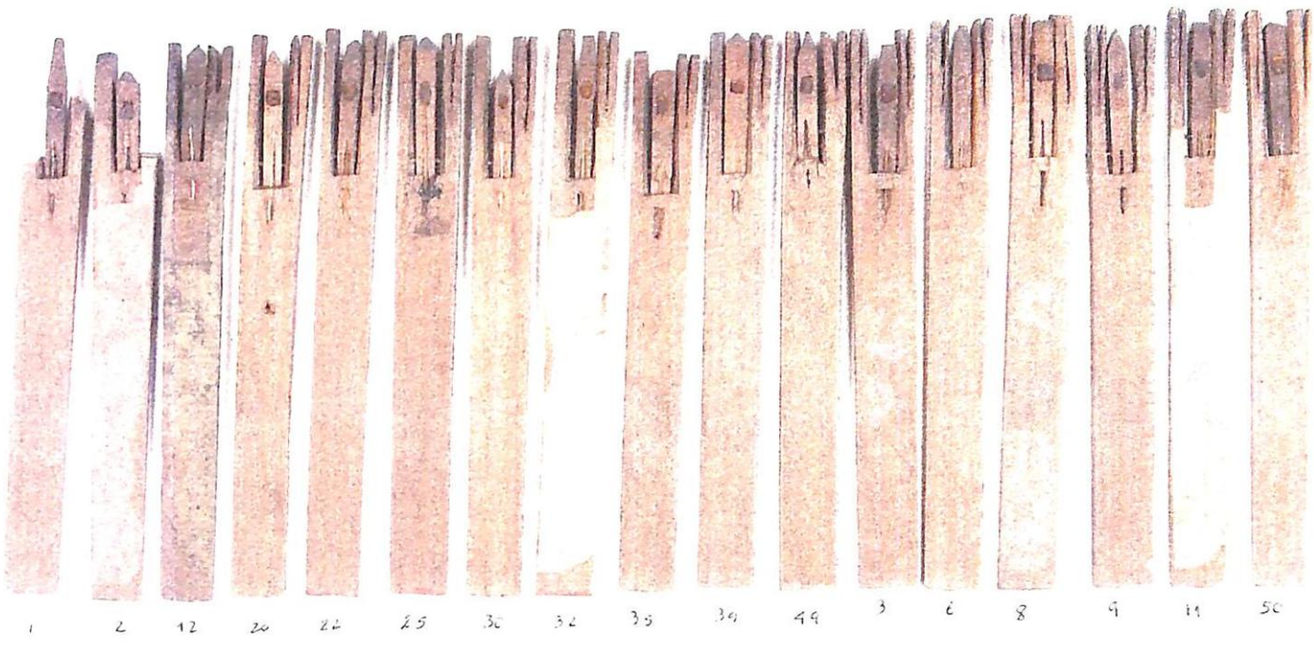


Figure 106. This picture shows the backside of the 17 extant jacks seen in the previous picture. Except, perhaps, for 49, 2, and 12, they all seem to be from the same maker. Note the unreasonably slender damper slots, pointed tops on some but flat tops on others; twin dampers on some but single dampers on others. Also notice the unusually low pivot wires and the absence of weights. The tongues were opened for leather at a later date.

Figure 107. With this group of 11 jacks with single dampers, note the apparently random position of them in the spinet. Also, note the varying plectra heights that must have required some sort of correction on the key levers. This is hard to explain.

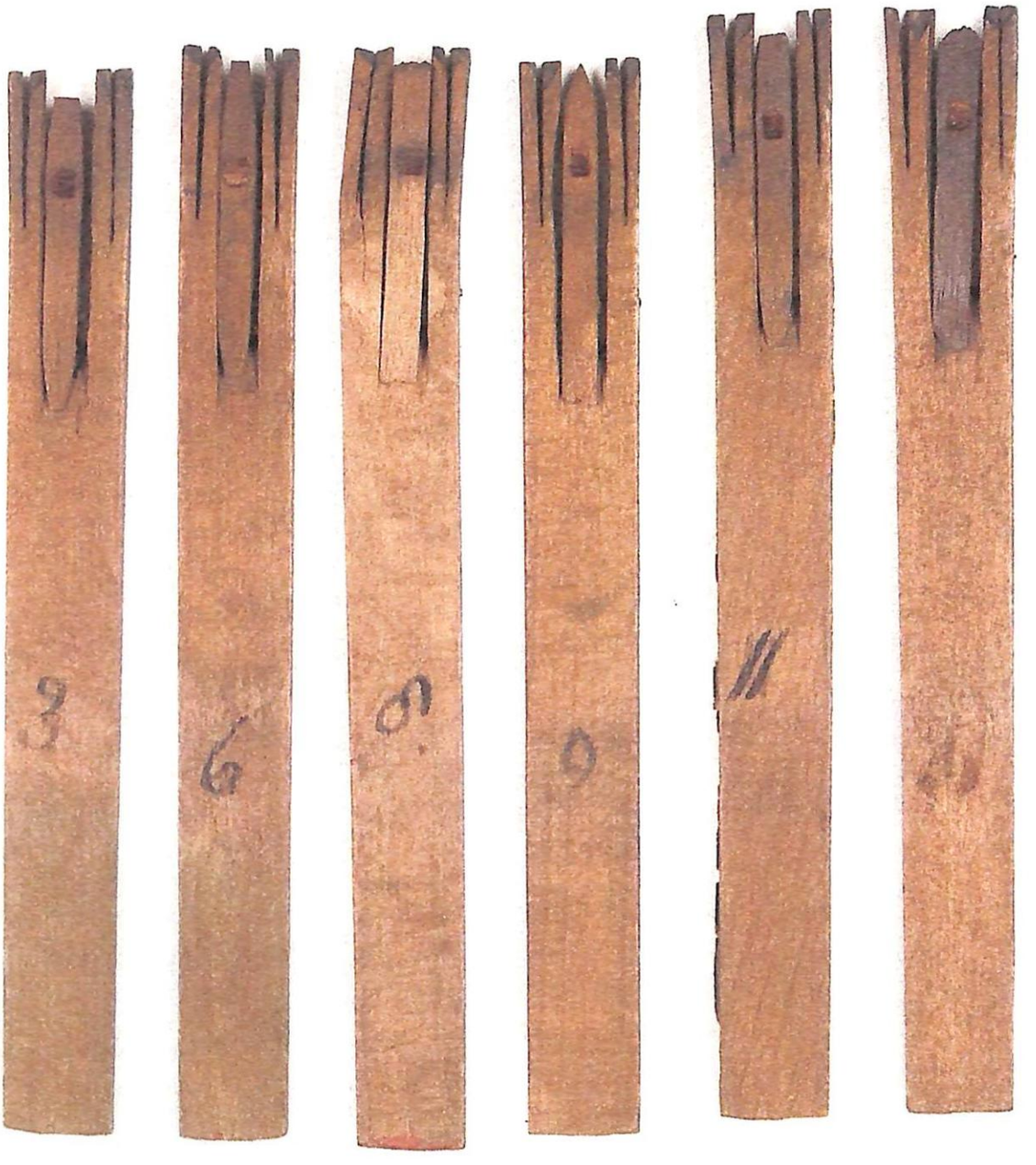


Figure 108. This group of six jacks with dual dampers looks less primitive than those with single dampers. But what sort of damper cloth was used in those narrow slits? We can be grateful these jacks were not discarded in this spinet's 1909 restoration. But how were such jacks, then, made to function?

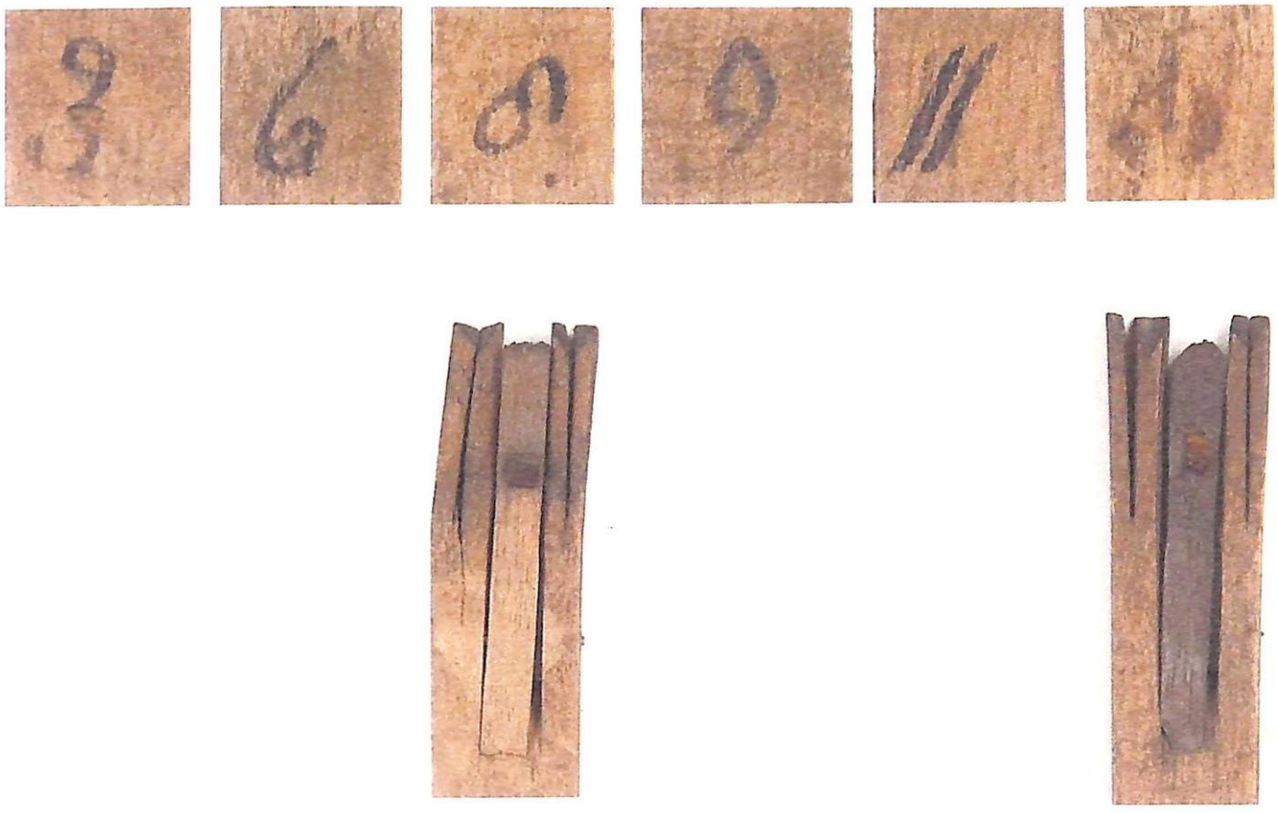


Figure 109. This picture shows the low position of the pivot wires and the narrow damper slots. With no wire staples, how did the tongues avoid being pinched by the dampers? What was intended to be inserted into those paper-thin slots?

c.1685

Figure 110. When John Watson restored this undated Haward spinet in the 1970s, he assigned a date of c.1685, referring to it as "a reasonable guess" (Watson 1982-3:19). Because so much of it appears to be what we could assume is early 18thC, there has been some question about its originality. Was it made originally in the 1680s and then updated a generation later? The existence of so-similar a spinet as the **1687** though, authenticates this one in every way. But even in the absence of the **1687**, much of its prescient character can be shown to be Jacobean, and not early Queen Anne. This is discussed elsewhere.

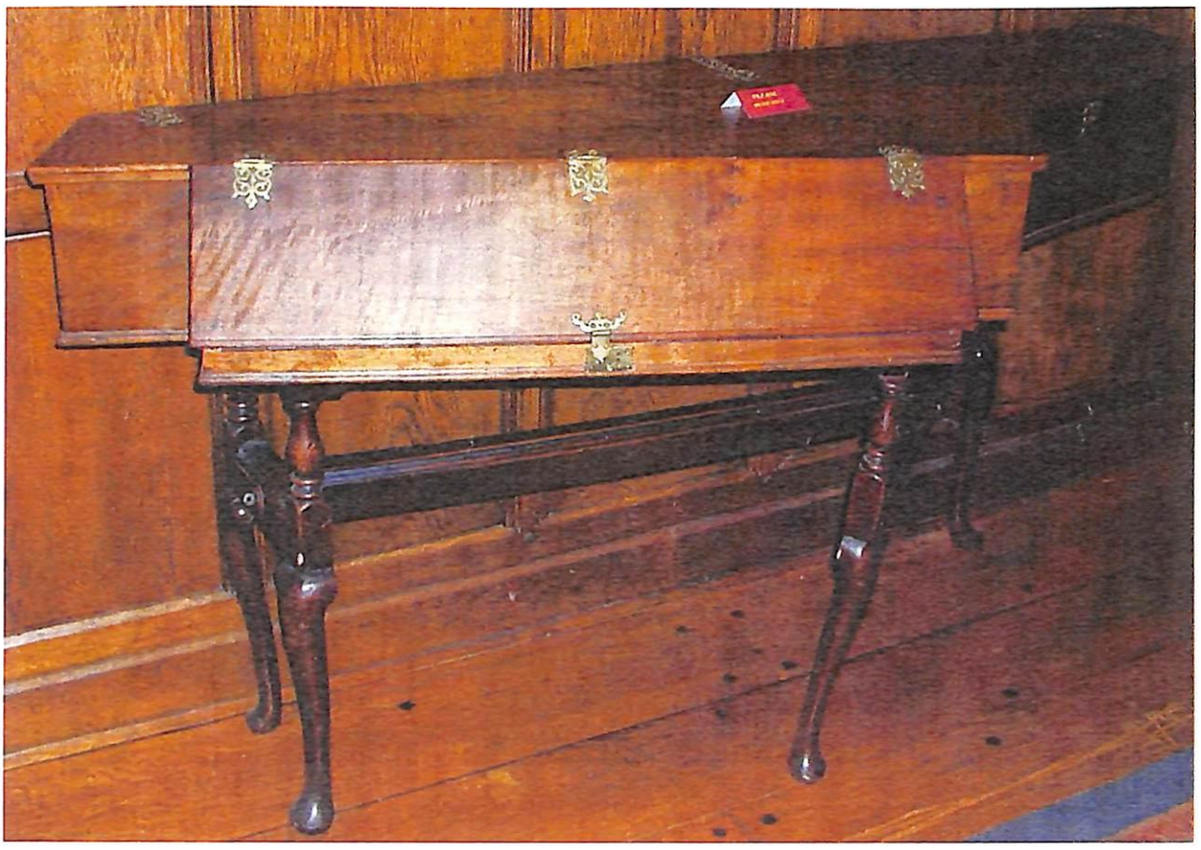


Figure 111. Since this mid-late 1680s spinet is so forward-looking, its marriage, today, to a trestle made, perhaps, 80 years later, might be accepted. This marriage must have been made after a 20thC refinish of the case, for the trestle appears untouched and does not match. Stylistically, today's combination is an aesthetic surprise. Notice how Haward's compound-curved bentside is echoed in the 'cyma-recta' baluster turnings above the stretcher. Then, notice how this curve is repeated, but inverted, below the stretcher in the 'cyma-reversa' cabriole legs. Notice how these lower legs, by being visually separated from the spinet's case, actually accentuate the cantilevered bentside's curvature. This trestle never did more justice to the spinet it was made for than it does today with this nubile Haward. Notice that the lid extends out from the case and, in common with all spinets of a later date, has an attached edge moulding. Unlike **16XX, 1683, 1684,** and **1689, i**t extends over the RH and LH faces, as well. Like virtually all spinets of a later date, the lid and lower case mouldings correspond; creating, with the lids down, the appearance of a closed book.

Figure 112. With the keyboard cover open, this spinet is a virtual twin of **1687**. Note the marquetry plaque framed with book-matched rosewood veneers, the boxwood stringing on three sides of the keyboard, the skunktail sharps, and the semi-circular key fronts – made of wood, not ivory.

Figure 113. Note the square, scalloped-edged lockplate. Also, the ebony naturals - identical to all other Hawards - and key end-blocks that match all but two. Note the cross-grain plane-marks, visible on both sides of the keyboard cover. Also, the attached moulding on both ends of the key board cover. The semicircular moulding on the top of the case and even on the lock board, is rosewood. Like **1687,** this spinet has a 53-note GG/BB - d3 keyboard with Chas Howard's single-split D# key.

Figure 114. The angle between the LH face and the LH tail is not acute, but 90-degrees. John Barnes (1985:15) pointed out the difficulty in creating a mitre joint at both ends of a board. Here, there is a mitre at the LH face / LH tail connection with a necessary butt-joint at the rear. The nail heads, not covered by a vertical moulding board, are visible at the sides where the tail joins the left-hand edge of the spine. There is no rear vertical moulding on any surviving Haward. Inside the case, the left-hand jack-rail holder, identical to the one in **1687**, can be seen as well as the un-mitred bass end of the straight nut. This spinet's worm holes seem to be mainly at the left side of the case.

Figure 115. Refinished, this spinet shows just how attractive the case of walnut trimmed with rosewood would once have been. We do not expect to see accumulated grime on our paintings, but we make an exception with our three-dimensional art. I recognize, there are no converts that can be made on this incendiary issue, however. Note the case's neat, right-hand mitre-joint.

Figure 116. Like the marquetry on **1687**, this also resembles the panel on the Keene-Blunt spinet made at the beginning of the 18thC. While not a good photograph, it clearly shows the arrangement of the various pieces of wood making up the design. The vertical cuts on the cross-banding above and below the astragal panel-ends is not on the **1687**.

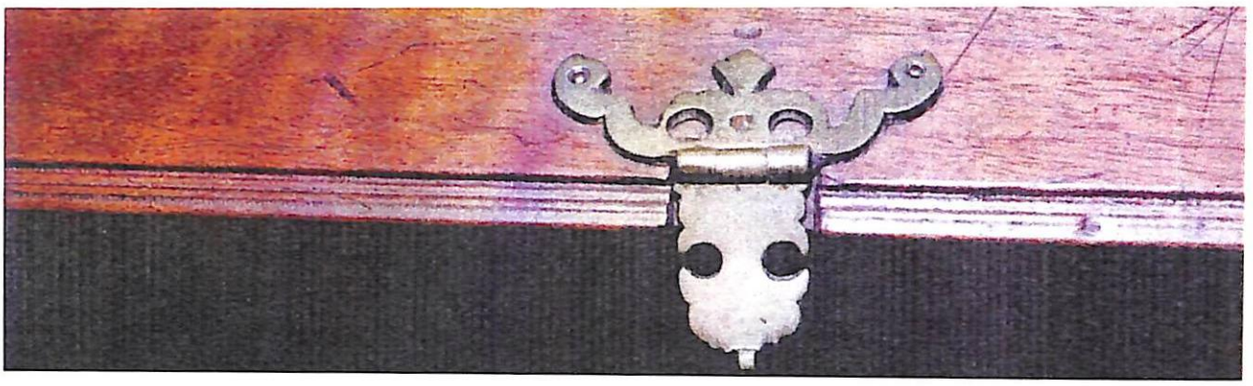


Figure 117. This shows the unexpected edge-moulding; not added, but cut into the keyboard cover's front edge. Notice how it had to be cut to allow the hasp to close. This late-looking hasp, like all of this spinet's brass, appears to be original.

Figure 118. This is the central hinge of the keyboard cover. The spine hinges show identical shapes and piercing. There is no evidence of any replacement. However, the 19thC or early-20thC round-head, brass screws have replaced the original tacks. The hinges, the lock plate, and the hasp, appear to be identical to those on the Keene & Brackley spinet of c.1715.

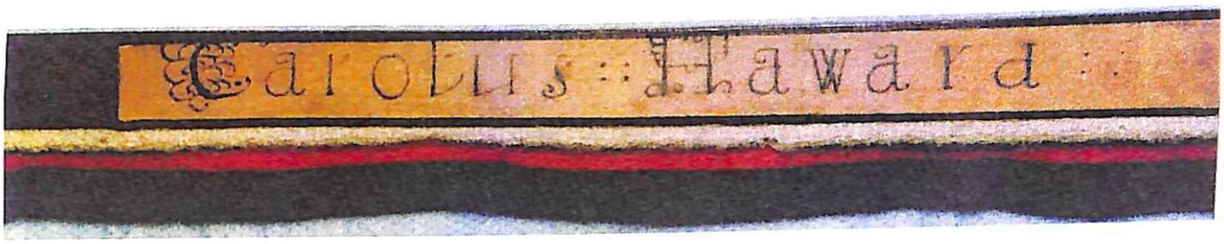


Figure 119. This picture shows that this boxwood or fruitwood veneer strip was trimmed to fit the jack rail. For some reason, on both **1687** and this spinet, the strips were trimmed on just one side – for **1687**, on the bottom, and for this one, on the top. The lettering is identical on both spinets and it also corresponds with the remains of the lettering on the **1689** faceboard. The four dots in two places are interesting.

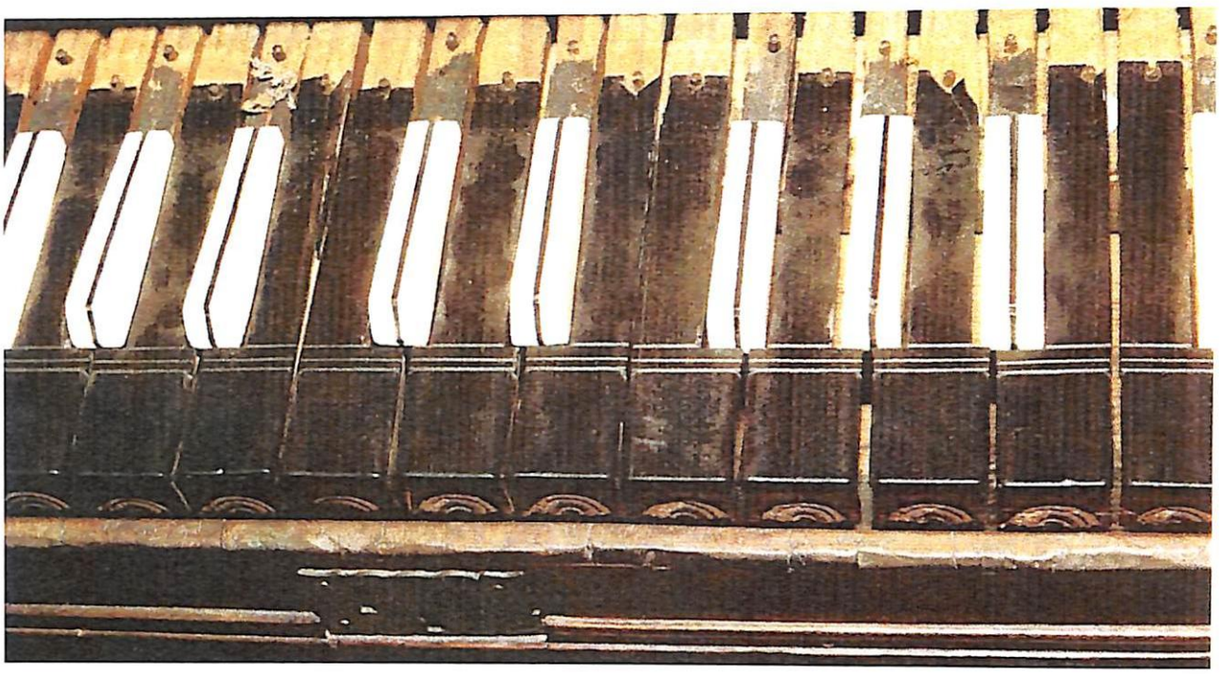


Figure 120. Here, the sharps' tails continue back, more or less, to the pivot pins, and the sharp levers are blacked behind the skunktails. As on all Hawards, these sharps are tapered, resulting in a 20-percent material savings. Also, in the Haward fashion, D's are wide (c.5/8") and sharps are narrow (c.7/16"). The pivot-pin holes, here, are more ovalled-out than on other Chas Howard keyboards, but their placement in the absence of guide-lines is uneven. Notice the edge shaping of the rectangular lock plate.

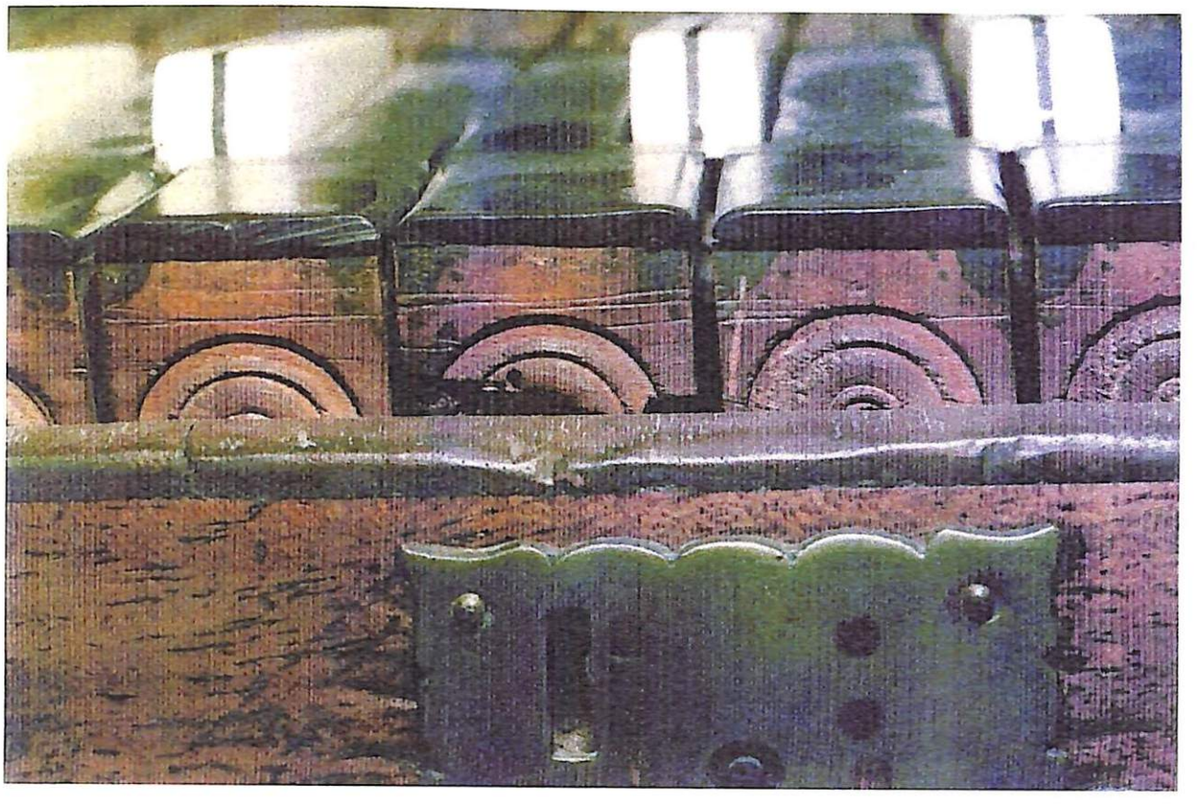


Figure 121. This close-up shows the circular cutting of the key fronts made with a drill. Their circular pattern suggests those wonderful winding-hole ring-surrounds on long-case clocks from c.1690 – c.1740 that were created the same way. Was that theatre-curtain decoration done by the maker or by a later owner? The scratched lines were probably done by a child, made to practice before going out to play. Notice the blunt, crudely-ended ebony fronts. In all fairness, it appears that Keene terminated his naturals in the same primitive way. But here, on this otherwise magnificent spinet, these key fronts as well as the indifferent trimming of the maker's name seem out of place.

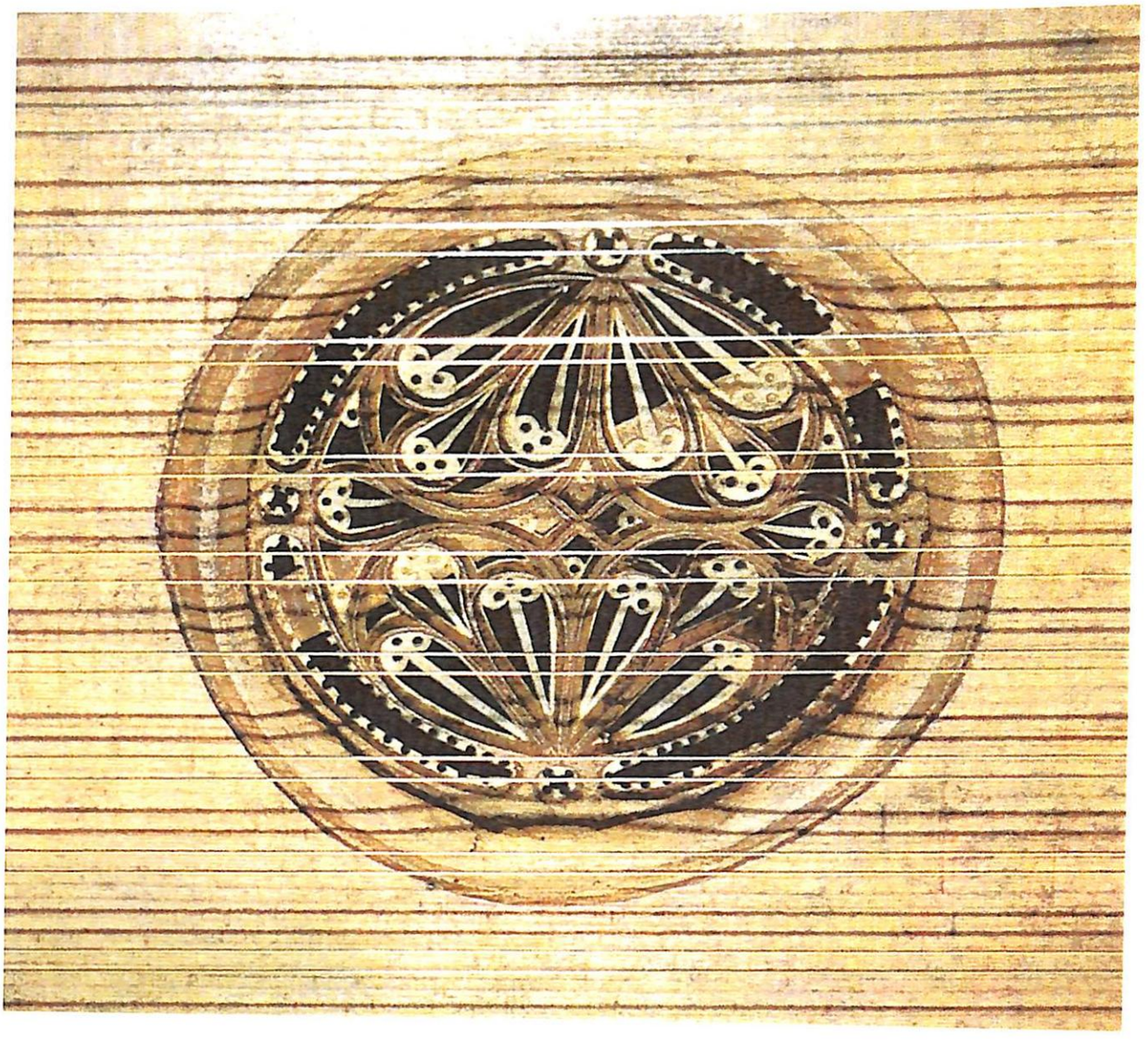


Figure 122. This rose has survived in clean, vibrant condition. Its design is similar, but not identical, to the rose in **16XX**. As in all Haward roses, the brown colour is wood and the beige, parchment. As in all Hawards with original roses, the angle of the second soundboard bar to the strings can be accurately measured. This soundboard, like the one in **1689**, has no decoration. A bead, not a bevel, surrounds the roses in both spinets.

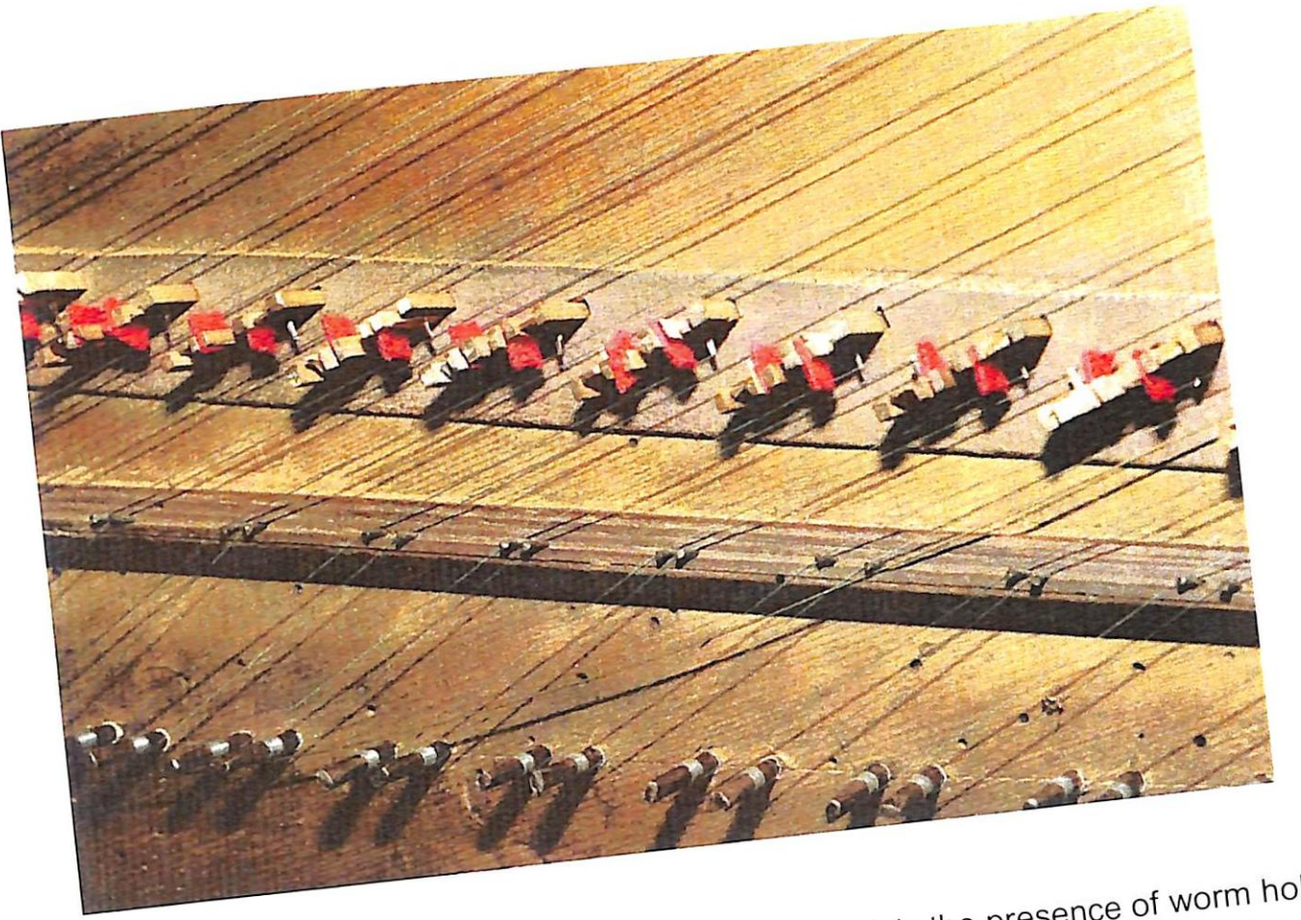


Figure 123. Possible evidence of a beech wrestplank is the presence of worm holes through the soundboard - but only above the wrestplank. European beech is particularly susceptible to the furniture beetle as is European walnut. The black walnut, used on the Haward bridges and nuts, seems to have been totally spared. Black walnut bridges and nuts are most unusual; typically, they are beech, and Barnes (1985) claims those on the c.1715 Keene & Brackley are pear. Notice the triple-reeded nut moulding - also found on the soundboard moulding but not on the bridge or the hitchpin rail.

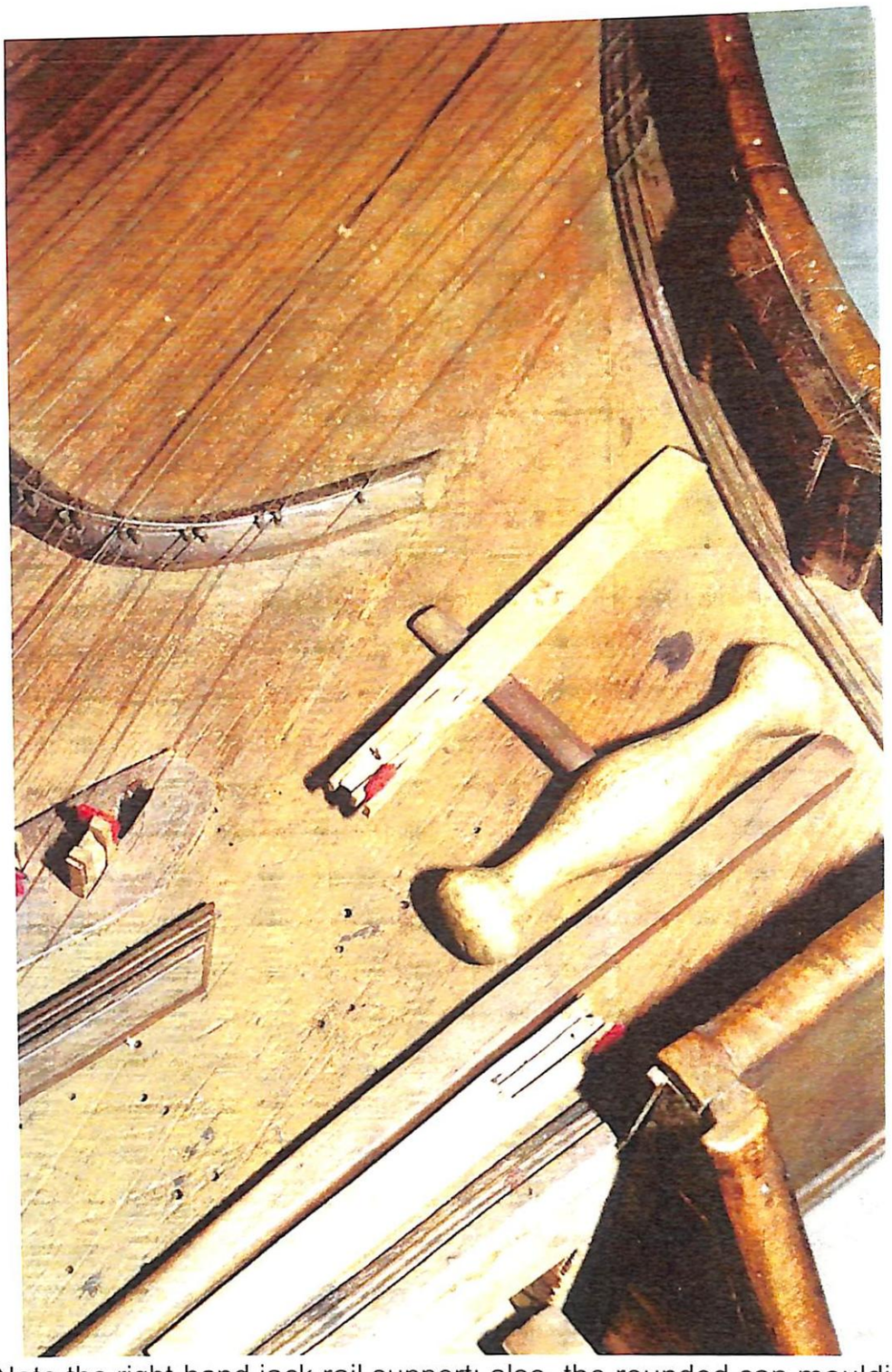


Figure 124. Note the right-hand jack rail support; also, the rounded cap moulding, cut into short lengths to fit over the curve of the bentside. In this Howard as in **16XX** and, perhaps all others, the soundboard growth rings are tighter and narrower in the treble than in the bass. The un-weighted replacement jacks - two shown here - are of fine quality. The ends of the faceboard are, as on **16XX**, square-cut.

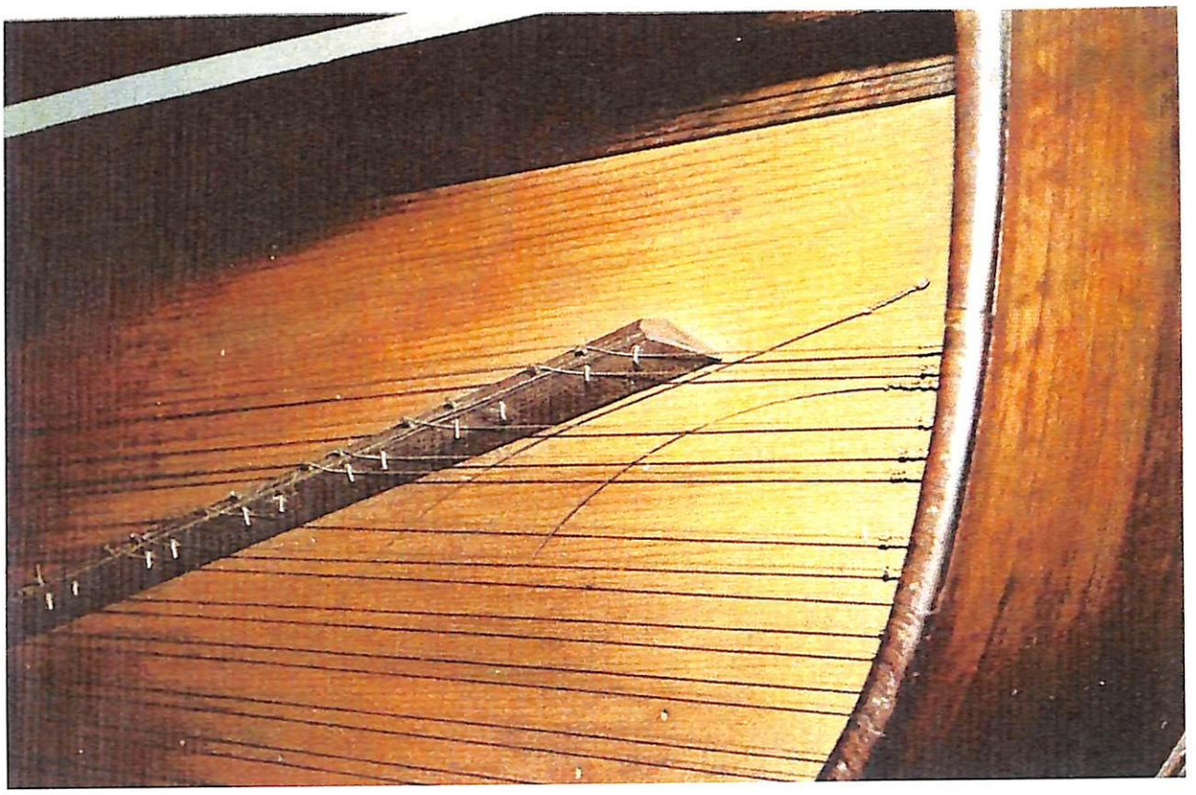


Figure 125. Except for **16XX,** Haward's bridges all seem to be vertically cut on the sounding side and curved on the over-draught side in the bass. The preceding picture shows the reverse of this profile in the treble. **16XX** has a similar taper on both sides of the crest wire for the length of the bridge, which may make it unique. The broken brass wire shown here at first seems to be surprising, for at this location the wire is under very low tension. But because of the split D#, a tuner must have been confused. But why did he just keep turning? Why more than one broken string?

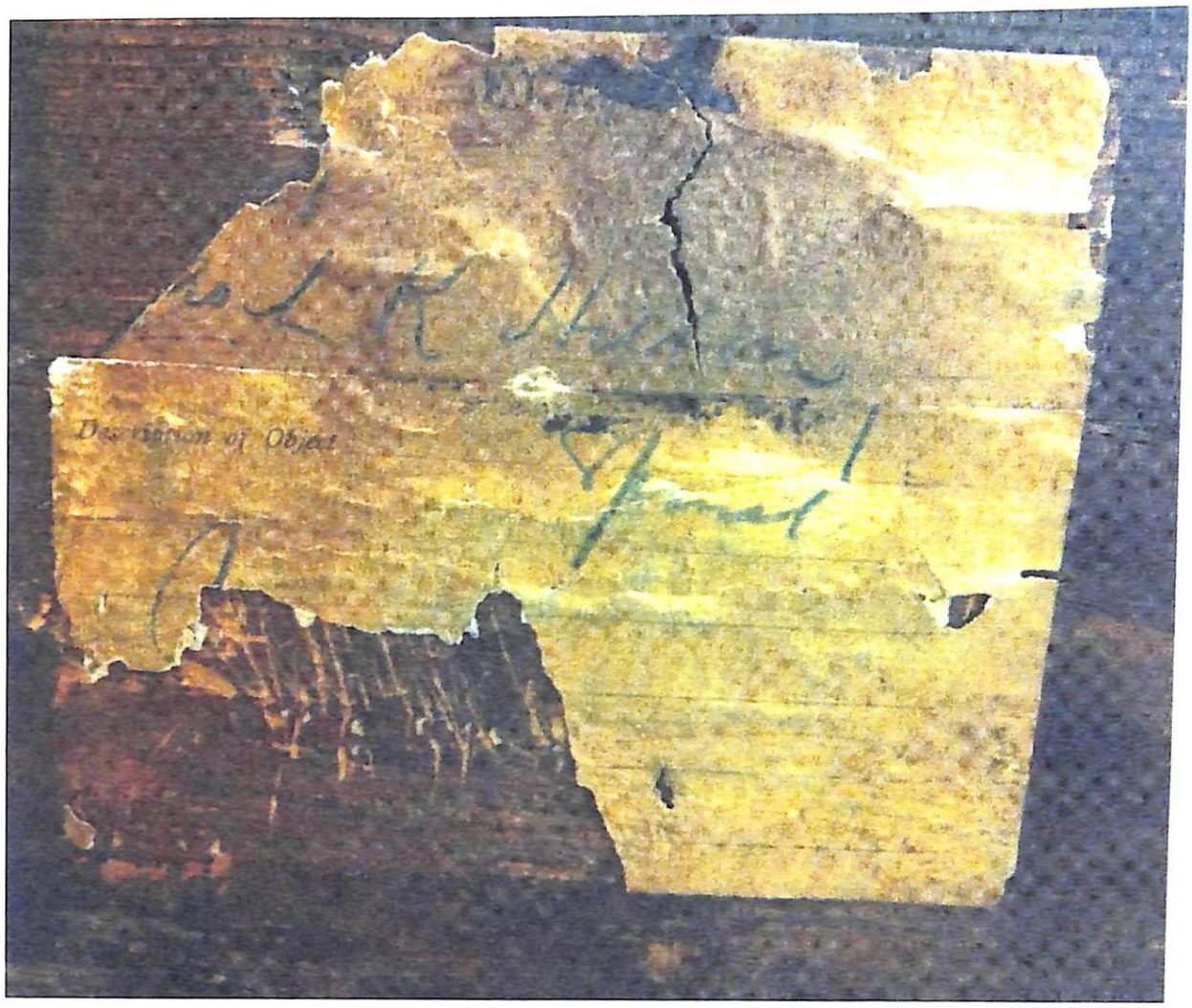


Figure 126. The Rev'd. L K Hilton's name on this shipping-label fragment attached to the treble end of the spine confirms this is the Haward spinet displayed at the exhibition held in Vienna in 1892. It shows that this splendid spinet was the one chosen to symbolize England's organological past. Earlier, like **16XX**, it had been shown at the 1885 London Inventions Exhibition. Note the coniferous wood spine. Not all Haward spines were hardwood.

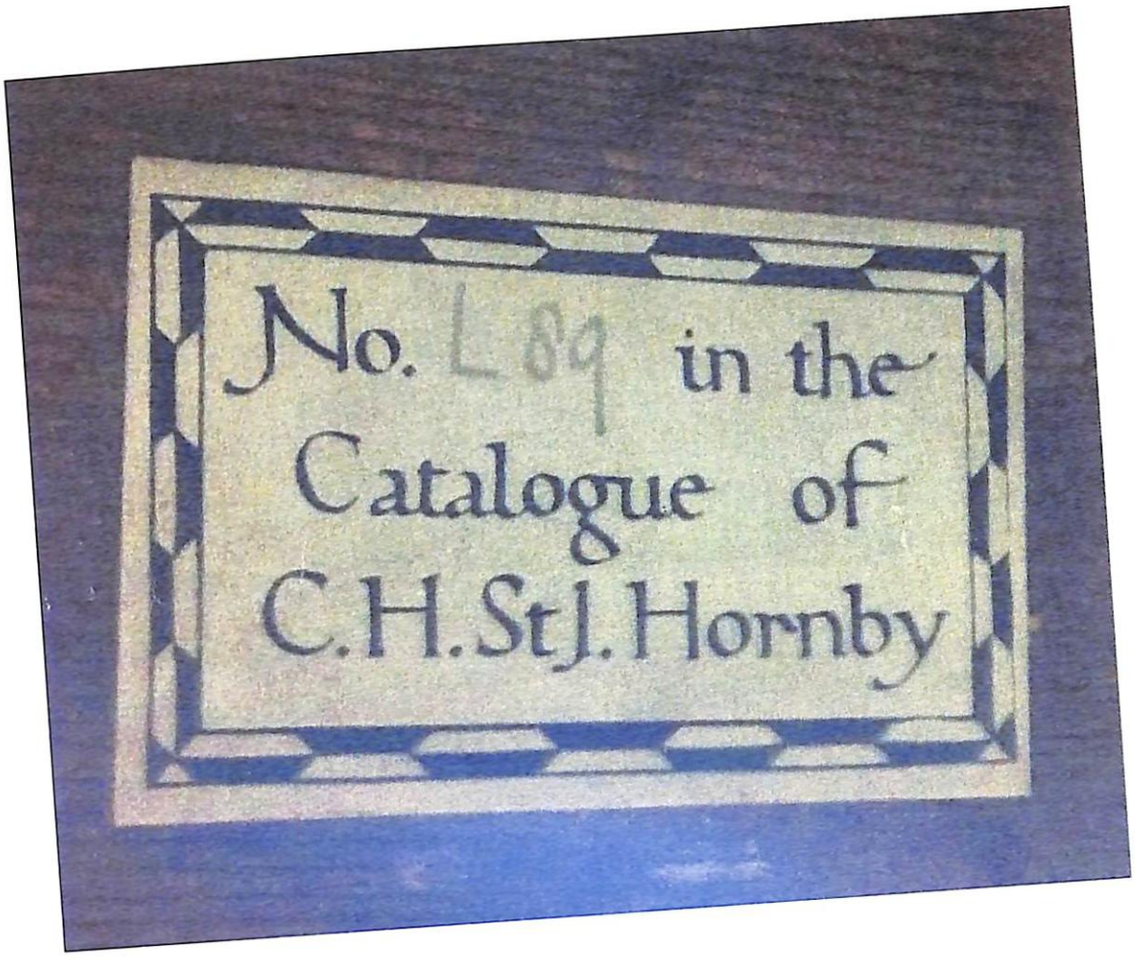


Figure 127. This label on the bottom board below the keyboard shows that Chas Henry St John Hornby was probably this spinet's next owner. The tag's border and lettering are believed to be his design.

1687

Figure 128. Each of the Haward spinets makes at least one major contribution to our understanding of the collection of six. The primary importance of this highly-restored spinet is that it authenticates so many late features of the **c.1685** Haward that have been questioned and assigns an early, exact date to them. If this spinet had been undated and Chas Haward had lived till c.1710 (he died in 1689), we might reasonably believe it had been made a generation later. It resembles a c.1710 Keene in so many ways. In this picture, note the beautiful, book-matched faceboard veneer straddling the marquetry plaque. Also, the boxwood stringing within the case. Also, the mitred corner between the RH face and the bentside. Also, the virginal-like jackrail name, keeping the faceboard clear of lettering.

Figure 129. Before it was restored, probably in the late 19thC, this spinet had evidently been gutted, like the 1622 Knole harpsichord, and for the same reason: too attractive to discard, yet unplayable – it could still serve as a storage place for papers, if eviscerated! While the keyboard and the LH jackrail support are original, everything else pictured here has been replaced. It is reported that even the wrestplank was replaced. I question this, for its removal and replacement would have required a dismantling of the case. More likely, it was redrilled (as the **1689** had been) and non-Haward, staggered pin-holes were substituted. The curved bridge, intelligently laid out, is likewise a non-Haward design; also, the geometrically-shaped rose. The long, straight, one-piece nut is conjectural. Note that as with **c.1685**, the surviving 53-key keyboard extends to d3 and the low D# is split.

Figure 130. Despite the later reinforcement boards, these bottom boards appear not to have been removed and reattached. Given the access to the inside of this spinet from the top, there was probably never a need for their removal.

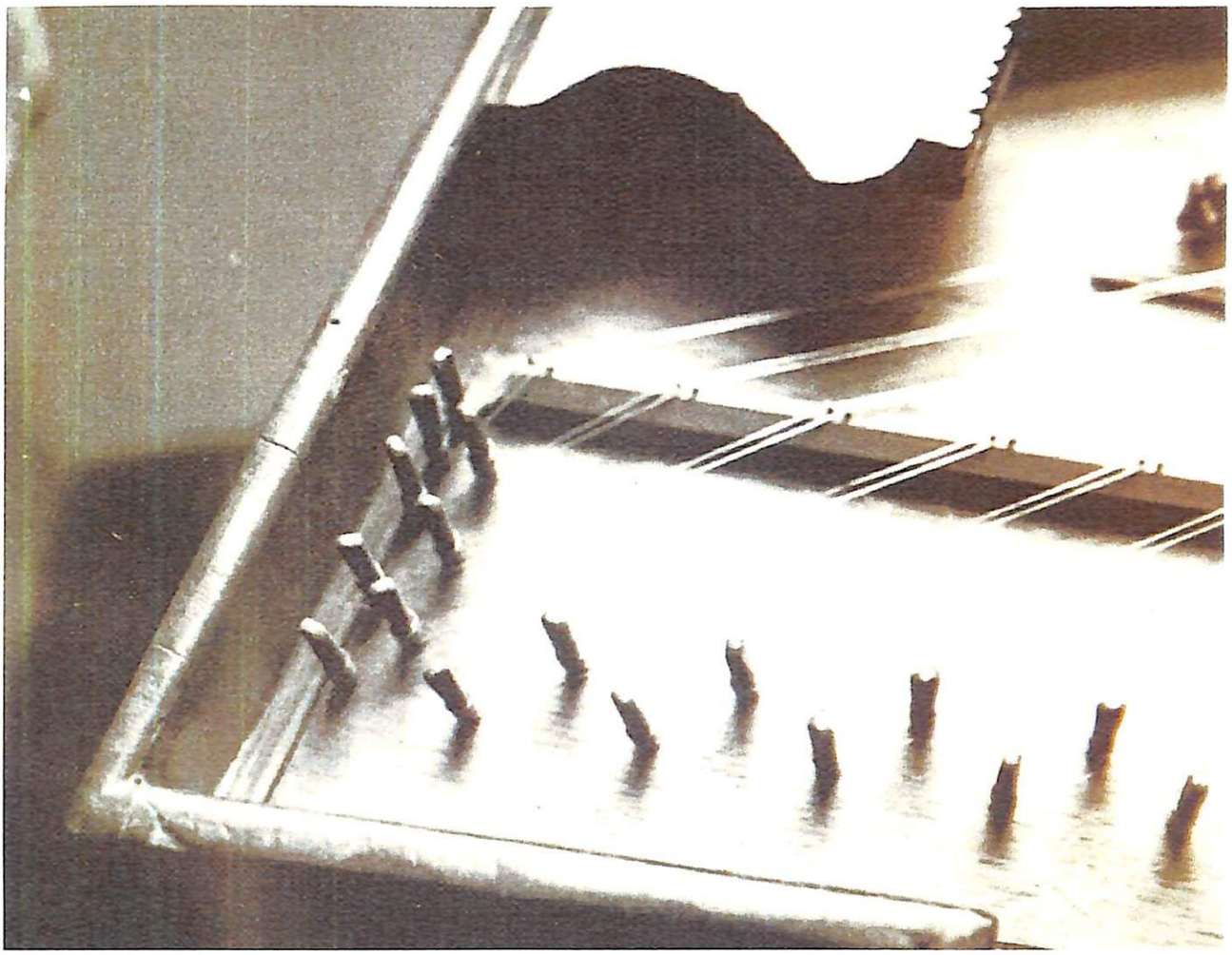


Figure 131. This sensible arrangement of the bottom eight wrest pins is unlikely to be original. Note the separate 'soundboard' veneer on the wrestplank with grain parallel to the keyboard. By separating the soundboard from its extension over the wrestplank, the restorer has intelligently simplified its eventual future removal. Note, also, the elevated, wooden upper register for the jacks, the broad, decorative jack rail support, which has the same shape as **c.1685**'s, and the rounded case moulding, probably of rosewood, which appears to be identical, as well. In this spinet's descriptive material, rosewood is not mentioned as one of the woods found, but in many ways, including wood identification, the notes I have seen have proven to be less than helpful.

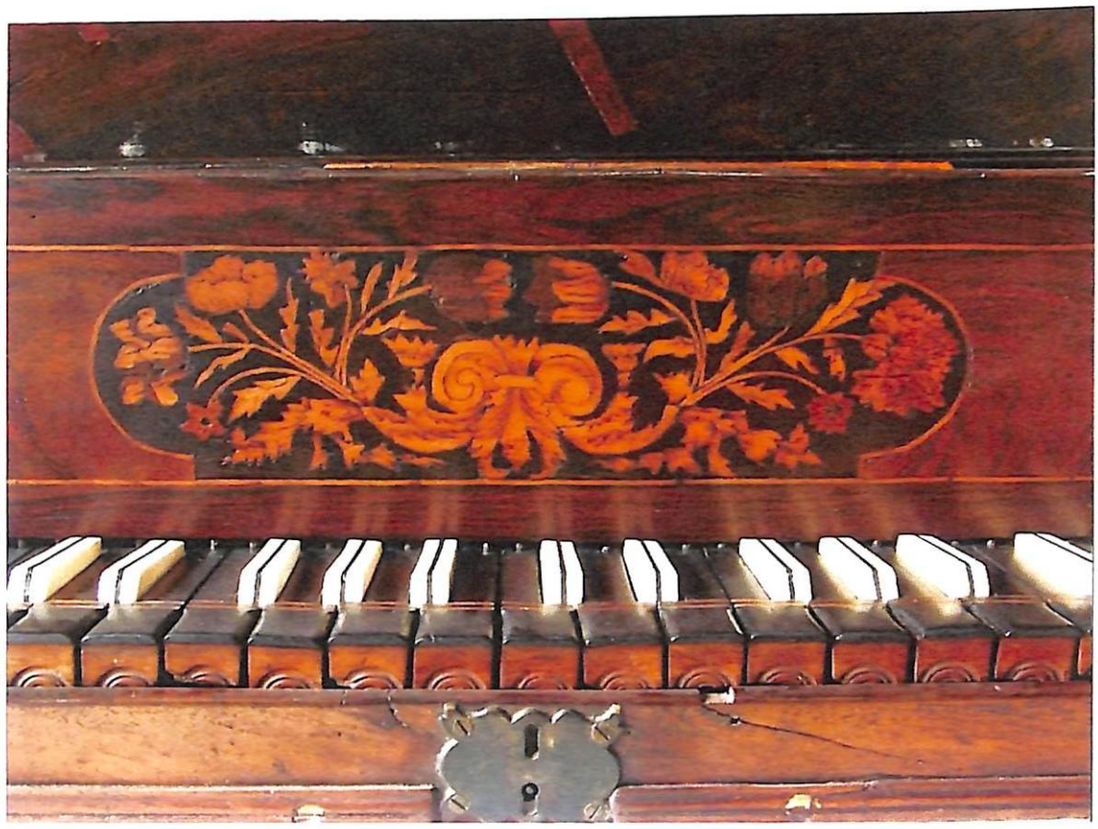


Figure 132. Note the resemblance of this marquetry plaque to that on the Keene & Blunt spinet made, probably, about 15 years later. In common with the marquetry panels on **c.1685** and on William & Mary-period long-case clocks, this panel is framed in Palladian arches or astragals at the sides. The panels were obviously purchased items. Notice the semi-circular key fronts made of wood. Because of the longer ebony overhang required, they cannot have been made for replaced parchment fronts. Notice, too, the sawed, unfinished ebony key fronts, the brass lock plate of a newer design, but the cyma-moulded bottom moulding - a shape that had been used earlier by Haward.

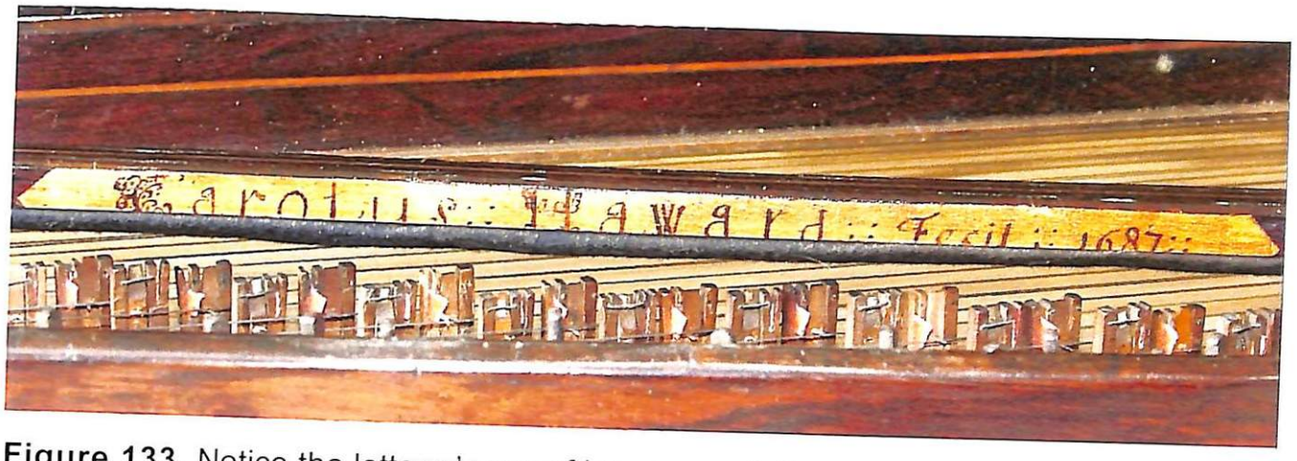


Figure 133. Notice the letterer's use of lower-case letters, raised almost to the height of his capital 'C' and 'H'. As on the earlier boards, the 'ecit' in 'fecit' is half-height, but the droll candle for 'i' is now gone.

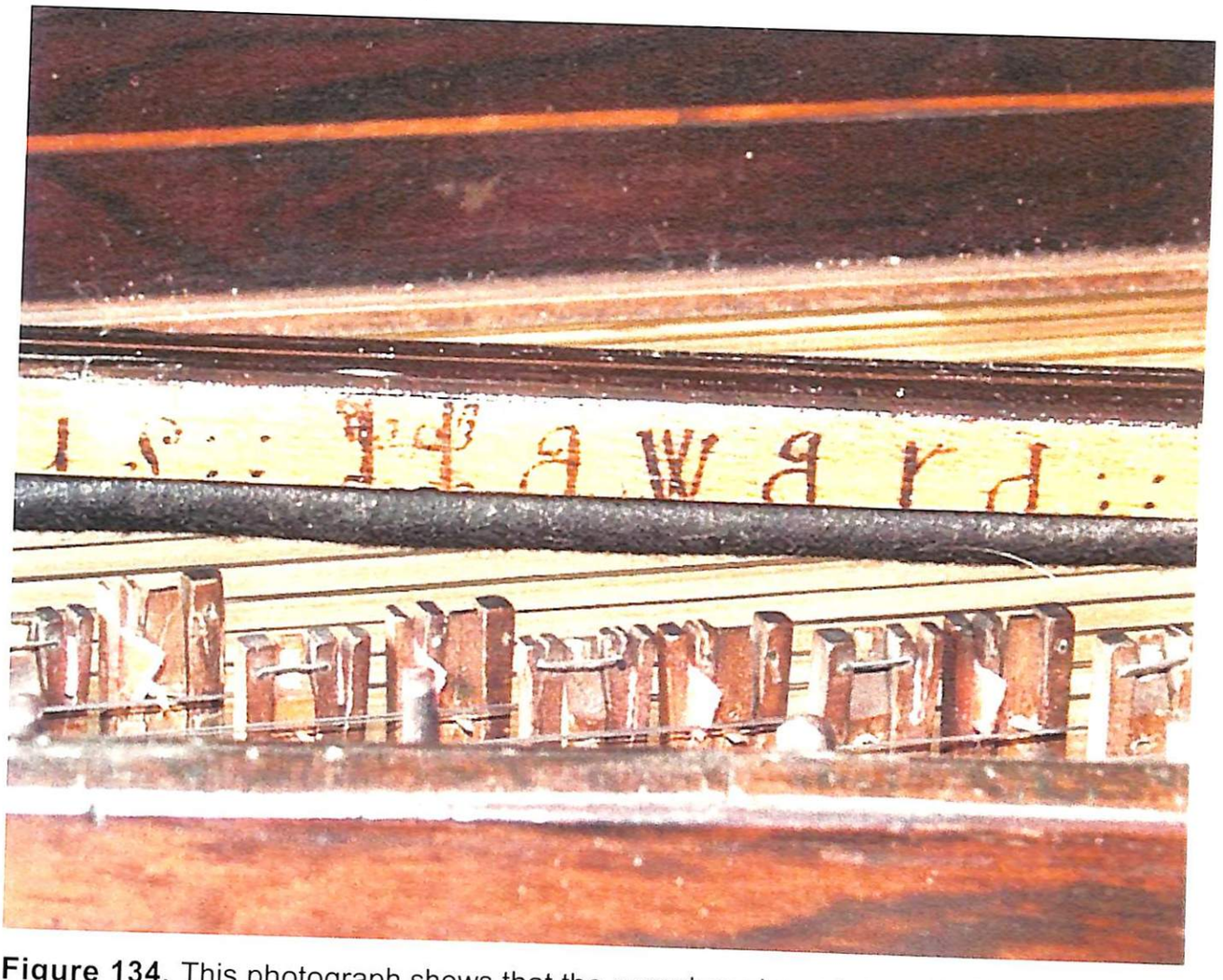


Figure 134. This photograph shows that the nameboard was lettered with brown ink. Notice the replacement jacks with normal-width damper slots, square-tipped tongues, and staples.

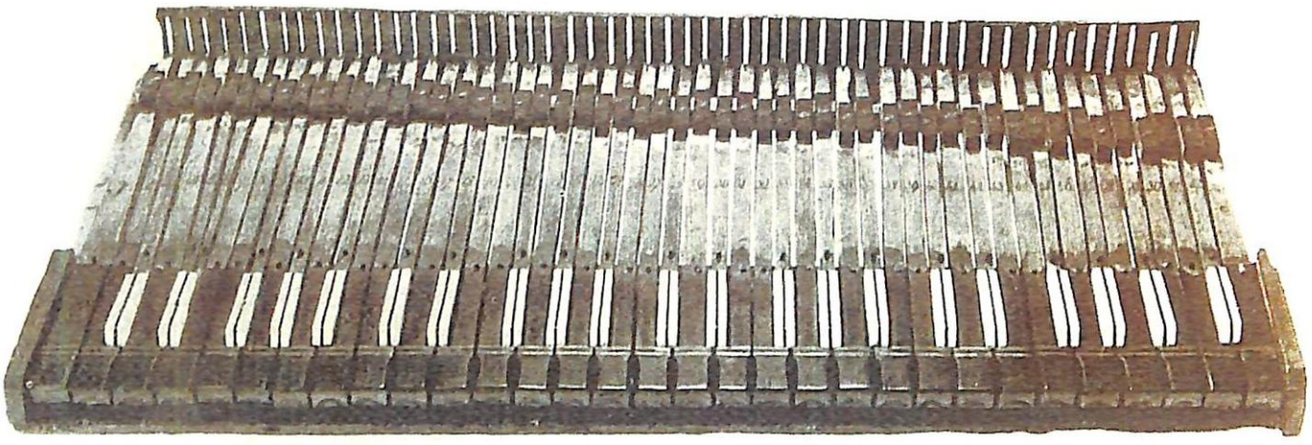


Figure 135. Notice that the outer edges of the two terminal keys is straight, but both are tapered to accommodate a slightly-swelled lever assembly with its added D# key. Chas Haward has numbered these levers on their tops in the usual manner.

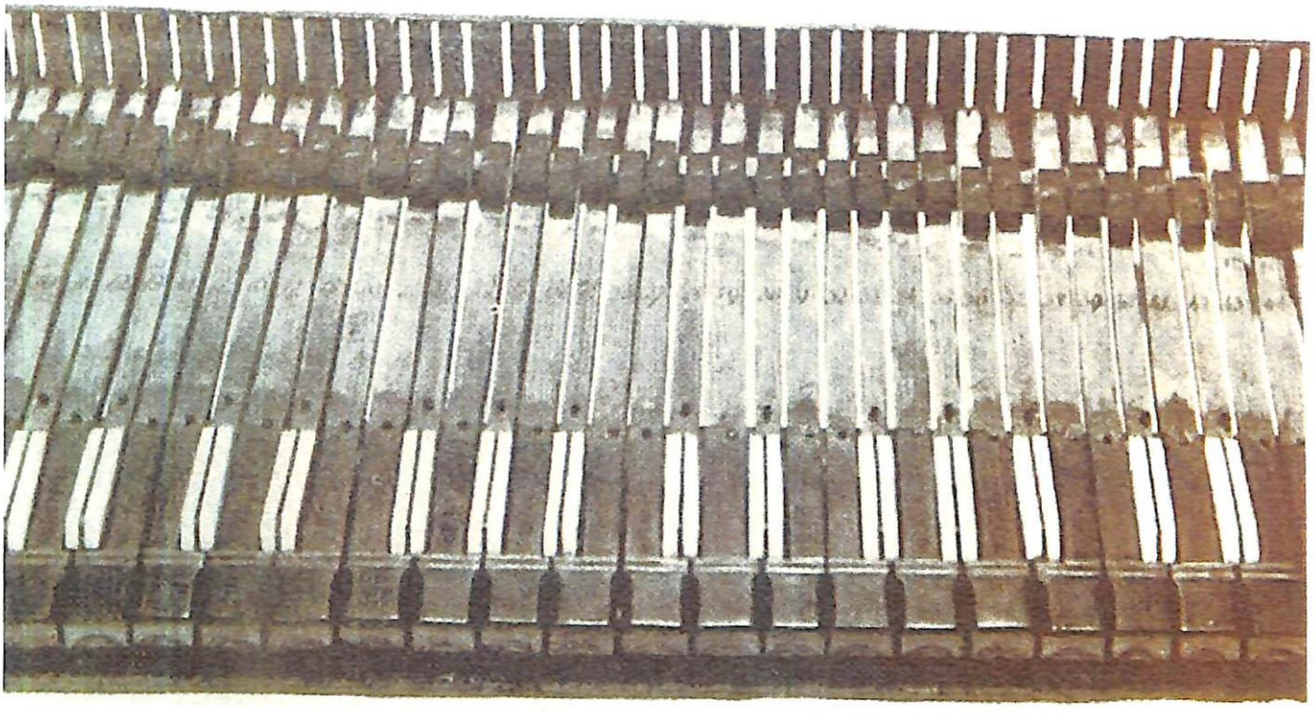


Figure 136. Despite the apparent absence of horizontal scribed lines, this spinet's pivot pins seem to be commendably straight. Note the front rail and the absence of a rack over-rail. This rack looks particularly thin. Although the rack's tongue slots appear to be quite evenly spaced and the keys appear to be so as well, notice the crude lever cutting at their distal ends.

1689

Figure 137. When this spinet was discovered recently with an apparent 1689 date, some believed it must have been a misreading of 1681, or else it had received a dating-upgrading by a venal dealer. **1689** has to post-date Haward's two more progressive spinets: **1687** and **c.1685**; yet, in some ways it seems to be one of his earliest. It is certainly the most primitive of the six. This spinet has been measured and analyzed in depth. Miles Hellon has made a comprehensive full-sized drawing of it that has been used to make at least two replicas and John Koster has taken very detailed photographs of it - many copied here. It seems clear that it is, indeed, a very early Haward spinet that was then rebuilt by the maker in the last year of his life. It has a number of late characteristics that only he could have been responsible for.

Figure 138. Except on the lockboard, the entire case shows very prominent cross-grain plane marks. Notice the nail heads on the left of the LH face and the end-grain of the bentside on the right. The trestle, stylistically correct, is probably modern, but made, in part, with old wood. The colour and the finish do not tie it to the case. The stretcher and the top are too rudimentary to go with those shiny, sophisticated legs, and there are no mortise & tenon securing pegs expected in period work. Note the absence of a lock and the lack of a lower moulding, exposing the nails that secure the sides to the bottom boards.

Figure 139. Note the three-board top. As on **16XX**, each board was planed separately before being glued together. This planing has been confused with figured walnut - presumably because of its resemblance to the rippling on early American tiger maple. No walnut has such rippling.

Figure 140. Marks for the three original hinges (now replaced with 19thC or 20thC butt hinges) can be seen. The early board at the top of the trestle must have received some sort of glued attachment to the rear legs. Note that the lids on Haward's early spinets are flush with the case sides and have no overhanging mouldings.

Figure 141. Alone of the Haward spinets, this bridge has a mitre at the end. This mitre, plus the extreme bass-string-to-spine angle, allows for a slightly longer string in the bottom octave at the expense of a more optimal bridge placement farther away from the bentside case liner. The keyboard of 51 notes has a split D#, in common with **1687** and **c.1685**; but in common only with **16XX**, it terminates in c3. Note the elaborate corbel-shaped key blocks - unique to this Haward and the straight, unmitred nut like that on **c.1685**. Both of these traits could reflect a late-modification.

Figure 142. Close inspection of the lettering-remains on **1689**'s faceboard shows that the inscription was painted by the same artist responsible for the jack rail calligraphy on **1687** and **c.1685**. It is interesting that an expected and near-universal "Londini" appears on no Howard spinets. Note the key fronts - largely trapezoidal, but variable in shape.

Figure 143. The "1720", located just forward of middle-c has generally been regarded as a restoration date - penned 31 years after the spinet was finished. It was done with the same black ink as the wrest pins' identifying letters.

Figure 144. Note the very prominent cross-grain plane marks. Also, the early lid, ending at the case sides. Also, the absence of a lower moulding. Also, the crisp cutting of the modern trestle top.

Figure 145. Since the LH faceboard edge is visible from the side in this butt joint, the nail-heads face the front.

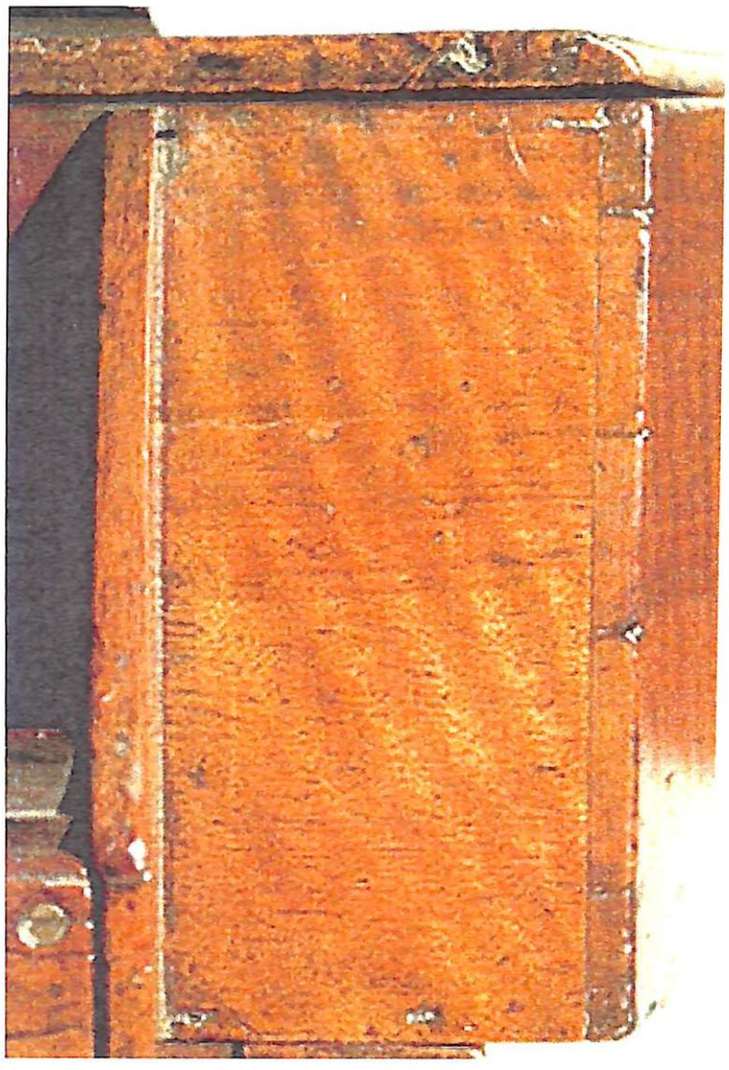


Figure 146. Here, the edge of the bentside faces front, leaving the nail heads visible from the RH side.

Figure 147. Before the present butt-hinges were installed, this original strap hinge appears to have been relocated. Note the surface damage caused by a pry-bar used to remove the nailed hinge tail. Also, note the spine wood - probably cedar.

Figure 148. On the right-hand side, the edge of **1689**'s bentside faces the front; at the rear, it also faces the back. The plugs, here, probably cover later screws used to secure the liner to the spine. The wedge at the bottom is a restoration repair.

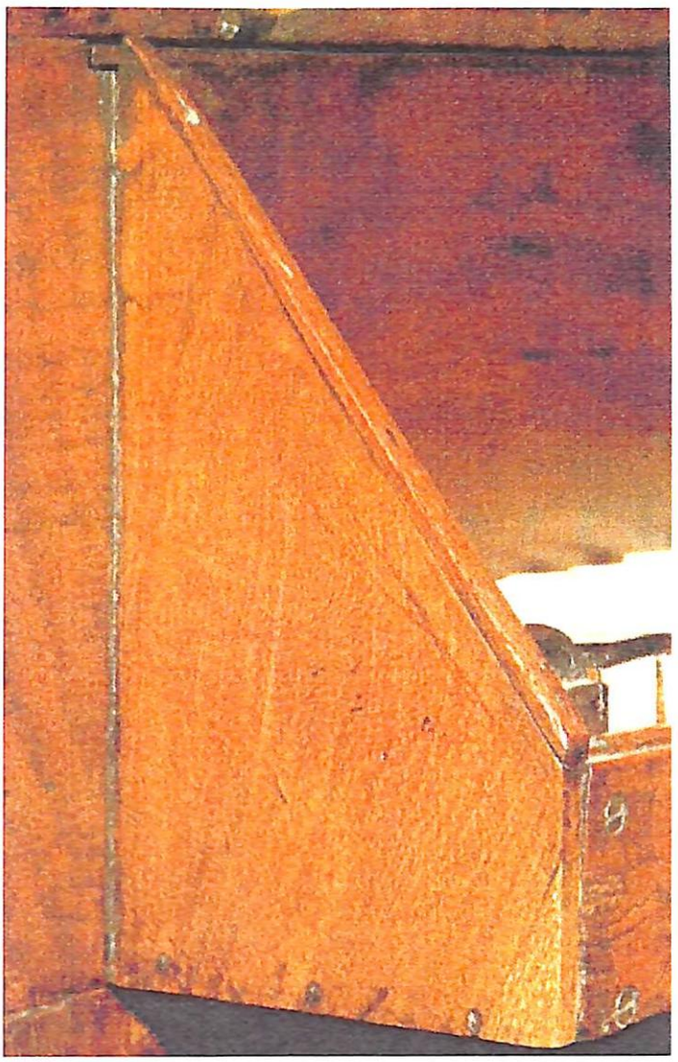


Figure 149. Notice the rounded cap moulding over this diagonal - a late Haward characteristic.

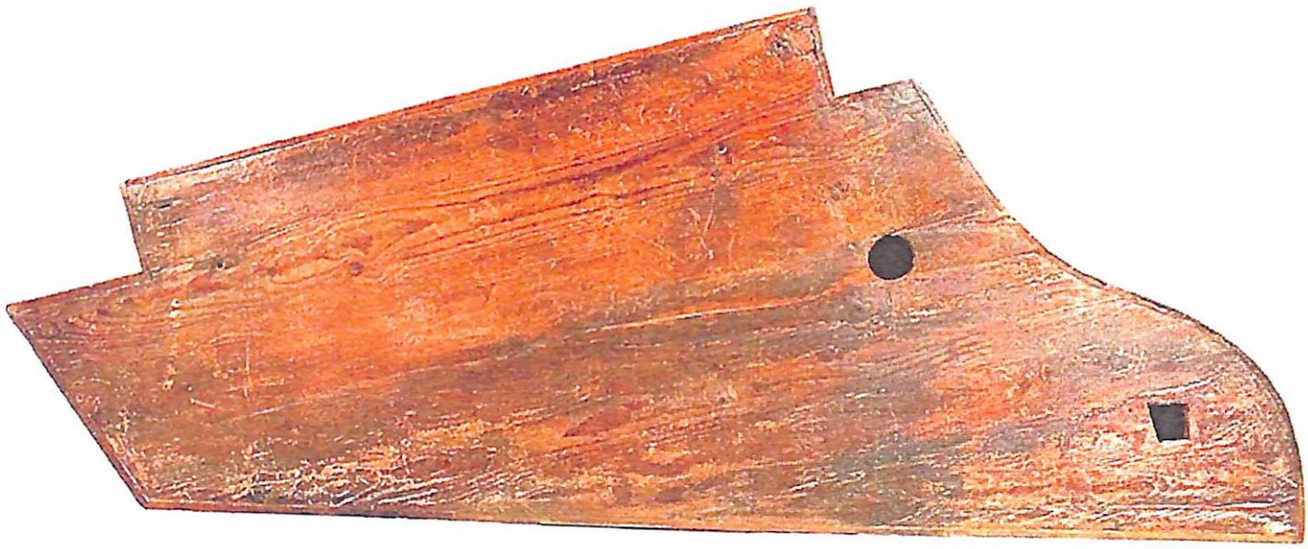


Figure 150. Sometime in the past, these two openings allowed a repairman to gain access to the case interior without the need to remove the soundboard.

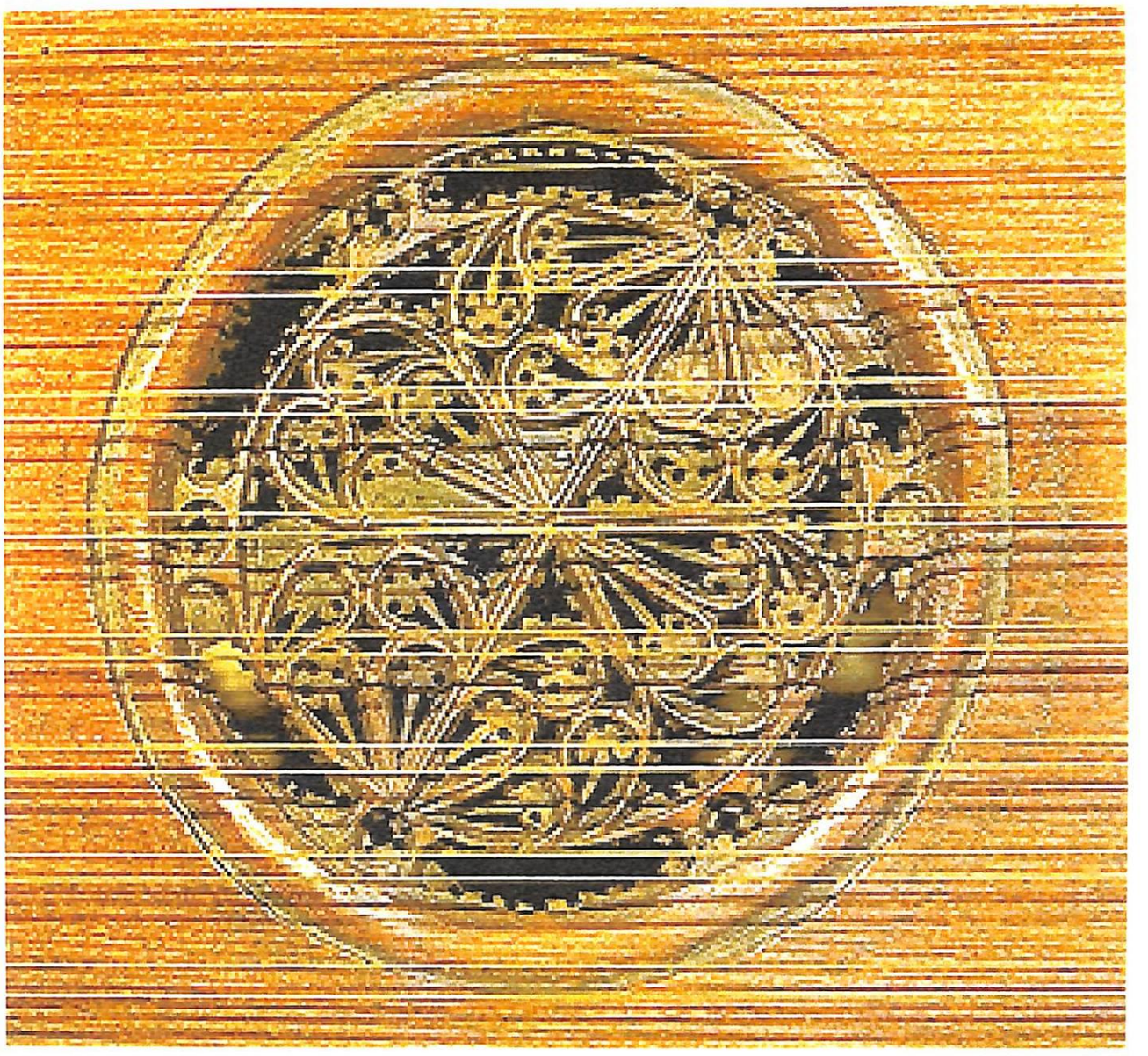


Figure 151. Presumably, dirt or stain has given this rose a single, dark colour: the rose is identical to the one in **1684.** Since the same rolled edge is also found on the **c.1685** soundboard, it must be a late Haward characteristic. Except for their roses, both soundboards are, otherwise, undecorated.

Figure 152. For some reason, the irregularity of Chas Haward's key cutting is more pronounced at the rear than at the front. This is surprising, for his saw-cuts should have begun at the back and come forward. The particularly crude cutting of the top six levers here is reflected in the spacing of the rack's slitted openings: these levers started out crooked; they did not become warped later.

Figure 153. In contrast to this instrument's treble levers, its bass levers have been more accurately cut: this picture shows Haward's single D# key and lever division. Miles Hellon has mentioned (PC) there is a second set of holes drilled in the wrestplank, covered by the soundboard-extension. This points to either a mis-drilling or an earlier location of the pins. This last could be understandable if the keyboard had been re-constructed to accommodate the extra bass key. But the swelling in the keyboard sides shows it was made for the extra key, and I understand the hole count was unchanged. Miles Hellon has located the second set of holes in his drawing. Since these holes appear only on the wrestplank, the soundboard and cover must have been replaced in 1689. Because of Haward's early, simple key fronts, the style found on **16XX,** the keyboard assembly must be early. But the original split D# suggests an initial date close to the mid-1800s. Supporting this conclusion, note the consistent patination on all the bass key levers. Also, note the pivot-pin holes, barely larger than the pins, themselves. If the pins had been 'rocked' after drilling in order to allow for pivotting, the circular portion must lie in the middle of each key lever - not the bottom. This should result in scrubbing against the pivot felt, however.

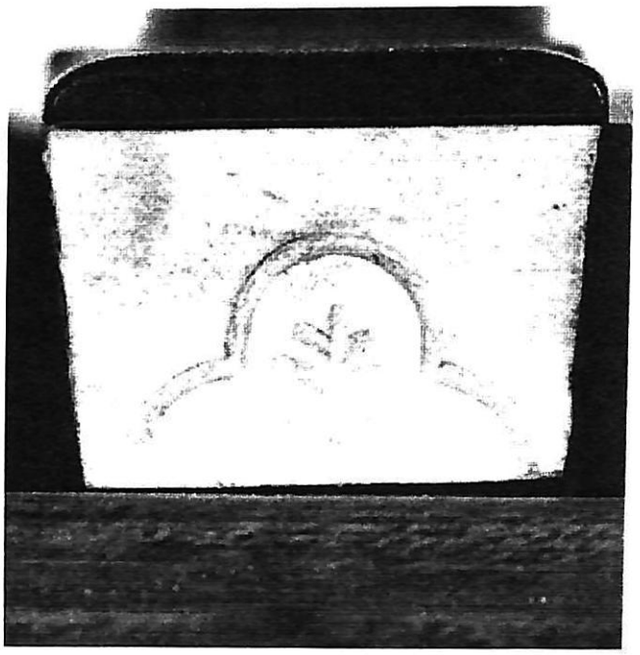


Figure 154. These simple, early key fronts are identical to those on **16XX.**

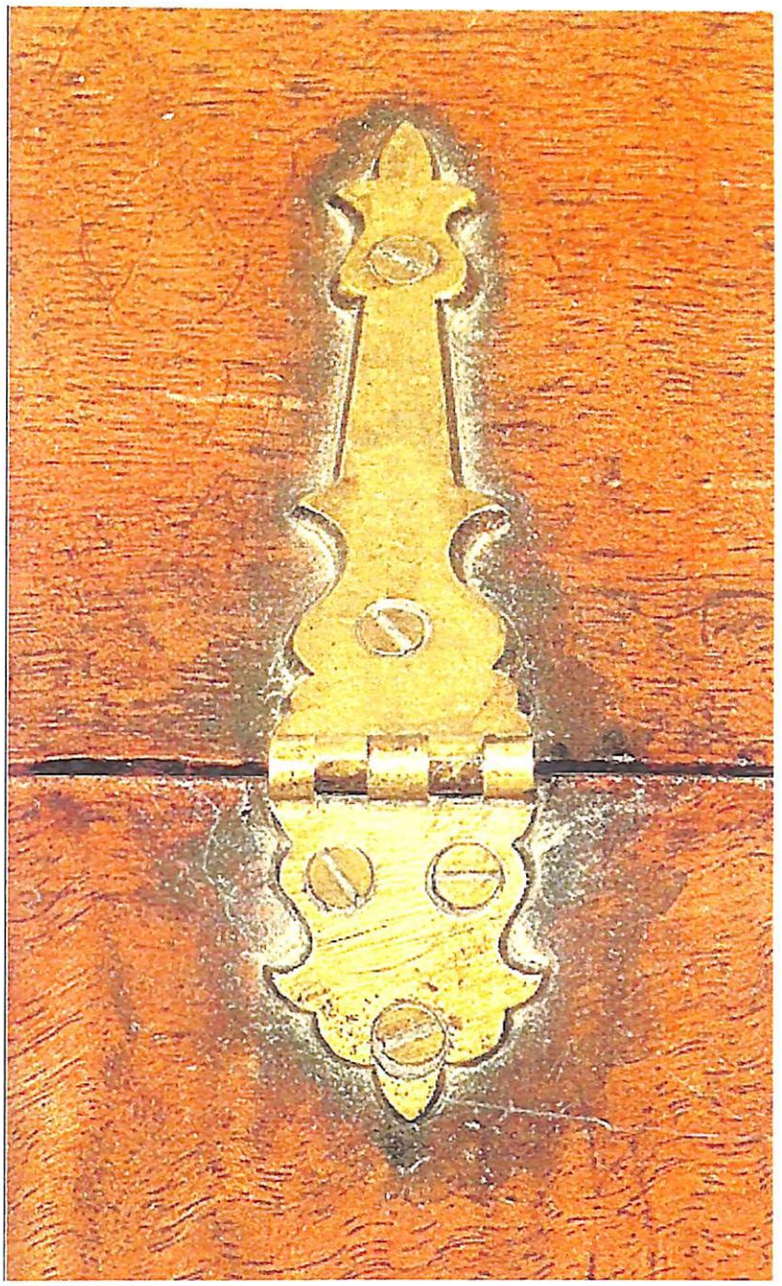


Figure 155. Although the brass attachment screws in this picture are late 19thC, these keyboard cover hinges appear to be original. Stylistically, they pre-date the pierced hinges on **1687** and **c.1685**. Note the file marks. These may be examples of the first brass spinet hinge design.

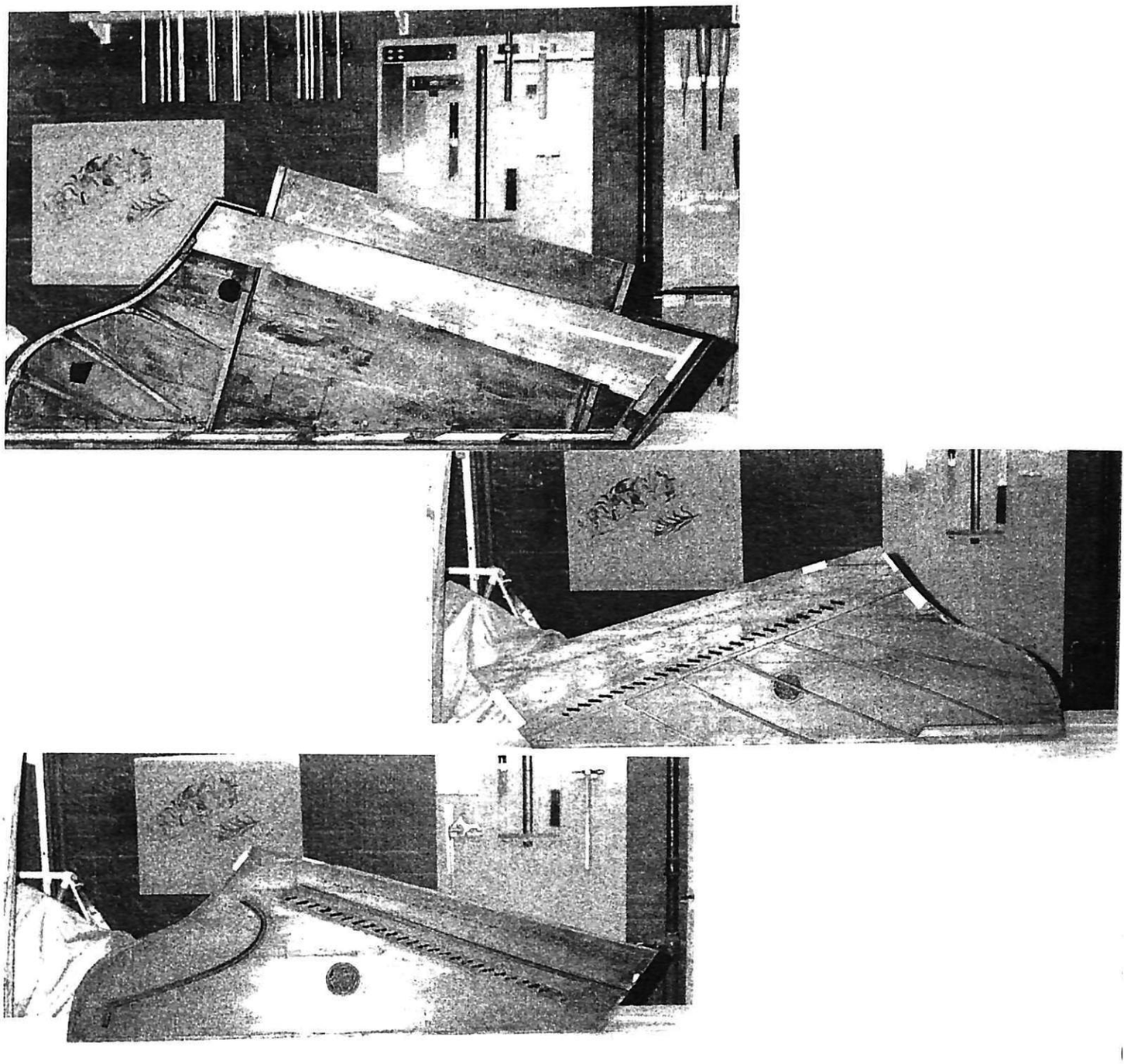
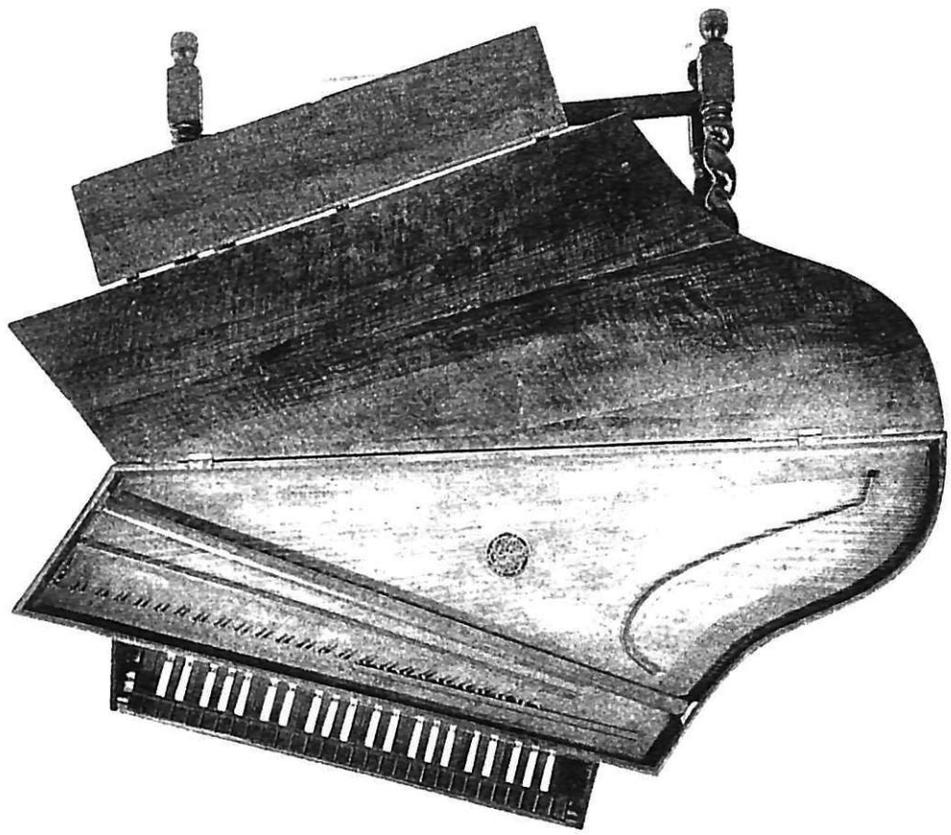


Figure 156. These four valuable photographs were among the papers I was given when I purchased **16XX**. I learned later they were taken in the 1970s when **1689** was in Miles Hellon's shop undergoing a restoration for its owner, Tony Bingham. These pictures give us an understanding of the construction of this as well as all Hawards, and perhaps most spinets made before elevated cross-bracing. The photographs show us how the early builder, starting with a bottom board, would have assembled his cases. From a builder's point of view, it was certainly logical - even to his gluing down of a giant soundboard, covering the entire interior as a final step. But from a

restorer's perspective, any internal repair would require either the removal of the soundboard, including the portion over the wrestplank or the creation of a hole in the bottom. This construction method is discussed elsewhere. Note the picture of the back of the soundboard showing what may be a relatively common early ribbing pattern with all ribs parallel to the bridge. While **1684** is believed to have an added rib to the right of the bridge, there is one here that appears to be original. There is none in that location on **16XX.**



APPENDIX B

SIX HAWARD SPINETS – DATA AND DESCRIPTIVE

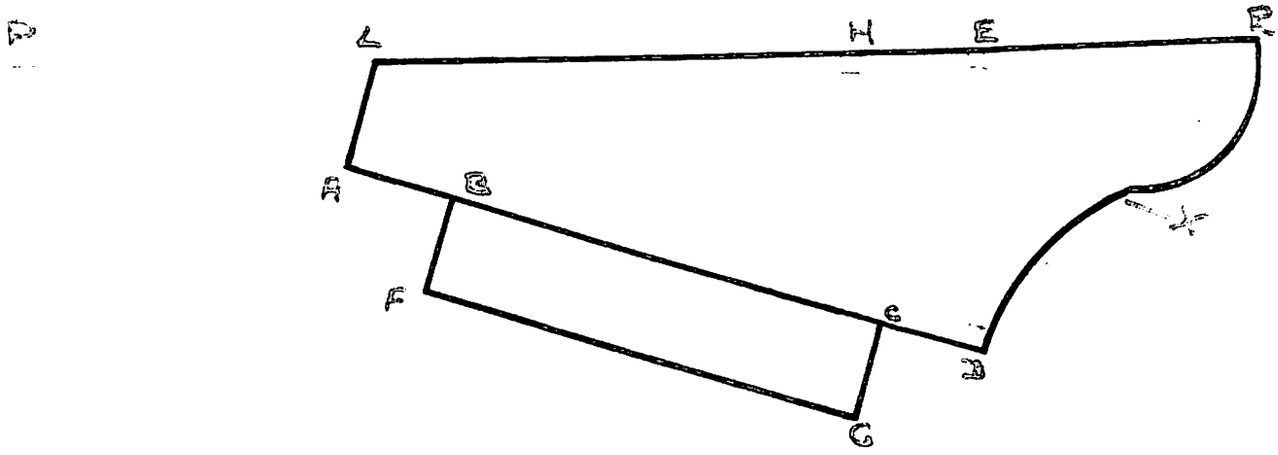
WHAT IT IS AND WHY

This appendix organizes all known factual measurement data and descriptive observations from the six extant Haward spinets onto 14 charts. By placing information on these spinets side-by-side, we can highlight their similarities and their differences. The data sheets are an attempt to pull together all meaningful quantifiable material that is available. The descriptive sheets are a link to the photographic evidence found in Appendix A. Together, these two appendixes are essential conformation of what I am writing elsewhere.

DATA GATHERING

Gathering relevant data for each of the six has not always been easy and the amount of information found differs from spinet to spinet. Owning spinet **16XX,** I have been able to return to it many times to remeasure and reconsider what I had found before. This is why it is so thoroughly documented. Dr Orum Stringer contacted Mellerstain House in Berwickshire in 2014 and was given permission to photograph and measure **1683.** (His email is copied elsewhere). Four or more people over the years have measured and written about **1684** at the Metropolitan Museum, and thanks to Suzanna Caldiera, I was given copies of the Metropolitan Museum's written material. She also re-checked measurements of this spinet, when, with varied existing data, it failed to close on any. She took the photographs of Charles Haward's sole-surviving jacks found in it. These are copied in Appendix A. The Musical Instrument Museum at Leipzig University sold me a copy of their descriptive write-up for **1687.** My sister, Dr A M W Bellows, and I worked together on an English translation. This write-up corrects and adds to the descriptive information found in Morris (1986:16) and Martin (2003:237). Like the 1622 Knole harpsichord, this spinet had been gutted, but unlike the harpsichord, speculatively rebuilt. Consequently, much of the data supplied was irrelevant. The Cummer Museum in Jacksonville, Florida was willing to remove **c.1685** from storage and allow me to photograph and measure it. Miles Hellon sent me detailed drawings of **1689** he had made that had been used to make at least two replicas of this spinet. By blowing them up to half and to full scale, I was able to take more accurate measurements than I could have if I had attempted to measure the spinet itself.

With all spinets I made half and full-scale top-down drawings that were essential in ensuring that every case would close using my combined angles and lengths.



This drawing is the guide to all cited case lengths and angles. On the drawing there are 12 points – eight real and four imaginary. Some of what I refer to as 'imaginary' are important. For example, the discovery of integer and semi-integer inch-lengths on the extended spines of three of the Hawards is, I believe, noteworthy. As only a single actual spine length on these spinets shows even a half-integer spine length, this could suggest that for the Hawards, the extended spines and faces were starting points in their layouts and not the cases, themselves. Equally surprising is the Haward case-size determination apparently based on overall dimensions. On a 'bottom-first' spinet, a pre-cut bottom board should most logically determine the instrument's dimensions – not this board after its sides are nailed on. It could be that the Hawards did use this bottom-board method. But because of bottom-board wood-shrinkage, today this would be difficult if not impossible to conclude.

THE ANGLES

Fortunately, for us today, revolutionary France was unable to sell the world on its decimal clock or its decimal compass. We can still tell time with our pre-Regency duo-decimal (and sexagesimal) clocks and our protractors' circles remain divisible by every digit number except seven.

For years, I found my ability to read a protractor accurately, even with the assistance of a bevel-gauge that Mole has found helpful (2009:389), was disappointing. I solved this problem by making scores of cardboard angle templates that gave me angle-accuracy of +/- 0.5 degrees. I found that by extending the length lines of so many top-down photographs and using these templates, I was able to make precise angle determinations, even though the lengths themselves proved to be less reliable. Mole may have measured the keyboard angle of the 1637 Zenti spinet in a similar way for we differ by only half a degree (2009:327). His "17-1/2 degree" determination is just over the 17-degrees I have measured for several of the Haward spinets.

THE LENGTHS

When communicating with other organologists today, it is necessary to use the metric scale. However, it is equally important to use the maker's ruler when trying to understand his starting points. We are fortunate that the English inch has not varied geographically and has remained

essentially the same for several hundred years. Martin (2003:xiv) has found that a yardstick dated 1659 comes just 0.0866% short of today's 25.4 mm. Here, and elsewhere in this thesis, I have used both measures side-by-side,

For string length measurement, the millimeter, the size of a modern spark plug gap, is a useful interval, and I have found that measurements to +/- 0.5 mm is optimal for string diameters. I have acquired some highly valued but complex early string measurements by Frank Hubbard, all in mixed fractions – down to 1/32-inches. But when Mole claims he is measuring wood length down to half a millimeter (2009:388), I wonder if he is equating super-precision with accuracy. After all, Samuel Johnson is alleged to have said, "Beware of the round number". But any engineer could turn this around to, "Beware of exaggerated accuracy". One could, I suppose, express the National Debt down to the exactness of a penny, but to what end?

A number of people have examined and measured Haward's **1684** at the Metropolitan Museum. Reported spine measurements have been (mm):1370, 1383.5, 1384, 1385, 1391, and 1394. If I had measured this spine, myself, there would be one more length and it would be no more accurate than any of the six I have cited. Some of the problems are: rounded corners, bowed backs, case top and bottom differences, and the ability to stand and accurately measure something several feet long. By working **1684**'s case out to a half-scale drawing and accepting the two angles, 124- and 73-degrees (net, 17-degrees), I was able to make this spinet's case close at 54-5/8-inches (1387 mm). I have learned to trust only my half- and full-scale drawings. In the end the case must close; and if it does, the measurements can be assumed to have the proper degree of precision.

SIX DATA CATAGORIES

WRESTPIN OFFSET

The distance of the wrestpins to the left of the extended key levers varies from spinet to spinet and from treble to bass on the same spinet. Because this offset is confusing, it had to be responsible for broken steel treble strings on two restored spinets, both in museum collections, I examined recently. I have to wonder, though, after turning and getting no change in pitch, why did the tuner just keep turning? After he broke his first string, probably c, the spinet was only marginally playable. Why did he continue breaking more? This inherent spinet flaw has not been addressed before, but it could be part of the explanation for the inexplicably short treble strings on most spinets. They would have been tuned originally by their amateur owners, who could not have been assumed to be using sufficient care at all times.

C2- EQUIVALENT LENGTH – LONGEST STRING

The c2- equivalent length of a spinet's longest string has also not been considered before. This thesis' chapter on string-graphing examines this issue – so critical to spinet top octaves. On a harpsichord, c2 alone is ordinarily a meaningful length. On a spinet, however, c2 alone can be misleading. While a spinet's c2 is often the short string of the long-short pair, it could be long. Either way, above this point, most spinets, unlike harpsichords, will show considerable irregularity because of the acute string angle and the need for uniform jack-clearance across a spinet's sharply-angled bridge placement in the high treble. Before determining whether a particular spinet can handle brass stringing at a chosen pitch, it is crucial to identify its longest c2-equivalent string and calculate its c2-equivalent length in order to avoid a risk of its certain-breakage at that note.

PIVOT POINT

A spinet's pivot point is not its balance point. Where I have data, I show both. I have found that the balance point is typically about ½-inch to ¾-inch behind the pivot point.

LEVER WIDTHS

All Hawards have wide-D's and narrow sharps. Other naturals on most Hawards seem to be inconsistent - even on the same spinet. While I have found those on **16XX** to be precise, those on **1683** and **1684** were reported to be irregular.

KEY SPANS

Although all Hawards have natural pads 7/8-inch wide, their 1, 2, 3, 4, octave widths plus their 5-natural pads seem to differ. I have provided measurements of all of these – not just the 3-octave 'standard measure'. In this thesis I have ordinarily expressed octave widths in inches for single octaves and in millimeters for standard measures.

KEY LEVERS – FRONT-TO-JACK

Since the distance of the key lever pivot-point to the jack is, I believe, more important than it is to the lever's end, I have substituted this length and length-percentage.

Scantlings

	16XX	1683	1684	1689	1687	c1685
Spine	12.7 mm		12.7 mm	11.1 mm	12.7 mm	
LH Tail	9.5 mm		12.7 mm	11.1 mm	9.5 mm	
Bent Side	9.5 mm		12.7 mm	9.5 mm	9.5 mm	
Face Board	9.5 mm			9.5 mm	9.5 mm	
Lid	4.8 – 6.4 mm				9.5 mm	
Flap	6.4 – 7.9 mm			9.5 mm		
LH Face	9.5 mm			9.5 mm		
RH Face	11.1 mm			11.1 mm		
Left Keyboard Side	9.5 mm		9.5 mm	9.5 mm		
Right Keyboard Side	11.1 mm		9.5 mm	9.5 mm		
Wrestplank	47.6 mm		47.6 mm	47.6 mm		44.5 mm

Scantlings

	16XX	1683	1684	1689	1687	c1685
Spine	1/2 in		1/2 in	7/16 in	1/2 in	
LH Tail	3/8 in		1/2 in	7/16 in	3/8 in	
Bent Side	3/8 in		1/2 in	3/8 in	3/8 in	
Face Board	3/8 in			3/8 in	3/8 in	
Lid	3/16 – ¼ in				3/8 in	
Flap	¼ – 5/16 in			3/8 in		
LH Face	3/8 in			3/8 in		
RH Face	7/16 in			7/16 in		
Left Keyboard Side	3/8 in		3/8 in	3/8 in		
Right Keyboard Side	7/16 in		3/8 in	3/8 in		
Wrestplank	1 7/8 in		1 7/8 in	1 7/8		1 3/4 in

Case Lengths

		16XX	1683	1684	1689	1687	c1685
P-L	Spine Extension	756 mm	784 mm	781 mm	911 mm	591 mm	565 mm
P-R	Extended Spine	2108 mm	2134 mm	2165 mm	2194 mm	2045 mm	2149 mm
P-D	Extended Face	1676 mm	1686 mm	1727 mm	1797 mm	1562 mm	1581 mm
A-R	Maximum Length	1483 mm	1524 mm	1534 mm	1461 mm	1575 mm	1670 mm
D-R	RH Diagonal	699 mm	705 mm	721 mm	679 mm	800 mm	848 mm
G-H	Maximum Width	559 mm	552 mm	581 mm	559 mm	619 mm	603 mm
D-E	Case Width	486 mm	486 mm	508 mm	495 mm	533 mm	527 mm
E-R	RH of Spine	495 mm	521 mm	514 mm	470 mm	597 mm	660 mm
L-R	Spine	1353 mm	1353 mm	1387 mm	1283 mm	1454 mm	1584 mm
A-L	LH Tail	229 mm	248 mm	238 mm	270 mm	210 mm	187 mm
A-D	Face	1016 mm	1041 mm	1054 mm	1019 mm	1054 mm	1060 mm
A-B	LH Face	159 mm	137 mm	146 mm	159 mm	146 mm	165 mm
C-D	RH Face	95 mm	102 mm	95 mm	92 mm	92 mm	105 mm
D-X	Concave Length	349 mm		311 mm	267 mm	349 mm	
R-X	Convex Length	349 mm		410 mm	413 mm	451 mm	
Ratio:	D-X / RH Diagonal	50%		43%	39%	44%	
I	Concave Depth	38 mm	19 mm	35 mm	16 mm	44 mm	
O	Convex Projection	76 mm	102 mm	97 mm	79 mm	114 mm	
Ratio:	I / O	50%	19%	36%	20%	39%	
B-F	Keyboard Depth Outer	105 mm	102 mm	108 mm		105 mm	105 mm
C-G	Keyboard Depth Inner	92 mm			95 mm		
F-G	Keyboard Width Outer	762 mm	803 mm	813 mm	768 mm	803 mm	791 mm
B-C	Keyboard Width Inner	737 mm	778 mm		749 mm	768 mm	762 mm
Height:	Case without Lid	178 mm		191 mm	187 mm	183 mm	183 mm
Ratio:	Spine / Max. Length	91%	89%	90%	88%	92%	95%

Case Lengths

		16XX	1683	1684	1689	1687	c1685
P-L	Spine Extension	29 3/4 in	30 7/8 in	30 3/4 in	35 7/8 in	23 1/4 in	22 1/4 in
P-R	Extended Spine	83 in	84 in	85 1/4 in	86 3/8 in	80 1/2 in	84 5/8 in
P-D	Extended Face	66 in	66 3/8 in	68 in	70 3/4 in	61 1/2 in	62 1/4 in
A-R	Maximum Length	58 3/8 in	60 in	60 3/8 in	57 1/2 in	62 in	65 3/4 in
D-R	RH Diagonal	27 1/2 in	27 3/4 in	28 3/8 in	26 3/4 in	31 1/2 in	33 3/8 in
G-H	Maximum Width	22 in	21 3/4 in	22 7/8 in	22 in	24 3/8 in	23 3/4 in
D-E	Case Width	19 1/8 in	19 1/8 in	20 in	19 1/2 in	21 in	20 3/4 in
E-R	RH of Spine	19 1/2 in	20 1/2 in	20 1/4 in	18 1/2 in	23 1/2 in	26 in
L-R	Spine	53 1/4 in	53 1/4 in	54 5/8 in	50 1/2 in	57 1/4 in	62 3/8 in
A-L	LH Tail	9 in	9 3/4 in	9 3/8 in	10 5/8 in	8 1/4 in	7 3/8 in
A-D	Face	40 in	41 in	41 1/2 in	40 1/8 in	41 1/2 in	41 3/4 in
A-B	LH Face	6 1/4 in	5 3/8 in	5 3/4 in	6 1/4 in	5 3/4 in	6 1/2 in
C-D	RH Face	3 3/4 in	4 in	3 3/4 in	3 5/8 in	3 5/8 in	4 1/8 in
D-X	Concave Length	13 3/4 in		12 1/4 in	10 1/2 in	13 3/4 in	
R-X	Convex Length	13 3/4 in		16 1/8 in	16 1/4 in	17 3/4 in	
Ratio:	D-X / RH Diagonal	50%		43%	39%	44%	
I	Concave Depth	1 1/2 in	3/4 in	1 3/8 in	5/8 in	1 3/4 in	
O	Convex Projection	3 in	4 in	3 13/16 in	3 1/8 in	4 1/2 in	
Ratio:	I / O	50%	19%	36%	20%	39%	
B-F	Keyboard Depth Outer	4 1/8 in	4 in	4 1/4 in		4 1/8 in	4 1/8 in
C-G	Keyboard Depth Inner	3 5/8 in			3 3/4 in		
F-G	Keyboard Width Outer	30 in	31 5/8 in	32 in	30 1/4 in	31 5/8 in	31 1/8 in
B-C	Keyboard Width Inner	29 in	30 5/8 in		29 1/2 in	30 1/4 in	30 in
Height:	Case without Lid	7 in		7 1/2 in	7 3/8 in	7 3/16 in	7 3/16 in
Ratio:	Spine / Max. Length	91%	89%	90%	88%	92%	95%

Keys

		16XX	1683	1684	1689	1687	c1685
Key Levers							
Lever Lengths							
Total Length	Bass	305 mm		318 mm	349 mm	314 mm	318 mm
	Middle C	298 mm		305 mm	327 mm	298 mm	298 mm
	Treble	292 mm		292 mm	305 mm	281 mm	283 mm
Front to Jack	Bass	248 mm		235 mm	283 mm		c. 286 mm
	Middle C	241 mm		216 mm	248 mm		
	Treble	222 mm		203 mm	213 mm		216 mm
Front to Pivot	Bass	95 mm		98 mm	114 mm	105 mm	108 mm
	Middle C	98 mm			111 mm		
	Treble	102 mm		98 mm	106 mm	95 mm	98 mm
Ratio: to Pivot / to Jack	Bass	38%		42%	41%		
	Middle C	41%		45%	44%		
	Treble	46%		48%	50%		
Pivot to Balance Point	Bass	21 mm		19 mm			13 mm
	Middle C	16 mm					
	Treble	13 mm					10 mm
Lever Widths							
	D's	16 mm	16 mm	*irregular*	16 +/- mm		16 mm
	C's	14 mm	14 mm		14 +/- mm		14 mm
	A's	14 mm	14 mm		14 +/- mm		13 mm
	B's	13 mm	13 mm		14 +/- mm		13 mm
	G's	13-14 mm	14 mm		14 +/- mm		13-14 mm
	#'s	11 mm	11 mm		11 mm		11 mm
Key Spans							
Total Span		708 mm	733 mm	733 mm	711 mm	727 mm	724 mm
4 Octave	28 keys	660 mm					645 mm
3 Octave	21 keys	495 mm		498 mm	489 mm	492 mm	489 mm
2 Octave	14 keys	330 mm		333 mm			325 mm
1 Octave	7 keys	165 mm		167 mm	162 mm	162 mm	162 mm
C – G	5 keys	114 mm					113-116 mm
Each	1 key	22 mm		22 mm			22 mm
Keys							
Natural Lengths	Fronts	32 mm	31-32 mm	32 mm	32 mm	32 mm	32 mm
	Tails	57 mm	57 mm	60 mm	62 mm		60 mm
Sharp Lengths	Top	51 mm	52 mm	52 mm	48 mm	54 mm	54 mm
	Bottom	56 mm	57 mm	60 mm	56 mm	60 mm	60 mm
Sharp Heights	Proximal	8 mm		10 + mm	10 mm	8 mm	8 mm
	Distal	5 mm		6 mm	8 mm	5 mm	5 mm
Total Key Lengths		89 mm	89 mm	92 mm	94 mm		92 mm

Keys

		16XX	1683	1684	1689	1687	c1685
Key Levers							
Lever Lengths							
Total Length	Bass	12 in		12 1/2 in	13 3/4 in	12 3/8 in	12 1/2 in
	Middle C	11 3/4 in		12 in	12 7/8 in	11 3/4 in	11 3/4 in
	Treble	11 1/2 in		11 1/2 in	12 in	11 1/16 in	11 1/8 in
Front to Jack	Bass	9 3/4 in		9 1/4 in	11 1/8 in		c 11 1/ 4 in
	Middle C	9 1/2 in		8 1/2 in	9 3/4 in		
	Treble	8 3/4 in		8 in	8 3/8 in		8 1/2 in
Front to Pivot	Bass	3 3/4 in		3 7/8 in	4 1/2 in	4 1/8 in	4 1/4 in
	Middle C	3 7/8 in			4 3/8 in		
	Treble	4 in		3 7/8 in	4 3/16 in	3 3/4 in	3 7/8 in
Ratio: to Pivot / to Jack	Bass	38%		42%	41%		
	Middle C	41%		45%	44%		
	Treble	46%		48%	50%		
Pivot to Balance Point	Bass	13/16 in		3/4 in			1/2 in
	Middle C	5/8 in					
	Treble	1/2 in					3/8 in
Lever Widths							
	D's	5/8 in	5/8 in		5/8 +/- in		5/8 in
	C's	9/16 in	9/16 in		9/16 +/- in		9/16 in
	A's	9/16 in	9/16 in	*irregular*	9/16 +/- in		1/2 in
	B's	1/2 in	1/2 in		9/16 +/- in		1/2 in
	G's	1/2 - 9/16 in	9/16 in		9/16 +/- in		1/2 - 9/16 in
	#'s	7/16 in	7/16 in		7/16 in		7/16 in
Key Spans							
Total Span		27 7/8 in	28 7/8 in	28 7/8 in	28 in	28 5/8 in	28 1/2 in
4 Octave	28 keys	26 in					25 3/8 in
3 Octave	21 keys	19 1/2 in		19 5/8 in	19 1/4 in	19 3/8 in	19 1/4 in
2 Octave	14 keys	13 in		13 1/8 in			12 13/16 in
1 Octave	7 keys	6 1/2 in		6 9/16 in	6 3/8 in	6 3/8 in	6 3/8 in
C – G	5 keys	4 1/2 in					4 7/16 - 4 9/16 in
Each	1 key	7/8 in		7/8 in			7/8 in
Keys							
Natural Lengths	Fronts	1 1/4 in	1 22 - 1 26 in	1 1/4 in	1 1/4 in	1 1/4 in	1 1/4 in
	Tails	2 1/4 in	2 1/4 in	2 3/8 in	2 7/16 in		2 3/8 in
Sharp Lengths	Top	2 in	2 1/16 in	2 1/16 in	1 7/8 in	2 1/8 in	2 1/8 in
	Bottom	2 3/16 in	2 1/4 in	2 3/8 in	2 3/16 in	2 3/8 in	2 3/8 in
Sharp Heights	Proximal	5/16 in		3/8 + in	3/8 in	5/16 in	5/16 in
	Distal	3/16 in		1/4 in	5/16 in	3/16 in	3/16 in
Total Key Lengths		3 1/2 in	3 1/2 in	3 5/8 in	3 11/16 in		3 5/8 in

Angles

		16XX	1683	1684	1689	1687	c1685
	Case Angles						
DPR	Keyboard / Spine	17	17	17	16	20 °	20
DAL	LH Front Corner	75	65	73	69	78	85
ALR	LH Rear Corner	122	132	124	127	122 °	115
LAR	LH Tail / Long Diagonal	51	41	48	45	52	59
DAR	LH Face / Long Diagonal	24	24	25	24	26	26
ADE	RH Face / Case Width	73	73	73	74	70	70
EDR	Case Width / RH Diagonal	47	47	45	44	48	51
ADR	Face / RH Diagonal	120	120	118	118	118	121
ARD	Long Diagonal / RH Diagonal	36	36	37	38	36	33
ARL	Long Diagonal / Spine	7	7	8	8	6	6
DRL	RH Diagonal / Spine	43	43	45	46	42	39
LR Bent side	(1st inch)	c. 81 °	c. 83 °	c. 85 °	c. 84 °	c. 86 °	c. 82 °
AD Bent side	(1st inch)	c. 105 °	c. 112 °	c. 112 °	c. 110 °	c. 96 °	c. 101 °
	Internal Angles						
	Keyboard / Nut (Treble and Bass)	0	1	1	3		c. 3 °
	Nut (Treble and Bass) / Register	3	7	2	2		c. 2 °
	Keyboard / Register	3	8	3	5	5	c. 5 °
	Keyboard / Spine	17	17	17	16	20	20
	Lowest String / Spine	1 ½ °	1	1	2 ¼ °		0
	Lowest String / Keyboard	18 ½ °	18	18	18 ¼ °		20
	Top String / Keyboard	22		c. 20 °	26		
	Rib (through Rose) / Spine	35		38	25		23
	Bridge Treble:						
	Top 2 Pins / Keyboard	8			31		24
	Top ½ inch / Keyboard	5			21		20

Internal Measurements

	16XX	1683	1684	1689	1687	c1685
Bass (GG/BB) String						
Case Spine Length	1353 mm	1353 mm	1387 mm	1283 mm	1457 mm	1584 mm
GG/BB String Length	1254 mm	1226 mm	1273 mm	1222 mm		1394 mm
Difference	98 mm	127 mm	114 mm	60 mm		191 mm
Percent: String / Spine Length	93%	91%	92%	95%		88%
GG/BB to Spine at Bridge	57 mm	67 mm		51 mm		60 mm
GG/BB to Spine at Nut	89 mm	78 mm		95 mm		60 mm
GG Equivalent Length	117 mm	114 mm	119 mm	114 mm		130 mm
Low C String Length	1230 mm	1187 mm	1229 mm	1214 mm		1372 mm
Low C Equivalent Length	155 mm	150 mm	152 mm	152 mm		173 mm
Length c2	273 mm	282 mm	287 mm	289 mm		294 mm
Short/Long	Short	Short	Short	Short		Short
C2 Equiv. Length Longest String	294 mm	306 mm	343 mm	301 mm		328 mm
String	b2	c#3	d3	b1		d3
Short/Long	Long	Long	Short	Long		Short
Wrest Pin Offset						
Inches Left of Bass Key	216 mm			184 mm		216 mm
Inches Left of Middle C	165 mm			76 mm		152 mm
Inches Left of Treble Key	114 mm			64 mm		102 mm
Keyboard Cover						
Width	171 mm					187 mm
Length	775 mm			781 mm		819 mm
Bridge						
Bass Height	9.5 mm		11.1 mm	9.5 mm		11.1 mm
Bass Width	12.7 mm			15.9 mm		12.7 mm
Treble Height	7.9 mm		8.7 mm	9.5 mm		9.5 mm
Treble Width	12.7 mm			14.3 mm		12.7 mm
Rose						
Diameter	64 mm		67 mm	64 mm		64 mm
Diameter Bevel	73 mm		73 mm			76 mm
Diam. of Surrounding Ring				76 mm		76 mm
Gap between Strings						
Major	8.0 mm					
Minor	2.5 mm					
Average	5.25 mm					
Miscellaneous						
Soundboard to Casetop	48 mm			48 mm		44 mm
Faceboard Height	121 mm			117 mm		
Wrest Pin Diameter	4 mm		4 mm			4 mm
Wrest Pin Height above SB	29 mm					22 mm

Internal Measurements

	16XX	1683	1684	1689	1687	c1685
Bass (GG/BB) String						
Case Spine Length	53 1/4 in	53 1/4 in	54 5/8 in	50 1/2 in	57 3/8 in	62 3/8 in
GG/BB String Length	49 3/8 in	48 1/4 in	50 1/8 in	48 1/8 in		54 7/8 in
Difference	3 7/8 in	5 in	4 1/2 in	2 3/8 in		7 1/2 in
Percent. String / Spine Length	93%	91%	92%	95%		88%
GG/BB to Spine at Bridge	2 1/4 in	2 5/8 in		2 in		2 3/8 in
GG/BB to Spine at Nut	3 1/2 in	3 1/16 in		3 3/4 in		2 3/8 in
GG Equivalent Length	4 3/5 in	4 1/2 in	4 7/10 in	4 1/2 in		5 1/10 in
Low C String Length	48 7/16 in	46 3/4 in	48 3/8 in	47 13/16 in		54 in
Low C Equivalent Length	6 1/10 in	5 9/10 in	6 in	6 in		6 4/5 in
Length c2	10.75	11.12	11.28	11.38 in		11.57
Short/Long	Short	Short	Short	Short		Short
C2 Equiv. Length Longest String	11.59	12.06	13.52	11.85 in		12.9
String	b2	c#3	d3	b1		d3
Short/Long	Long	Long	Short	Long		Short
Wrest Pin Offset						
Inches Left of Bass Key	8 1/2 in			7 1/4 in		8 1/2 in
Inches Left of Middle C	6 1/2 in			3 in		6 in
Inches Left of Treble Key	4 1/2 in			2 1/2 in		4 in
Keyboard Cover						
Width	6 3/4 in					7 3/8 in
Length	30 1/2 in			30 3/4 in		32 1/4 in
Bridge						
Bass Height	3/8 in		7/16 in	3/8 in		7/16 in
Bass Width	1/2 in			5/8 in		1/2 in
Treble Height	5/16 in		11/32 in	3/8 in		3/8 in
Treble Width	1/2 in			9/16 in		1/2 in
Rose						
Diameter	2 1/2 in		2 5/8 in	2 1/2 in		2 1/2 in
Diameter Bevel	2 7/8 in		2 7/8 in			
Diam. of Surrounding Ring				3 in		3 in
Gap between Strings						
Major	8.0 mm					
Minor	2.5 mm					
Average	5.25 mm					
Miscellaneous						
Soundboard to Casetop	1 7/8 in			1 7/8 in		1 3/4 in
Faceboard Height	4 3/4 in			4 5/8 in		
Wrest Pin Diameter	0.162 in		0.15 in			0.157 in
Wrest Pin Height above SB	1 1/8 in					7/8 in

Internal

	16XX	1683	1684	1689	1687	c. 1685
Key Frame						
Rails	3		2	3	3	
Rack Rail	Yes		Yes	No	No	
Moulding Design						
Shape	Cyma - Deep Coved	Triple Ribbed	Cyma	Cyma		Triple Ribbed
Consistent	Yes	Yes		No		Yes
Layout						
All C-D-E	Short	Short	Short	Short		Short
All F-G-A-B	Long	Long	Long	Long		Long

Internal

	16XX	1683	1684	1689	1687	c. 1685
Left Side	Straight Vertical	Slight Angle	Angled	Angled		B Vert T Arcuate
Right Side	Straight Angled	Slight Angle	Arcuate	Angled		B Arcuate T Vertical
Rose						
Pre-cut Divisions	4 sections		6 sections	6 sections		4 sections
Identical to		*not original*	1689	1684	*not original*	
Nut						
Straight / Bowed	3/8" Bow	Bow	1/4" Bow	1/4" Bow		Straight
Mitred at Bass	Yes	Yes	Yes	No		No
Strings Past Mitre	2	4				
Profile	Distal - Cyma	Distal - 3 Rib	Distal - 3 Rib	Distal		Distal - 3 Rib
Bass String / Spine Angle	1 ½°	1°	1°	2 1/4°		0
Wrestpins						
Straight / Staggered	Straight	Straight	Straight	Straight		Straight
Number Offset	4	4	3	3		4
Key Identifying Letters	Yes - Clear	"Blurry and Brown"	No	No		No
Keys						
Wood - Naturals	Snakewood	(?) Ebony	Ebony	Ebony	Ebony	Ebony
Natural Key Fronts	Parch - Simple 3 Arch	Parch - Complex 3 Arch	Black Painted	Parch - Simple 3 Arch	Wood ½ Round	Wood ½ Round
Scribed Natural Lines and Break	2 + 1	2 + 1	2 + 1	2 + 1	2 + 1	2 + *
"Standard Measure" (mm)	495 mm		498 mm	489 mm	492 mm	489 mm
Shape Key Fronts	Trapezoidal	Mixed		Uneven	Square	Square
Shape - Pivot Pin Holes	Square	Round	Round	Round	Round	Oval
Scribed Lever Lines - Naturals	1		1(?)			
Scribed Lever Lines - Sharps	1					
Scribed Lever Lines - Bal Points	1 - 2		1(?)			
Pierced Natural Key Plates	0	0	0	0	0	0
Bal Points behind Pivot Pins	B 13 16 - T 1 2					B 1 2 - T 3 8
Chas Haward's Key Nos	Yes - Top	No	Yes - Top	Trace	Yes - Top	Yes - Sides
Outer Levers Angled-Shared	Straight - in Curved		Rear Converging	Straight - 1 8" Cham ?	Straight - Parallel	Straight - Bass 1 8" Cham
Sharps	Ivory	Ivory	Ivory	Ivory	Skunk Tail	Skunk Tail
Sharps Tapered - Front to Back	5 16 - 3 16	Yes	3 8+ - 1 4	Yes	Yes	Yes
Sharps Rear-Tapered	No		Yes	Yes		
Top Note	C	D	D	C	D	D
Split Sharp	No	No	No	D# Only	D# Only	D# Only
Total No Keys	50	52	52	51	53	53
Natural Number	30	31	31	30	31	31

Internal

	16XX	1683	1684	1689	1687	c 1685
Woods						
Bridge	Black Walnut	Walnut	(?) Walnut			Walnut
Nut	Black Walnut	Black Walnut	(?) Walnut			Walnut
Hitch Pin Rail	Black Walnut	Walnut	(?) Walnut			Walnut
Wrest Plank	(?)	(?) Beech	(?) Beech	Beech	*replaced*	Beech
Interior Edge Moulding	Black Walnut	Walnut	Walnut	Walnut		Rosewood
Interior Side Veneer Wood	(Atlas) Cedar	Cedar	Cedar	Cedar		Rosewood
Side Veneer Stringing	*none*	*none*	*none*	*none*	1 Boxwood	1 Boxwood
Jackrail	Dutch Elm Burl	(probably) Walnut	*missing*			
Pivot Rail	Oak		Beech	Oak	Oak	
Faceboard Veneer	Cedar	Cedar	Cedar	Cedar	(?) Rosewood	Rosewood
Faceboard						
Lettered / Marquetry	Black Lettered	Black Lettered	Gold Lettered	Black Lettered	Marquetry	Marquetry
Guideline Separation	5/ 8 in	5/ 8 in	5/ 8 in	*non-existent*	*N/A*	*N/A*
Angle-Cut Ends	Square Cut	Angle Cut	Angle Cut			
Soundboard						
Grain Parallel to	Spine	Spine	Spine	Spine		Spine
No of Pieced Boards	2	2				
Width Front Board	6 in					
Narrow Grain - Front	Yes	Yes	Yes	Yes		Yes
Wide Grain - Back	Yes	Yes				Yes
Ink Decorated	Yes	Yes	Yes	No		No
Rose Surround	Beveled	Beveled	Beveled	Rolled		Rolled
Ribs - Left of Bridge	6		5	5		
Ribs - Right of Bridge	0		1 (original?)	1		
2d Rib - Angle at Rose	36°		38°	24°		24
Crost Wires						
Bridge	Yes	Yes	Yes (missing)	Yes		Yes
Nut	Yes	Yes	Yes (missing)	Yes		No
Hitch Pin Rail	Yes	No	No	No		No
Bridge						
Straight / Mitred	Straight	Straight	Straight	Mitred		Straight
Strings Past Mitre	-	-	-	8		-
Strings Double-Pinned	21	19	22	24		23
Double-Pinning Through	F	D#	F#	G		F#
Bass Termination	Carved Scroll	Angle Cut	Angle Cut	Bevel Cut		Bevel Cut
Treble Termination	Angle Cut	Angle Cut	Angle Cut	Angle Cut		Angle Cut

Case - External

	16XX	1683	1684	1689	1687	c. 1685
Veneered	No	No	Walnut Veneered	No		No
Bottom Edge Moulding	Yes	No	Yes	No	No	No

Case - External

	16XX	1683	1684	1689	1687	c. 1685
Board Edge Visible						
LH Face - LH Tail	Side Facing	Side Facing	Side Facing	Side Facing	Mitred	Mitred
RH Face - Bent side	Side Facing	Side Facing	Side Facing	Front Facing	Mitred	Mitred
Bent side - Spine	Rear Facing		Rear Facing	Rear Facing	Rear Facing	Rear Facing
LH Tail - Spine	Rear Facing		Rear Facing	Side Facing	Rear Facing	Rear Facing
Wood						
Exterior	European Walnut		European Walnut	European Walnut	European Walnut	European Walnut
Face board Veneer	(Lebanon) Cedar		(Lebanon) Cedar	(Lebanon) Cedar	"Walnut & Maple"	(Braz.) Rosewood
Lower Moulding	Black Walnut		Walnut	*none*		(Braz.) Rosewood
Case Capping	Black Walnut		Walnut			(Braz.) Rosewood
Spine	(?) Cedar		Walnut Veneer	(?) Cedar		
Shapes						
Case Capping	Flat - Cyma Edge	Flat - 3 Rib Edge	Flat - Cyma Edge	Flat - Moulded Edge	Flat Across	Arcuate
Angled Cheek Capping	Flat - Across	Flat - Across	Flat - Across	Flat Across	Semi-arcuate	Arcuate
Keyboard Blocks	Flat Top Bevelled Corner	Flat Top Rounded Corner	Flat Topped	Complex	Flat Top Rounded Corner	Flat Top Rounded Corner
Square Washers LH RH Faces	2 Iron	2 Brass	2 Brass	0	0	0
Square Washers Bent side	1 Iron	1 Brass	1 Brass	0	1 - Missing	1 - Brass Elevated
Hinges (original)	"Angry Lady" Iron		2 Brass Original	3 (Lid) Repaced		Pierced Brass
Lock Hasp (original)	Not original - Iron		*no lock*	*no lock*		"Outstretched Arms"
Moulding Profile	Cyma - Deep Coved	Triple-Ribbed	Cyma	Cyma		Triple Ribbed
Cross Grain Plane Marks						
Case Sides	No			Yes		
Spine	No			Yes		
Lid Keyboard Cover	No			Yes		Yes
Lid Keyboard Underside	Yes			Yes		Yes
Lid						
Boards	3	3	3	3		3
Width of Front Board	7" - 9"					
Wood	European and Black Walnut	Walnut	Walnut	Walnut	Walnut	European Walnut
Rear side 3/8" Batten	Yes					
Vertical Edge Moulding	No	Applied	No	No	No	Applied
Keyboard Cover						
Front Edging	Curved			Curved		Cut - 3 Rib
Side Moulding	Thumbnail	Applied		Thumbnail		Applied - 3 Rib
Spine						
Single Board	Original - Yes	Yes		Original - Yes		Yes

APPENDIX C

WHAT IT IS AND WHY

EIGHT TOPIC CATEGORIES

TWO MAJOR PROBLEMS

FREQUENT CITATIONS OF SPINE LENGTHS

CHRONOLOGICAL TABLE

The idea of a chronological table has been borrowed from one found in Chas Mould's PhD thesis: THE ENGLISH HARPSICHORD (1976). His 'Table-4' notes: "The Most Significant Events in the Development of the English Harpsichord from 1439 – 1800". In order to achieve an understanding of spinets in general and Haward spinets in particular, we can 'pick and probe' the subject from several directions. A sequential, historical tabulation can be one of these directions. Here, I have attempted to blend Haward and more general spinet-related material into a broad musical context and relate this to important events in English history. This explains the single unifying table. I have incorporated some of Mould's harpsichord observations that I feel are applicable to spinets and identified them: (CM). The sources of the remainder vary. There are eight topic categories:

1. Particular spinets
2. Other keyboard instruments
3. Particular spinet makers
4. Important musical people
5. Relevant music publications
6. Death dates of musical people
7. Dates of important non-musical people
8. Important people and events

Data Attributes

Since the spinets considered are restricted to those found in Boalch with dates, so many without dates or with attributed '(A)' dates could not be included. This had the effect of all but eliminating certain makers and some of their important spinets. For example, of the major makers, many spinets of Player, Kirshaw, and the Hitchcocks, rarely if ever dated, had to be disregarded. But spinets of Baker and Wm Harris, Barton, Harrison, Haxby, Kirkman, and Shean, which were largely dated, are well-represented. About half of the spinets of Keene's shop, Mahoon, and Longman & Broderip, being dated, could be included as well.

Of the roughly 280 English spinets tallied, 47-percent were dated and considered. Another 13-percent were date-estimated and, therefore, not considered as were the remaining 40-percent that were neither dated nor date-estimated.

If we deduct the c.55 spinets of the Hitchcocks (Mole's estimated total is 43 (2009:373)), we would raise the dated percentage, but only from 40-percent to about half.

Since only a minority of the Boalch (BM3)-listed spinets were considered, many of the assumed-dates of developmental change will have to be regarded as approximate. But they should be off by only a short time period. Much more significant is the minuscule proportion of surviving spinets to the numbers made. For example, Mole has estimated that only about 5-percent of the justly-esteemed Hitchcock spinets are still with us today, and Morris' earlier estimate is about half of this. In my statistical section I have discussed this and compared Hitchcock, Shudi (harpsichord) and Baker Harris survivors. As important as it is for us to use what information we have, we must be acutely aware of its limitations. Even if every spinet in Boalch had been dated, this assembly would represent well under a tenth of the number made.

Spine Lengths

I have frequently cited length measurements in this table for several reasons. First, they show an interesting expansion over time. Second, this expansion is correlated with longer bass string lengths and fuller semi-exponential cavities – both of musical importance. Third, spine lengths are often shown in Boalch. Great precision, however, cannot be assured: Lengths as reported will be aberrant. Some will be lid lengths; others will reflect worn corners and bowed spines. The measurements will usually involve two people and long tapes. Most important, in the case of the six Hawards and all but two of the Players, spine length is not maximum length. Which of the two is reported? Which of the two is important?

1612	"Paid to Hazard (sic) that keepeth her grace's virginals in tune".
1613	*"Parthenia"* is first published.
1617	Death of Wm Hassard (sic),a virginal maker.
1622	John Haward had three apprentices this year: Dutton, Cooke, and Edwardes.
1622	Date of the semi-extant Knole harpsichord, inscribed, 'JOHANNES _A_ARD'.
1630	Death of a John Hazard (sic), whose daughter married Gabriel Townsend.
1633	An E Hazard (son of John Hazard) is admitted free of the Joiners' Company by patrimony.
1637	Date on the keyboard of Zenti's earliest surviving wing spinet.
1638	The first dated extant English virginal (by Thos White).
1645	Death of the composer, Wm Lawes (age 43)
1649	Chas I is beheaded; The Commonwealth is declared.
1650	John Player is apprenticed to Gabriel Townsend.
1651	The *"English Dancing Master"* is first published by John Playford (1623-87).
1652	Another John Haward - presumably Chas's brother - is admitted to the Joiners' Company by patrimony.
1655	Stephen Keene is bound to Gabriel Townsend until 1662.
1656	Death of the last 'Elizabethan' composer, Thos Tompkins (age 84).
1658	John Player is made free of the Joiners' Company.
1658	Death of Oliver Cromwell (age 59).
1660	Chas Haward, probable son of John Haward the elder, is admitted to the Joiners' Company by patrimony.
1660	First date of Sam'l Pepys' diary (1 Jan).
1660	Chas II returns to England from France and is crowned king.
1661	Sam'l Pepys acquires a polygonal virginal, or possibly an ottavino, from Lord Brouncker, who purchased a harpsichord (14 June).
1662	Stephen Keene is made free of the Joiners' Company.
1663	Following his employment at the French court, Girolamo Zenti is employed in England, for at least a year, as King Chas's 'Virginall-maker'. He must have made a spinet then that was seen and studied by John Haward.
1663	Pepys refers to his virginal as his 'Tryangle' (18 March, 1 April, etc.).
1663	*"Music's Hand-Maide"* is first published by John Playford.
1664	Girolamo Zentl is given permission to leave the English court to visit Italy (Jan).
1665	Birth of Princess, later Queen, Anne.
1665	Year of the plague.

1666	Year of the London fire.
1666	Robt. Hooke describes for Pepys the correlation of musical pitch with vibrational speed, using the 'strokes' of a fly's wings as an example (8 August).
1667	Death of John Haward the elder (Age 74+).
1667	Corney Barres, the last of numerous apprentices of John Haward the elder, is made free of the Joiners' Company.
1668	Pepys acquires Rene Descartes' *"Little Treatise of Musique"* with a grid drawing (3 April).
1668	Pepys sees an unfinished "little espinette" in Chas Haward's shop that "will do my business as to finding out of chords, and I am very well pleased that I have found it" (4 April).
1668	Pepys pays £5 for his finished spinet (13 July).
1668	Pepys buys a 'rest' (wrest - a tuning hammer) from a blacksmith for his spinet. This is the last diary entry concerning his spinet; his interest had turned to the pantograph (20 July).
1669	Princess Mary and Princess Anne's father, the Duke of York, later Jas. II, abandons the Anglican Church and converts to Catholicism.
1669	Pepys terminates his diary: "And thus ends all that I doubt I shall ever be able to do with my own eyes ... my eyes hindering me in almost all other pleasures..." (31 May).
1670	Princess Anne returns from France. French doctors had been unable to cure her eye "defluxion".
1673	A fire destroys the Naval Office in Seething Lane and "severall of the houses about it". The Naval Office was forced to move (Jan).
1673	The Duke of York remarries. His new bride is just seven years older than Anne – four years older than Mary.
1673	Passage of the Test Act, requiring all office holders to offer their loyalty to the Church of England.
1673	The Test Act forces the Duke of York to resign his position as Lord High Admiral. Before stepping down, he makes Pepys 'Secretary to the Affairs of the Navy'.
1673	Benj. Sison is bound to John Needles.
1673	Encouraged to run by the Duke of York, Pepys wins the election for a seat in Parliament representing Norfolk.
1673	*"Melothesia"* is published by Matthew Locke.
1675	John Harris is bound to Stephen Keene (free 1685).
1676	In *"Musick's Monument"* Thos Mace attributes the invention of the 'pedal' to John Haward - clearly, John the elder. (This pedal-operated harpsichord costs 50% more than the hand-controlled instrument).
1678	Death of the composer, John Jenkins (age 86).

1680	John Sandles is bound to Thos Hill – later to Chas Haward. He was made free of the Joiners' Company in 1689.
1680	The probable earliest surviving French spinet (a Rozet).
1681	Robt. Hooke publicly demonstrates the vibratory nature of musical pitch by use of his toothed wheel (erroneously attributed to Felix Savart a century and a half later).
1683	Princess Anne marries Prince George of Denmark in the Chapel Royal on "St. Anne's Day".
1683	The first dated Chas Haward spinet. Probably the earliest dated extant English spinet. It is the first dated English spinet terminating in d3, up from c3.
1683	Date of a surviving Chas Haward harpsichord.
1684	Benjamin Slade is bound to Jas Aland and later to Geo. Castleman.
1684	The latest dated extant Chas Haward spinet with a short octave. Later Hawards have a single-split D#.
1684	Revocation of the Edict of Nantes.
1684	The last dated extant English virginal (by Thos Bolton).
1685	Death of Chas. II (age 55).
1685	At the coronation of Jas. II, Pepys, as 'Baron of the Cinque Ports of Sandwich', rode just behind the king in the procession.
1685	John Harris is made free of the Joiners' Company.
1685	Two dated extant Keene spinets - probably the first dated extant English spinets with marquetry faceboards and probably the last dated extant English spinets with short octaves.
1686	Death of John Playford (age 63).
1687	Rich'd. Vesey (of York) is bound to Stephen Keene.
1687	The third dated Chas Haward spinet. The first dated English keyboard instrument with a split key (D#), with skunktail sharps, with pierced brass hinges, and with semi-circular key fronts (wood). The only dated Haward spinet with a virginal-like jackrail inscription, mitred front corner construction, and a marquetry faceboard.
1688	John Player is made Master of the Joiners' Company.
1688	The Glorious Revolution: James II abdicates (Nov-Dec).
1689	William and Mary are crowned Joint Monarchs. Pepys is briefly imprisoned.
1689	Jos. Sandles, Chas Haward's apprentice, is made free of the Joiners' Company. (He had earlier been bound to Thos Hill).
1689	The last dated (although rebuilt then) Chas Haward spinet. The last dated extant spinet terminating in c3.
1689	Death of Chas Haward.
1689	Joseph Sandles, reassigned to Chas Haward sometime in the 1680s, is made free of the Joiners' Company. He must have been responsible for the spinets: 'c.1685' and

	'1687', plus the rebuilding of '1689', and possibly the rebuilding of the 1683 harpsichord.
1690	The first dated extant Benj. Slade spinet.
1693	Cawton Aston is bound to John Player.
1694	Death of Queen Mary (age 32). Wm III would continue as reigning monarch.
1695	Death of Henry Purcell (age 36).
1696	Henry Purcell's *"Collection of Lessons for the Harpsichord or Spinnet"* is published posthumously.
1698	Benjamin Slade is made free of the Joiners' Company.
1700	Death of Princess Anne's 11-year old son – the only child of hers to live beyond the age of 2.
1700	Two dated Keene spinets, both initialled 'EB' (Edward Blunt) on their top keys.
1700	Thos Hitchcock, the younger, is bound to Benj. Slade for eight years.
1700	The second dated extant Benj. Slade spinet. It has skunktail sharps and parchment key fronts. Possibly the last extant English spinet with a jackrail inscription.
1700	A harpsichord by Tisseran with a GG/BB - d3 compass and a single split D sharp key.
1702	Death of William III (age 52). Princess Anne is crowned queen.
1702	A dated spinet inscribed with the names of both Stephen Keene and Edward Blunt is the longest extant spinet by this date. It measures 64.7" (1644).
1703	Death of Samuel Pepys (age 70).
1703	The earliest dated extant Edw. Blunt spinet. (Thos. Hitchcock's name is on a jack).
1704	Before being sold in 1704, Bildeston Hall, a manor house in Suffolk, was emptied of all contents.
1705	Cawton Aston is made free of the Joiners' Company.
1705	Shephen Keene is made Master in the Joiners' Company.
1706	Thos Barton is made free of the Joiners' Company.
1706	A Keene-inscribed spinet marked 'CB' (Chas Brackley) and dated '1705/6' (1 Jan 1705 - 25 Mar 1706) may be the first to add two extra natural keys (GG and AA) in the bass. Its length is 65.2" (1655).
1707	Death of John Player (or 1708) (age c.72).
1707	Under the Act of Union, England, Scotland, and Ireland become unified as the single state of Great Britain.
1707	Death of John Player.
1708	Death of Prince George of Denmark (Queen Anne's consort) (age 55).
1709	A Cawton Aston & Thos Barton jack-dated spinet maybe the earliest extant English spinet with a 5-octave GG - g3 compass.
1709	A harpsichord by Thos Barton with a GG/BB - d3 compass and two split sharp keys.

1710	Handel comes to England - staying less than a year.
1711	A Stephen Keene-inscribed spinet marked 'CB' (Chas Brackley) has a GG/AA - d3/e3 compass, extended by two bass and one treble keys beyond the expected range. Naturals still have parchment fronts.
1712	Death of Stephen Keene (age c.71).
1714	Death of Queen Anne (age 49). George I is crowned king. At this time, following her instructions, her Haward spinet is passed on to Dr Wm Croft, Master of the Children of the Chapel Royal.
1714	Thos Barton's earliest surviving spinet. About 15 are recorded.
1715	Thos Hitchcock, the younger, seems to have waited seven years to be made free of the prestigious Haberdashers' Co.
1716	A Thos Barton spinet appears to be the second dated extant spinet with a chromatic GG - g3 compass. It may be the first with distal brass rods for key lever locators - as found on Hitchcock spinets.
1716	Benj. Slade's last dated extant spinet. Seven are recorded.
1717	Handel returns, permanently, to England.
1720	Cristofori's first dated extant piano (c3 top note and FF,GG,AA in the bass, like the 1706 Keene-Brackley spinet).
1723	J. Baudin's London-made, sole-surviving spinet - one of five of Wm Dale's shown at the 1885 Inventions Exhibition.
1725	Thos Hancock's sole-surviving spinet, perhaps the earliest dated spinet with ivory key fronts. Probably the longest: 74.5" (1892) recorded by this date - the first over 6-feet in spine length.
1726	A probate inventory is taken of the entire contents of Bildeston Hall, a manor house in Suffolk, following the deaths of the last occupants. There were no musical instruments.
1726	The earliest surviving spinet by Cawton Aston following his partnership with Thos Barton. Possibly the earliest dated spinet with a curved (arcuate) LH tail and cross-banded case panels. It has a serpentine bentside.
1727	Death of George I (age 67). George II is crowned.
1727	Death of Dr Wm Croft (age 49), the first of the six Masters of the Children of the Chapel Royal to inherit Queen Anne's Haward spinet.
1731	A particularly interesting London-made spinet by Frederick Krickhof with an unpanelled English-type lid and inscribed faceboard, but with a tall, boxy, shallow-bentside Germanic case. It has a divided register.
1732	On Handel's 47th birthday, the Children of the Chapel Royal give a performance of 'Esther' for him at the home of their Master's (Bernard Gates's) where they lived. Queen Anne's Haward spinet was somewhere in the house.
1737	Death (by accident) of Thos Hitchcock (age 51).

1738	A Mahoon double harpsichord has, probably, the first dated example of a composite trestle (with a lathe-turned lower quasi-cabriole leg).
1739	42 Scarlatti Sonatas are published in England by Thos Roseingrove. This is the first publication of Scarlatti's music. Much of his keyboard music would have been played, in England, on spinets.
1739	Johann Clemm builds a spinet in Philadelphia of a German design. It is the first of four known American spinets, all remarkably different.
1740	Thos Barton's last dated surviving spinet.
1742	Of 13 listed Mahoon spinets, the first one (or two) is dated. A surviving Mahoon harpsichord of this date has a serpentine bentside.
1743	The earliest dated extant Joseph Harris spinet.
1743	The earliest dated extant John Harris spinet.
1744	The earliest dated extant Kirkman harpsichord (CM).
1748	The earliest of the six extant Kirkman spinets. Possibly the first known spinet with an FF/GG - f3 compass. Probably the longest spinet by this date: Its spine measures 79.0" (2007). The only Kirkman spinet with a c2 lass than 13" (330).
1749	John Harrison's earliest surviving spinet. It has a length of 74.0" (1880) and a c2 length of 13.3" (338).
1750	John Hitchcock, son of Thos Hitchcock the younger, is admitted to the Haberdashers' Company by patrimony.
1752	England replaces the Julian with the Gregorian calendar (losing 11 days in the transition).
1753	The first of two nearly identical spinets by the organ-builder, John Crang. An outstanding instrument. Spine length is 79.2" (2012).
1754	Earliest verified use of a composite-legged trestle on a Kirkman harpsichord (CM).
1757	Behind the faceboard of an exceptional spinet is the often-cited, "This is not one of my comon instruments but the best ton'd I ever made", Joseph Harris, London, 1756. It has a unique buff-stop, and a particularly attractive composite trestle with ball & claw feet.
1758	The last year Kirkman harpsichords are signed with 'fecit' before 'Londini' (CM).
1758	A second John Crang spinet. Both spinets have panelled lids, elaborate marquetry faceboards, and border-decorated soundboards.
1759	Death of Handel (age 74).
1759	The last of the dated Kirkman spinets. Range: FF/GG - f3; C2: 13.5" (343).
1760	Death of George II (age 57).
1761	George Washington orders a spinet from Plenius (CM).
1762	Johann Christian Bach (1735-82) comes to London.
1763	The last known Kirkman with a wholly-turned double-baluster trestle leg. The square 'Marlboro' leg supplanted it (CM).

1764	The earliest dated extant Wm Harris spinet.
1764	The earliest dated extant spinet by Thos Haxby of York (CM).
1764	The Mozart family spends close to a year in London.
1766	The earliest extant Zumpe piano.
1766	This year, music desks become standard on Kirkman harpsichords (CM) (but they are never found on spinets).
1766	One of seven extant spinets made by Thos Haxby. Its original owner was the composer, Thos Augustine Arne (1710-78).
1767	Jas Longman founds a music publishing firm (CM).
1768	The first public performance of a piano, employed as a solo instrument, in England.
1769	John Harris, who had moved from London, makes a spinet in Boston, Mass.
1770	The last dated extant Baker Harris spinet.
1770	Death of the composer Chas Avison (age 61).
1771	The date on two recorded Longman, Lukey & Co. spinets.
1773	Death of Bernard Gates (age 88), 2nd Master of the Children, Chapel Royal, after Queen Anne's death.
1773	Death of Joseph Mahoon (age 44).
1774	Death of John Hitchcock (age c.49).
1775	Longman and Lukey are joined by Broderip. The firm had three names for a year (CM).
1776	The last dated extant Wm Harris spinet.
1776	Chas Burney publishes the first volume of his, "*General History of Music from the Earliest Ages to the Present Period*".
1776	Sir John Hawkins publishes his 5-volume "*General History of the Science and Practice of Music*" which contained the first printed mention of Queen Anne's Haward spinet.
1776	Lukey leaves his partners, Longman and Broderip. The firm is renamed, 'Longman & Broderip' (CM).
1778	Death of the composer Thos Augustine Arne (age 68).
1779	Death of the composer Wm Boyce (age 68).
1780	Broadwood builds its first square piano - the design pioneered by German immigrant makers - the '12-Apostles'. There is no record of a Shudi or Broadwood spinet ever made.
1781	With the British surrender at Yorktown, Virginia, America achieves its independence.
1782	Death of John Christian Bach (age 47) and the end of the Bach-Abel concerts.
1783	Death of Dr Jas Nares (age 68), 3rd Master of the Children, Chapel Royal, after Queen Anne's death.

1784	Death of Sam'l Johnson (age75).
1784	Made by Andrew Rouchead (sic) of Edinburgh, a dated Neil Stewart spinet appears to be the earliest known FF - f3 spinet with an FF#. Like Rouchead's (sic) c.1795 spinet, it has a particularly short c2 length of just 9.5" (241).
1785	The earliest recorded Kirkman harpsichord with an FF# (CM).
1785	The last known Kirkman harpsichord with a composite leg trestle (CM).
1786	The last known Longman & Broderip (Culliford) spinet, it is believed to have been originally 'quilled' with leather.
1786	Death of the composer John Stanley (age 74).
1787	Death of the composer Carl Friedrich Abel (age 64).
1787	The last dated surviving London-made spinet; made by John Harrison, whose first surviving spinet was made 38 years before.
1789	Death of Sir John Hawkins (age 70).
1789	The last dated extant English spinet - by the Cambridge organ-builder Humphrey Argent. One of the most exceptional spinets ever made. Length (a probable record): 80.0" (2032), c2: 13.5" (343), a nag's head swell, original leather 'quilling'.
1789	An American spinet of English design is made by Sam'l Blythe of Salem, Mass.
1791	The probable last dated extent French spinet (a Basse).
1791	Haydn's first London visit.
1791	Delivery of a Longman & Broderip (Culliford) double harpsichord to President George Washington in Philadelphia. (The first piece of Mt Vernon furniture to be re-acquired in the 1850s).
1795	Probable date of the last (undated) extant 'English' spinet - by Andrew Rouchead (sic) in Edinburgh (the author's).
1795	Haydn returns to Vienna from his second London visit with a piano of his publishers - a Longman & Broderip 5 1/2 octave grand. He kept this piano until his death and it survives today.
1795	Year of Longman & Broderip's first bankruptcy.
1796	Death of Thos Haxby (age 67).
1801	Chas Burney begins to write the musical entries for Rees's *'Cyclopaedia'*.
1808	Death of Dr Edmund Ayrton (age 74), 4th Master of the Children, Chapel Royal, after Queen Anne's death.
1811	The first year of the decade-long Regency.
1814	Death of Chas Burney (age 88).
1820	Death of George III (and of his Anglo-American painter friend, Benj. West, as well). George IV is crowned King in his own right in 1821.
1822	The Royal Academy of Music is established.

1827	Date of the fourth extant American wing spinet - made in central Pennsylvania by Joseph Small (property of the author).
1830	Death of George IV. Wm IV is crowned.
1830	F-J Fetis writes "*Sketch of the History of the Pianoforte"* (Trans. *"The Harmonicon"* pp 377--).
1830	(Early-'30s) Queen Anne's spinet is used in a concert to accompany a song.
1836	Death of John Stafford Smith (age 86), 5th Master of the Children, Chapel Royal, after Queen Anne's death.
1837	Ignaz Moscheles (1794-1870) gives his pioneering Scarlatti concerts on a 5 ½ octave Shudi – Broadwood. harpsichord. This instrument is now in Switzerland in the town where Shudi was born.
1837	Death of Wm IV. Victoria becomes queen.
1842	"About this year" Geo. Grove bought a Keene spinet for 12/- and has it restored.
1845	Prince Albert directs and chooses the programme for an 'Ancient Music' concert using early instruments.
1846	Death of Wm Hawes (age 61), 6th and last Master of the Children, Chapel Royal, after Queen Anne's death.
1850	Carl Engel (b. 1818 in Hanover) moves from Manchester to London.
1853	Carl Engel writes a book "*The Pianist's Handbook".*
1855	Chas Salaman begins a series of lectures on the history of the pianoforte.
1857	The South Kensington Museum (the V&A) acquires its first keyboard instrument (an ottavino).
1860	Wm Hawes' daughter, Maria Hawes Merest, is widowed and moves back to her late father's townhouse which had remained in the family. No longer well off, she would give soirees and music lessons at her home over the decade.
1860	Edward Francis Rimbault's pioneering book "*The Piano-Forte*" is published. He wrote that Queen Anne's spinet was taken to the Hawes family attic "where in all probability it still remains". This confirms it was not passed on to Thos Helmore (1811-90), who would have been the seventh Master to inherit her spinet.
1864	Carl Engel writes "*The Music of the Most Ancient Nations"* - his first evident interest in instruments beyond the conventional piano.
1869	Carl Engel publishes "*A Descriptive Catalogue of the Musical Instruments in the South Kensington Museum".*
1869	Carl Engel publishes a book, "*Musical Instruments of All Countries"*
1871	A committee of about 50 was formed to arrange for an "Exhibition of Musical Instruments Made before the Year 1800" at the South Kensington Museum (the V&A) in 1872. Some of its members were: Carl Engel, Edward Rimbault, Geo Grove, Arthur Sullivan, and Sterndale Bennett.

1872	The musical instrument exhibition at the South Kensington Museum opens. It consists of over 500 instruments. About 40 are stringed keyboard instruments including a Player (lent by Kirkman) and a Hitchcock (lent by Sterndale Bennett).
1874	Carl Engel publishes an expanded "*Descriptive Catalogue of the Musical Instruments in the South Kensington Museum*" followed by a listing of 107 instruments owned by Engel and lent to the museum. **16XX** was not on this listing, but a Hitchcock and a Mahoon.
1875	Carl Engel sells most of his early and ethnological musical instruments to the South Kensington Museum: 201 instruments – sold for £556. He kept only a lute.
1875	Carl Engel writes *"Musical Instruments"* (No. 5 in the South Kensington Museum's art handbooks).
1876	Death of Edward F. Rimbault (age 60).
1878	Geo. Grove publishes the first volume (A - I) of his "*Dictionary of Music & Musicians*". His work began four years before.
1879	Edgar Brinsmead writes a book, "*The History of the Pianoforte*".
1882	Death of Carl Engel – a suicide (age 64).
1882	The Royal College of Music (The RCM) is established.
1883	The 3d volume of Grove's *Dictionary* (Pl - Su) is published. It includes a Hipkins-written article for "Spinet" and a woodcut of **16XX**.
1885	Wm Dale writes his catalogue "*Brief Description Spinets, Virginals, Harpsichords, Clavichords, and Pianos at the Inventions Exhibition*".
1885	A J Hipkins writes *"The Old Claviers or Keyboard Instruments"*.
1885	At London's International Inventions Exhibition, of the 65 plucked instruments displayed, 21 are English spinets.
1886	Death of Maria Hawes Merest, daughter of Wm Hawes, at a home of her late husband's on the Isle of Wight (age 70).
1886	Wm Smith Rockstro (1823-95) writes a book, *"A General History of Music"*. It includes the same woodcut of '16XX' found in Grove's 3d volume.
1888	A J Hipkins writes "*Musical Instruments, Historic, Rare, and Unique*".
1892	A J Hipkins writes the British section of a catalogue for the Vienna loan collection exhibition. **c.1685** was exhibited there.
1896	A J Hipkins writes a book "*History of the Pianoforte*".
1899	The *"Fitzwilliam Virginal Book"*, previously available only in MS, is published in London and Leipzig: Two Volumes - over 900 pages. (Reviewed MT 1 Feb 1900, pp 90-1).
1900	Death of Sir George Grove (age 80).
1901	Death of Queen Victoria (age 82) (three weeks into the 20thC).
1903	Death of Alfred Jas Hipkins, England's acknowledged keyboard instrument authority following the death of Engels (age 77).

1914	The last account of Queen Anne's spinet by the octogenarian W H Cummings, who had been a chorister under Wm Hawes in the 1840s. 16XX had to have been in the Hawes' living quarters then.

APPENDIX D

ALFRED JAMES HIPKINS (1826 – 1903) CHRONOLOGY

ALFRED JAMES HIPKINS - CHRONOLOGY

This pre-eminent auto-didact and keyboard instrument authority is, today, best remembered as the author of *A Descriptive History of the Pianoforte and the Older Keyboard Instruments* (1896). "One of the most extraordinary books about musical instruments ever written" (E M Ripin, 1974). At the Great exhibition of 1851, he gave 40 piano recitals. He contributed 134 articles and paragraphs to the first edition of Groves Musical Dictionary and was one of 100 contributors to the ninth edition of the Encyclopaedia Britannica. He was employed at Broadwood from 1840 for more than 60 years (see MT 1 Sept 1898).

According to Lucy Ethelred Broadwood (1858 – 1929), he was known to some of his friends as "Hippy". One referred to him as "The dear leviathan in Great Pulteney Street".

1826 (June 17) Arthur James Hipkins was born in Westminster, London not far from the Abbey.

1840 At age 14, Henry Fowler Broadwood brought him to his factory. Hipkins had, apparently, wanted to be a painter, but his father considered piano tuning to be more practical. A year later, he took piano lessons, but after three months he continued on his own.

1844 He began to study organ – taking lessons for a year. This year, he evidently first heard Bach and began a life-long appreciation of him.

1846 By this time, after he had been introduced to equal temperament through Crotch's *Harmony,* he apparently sold Walter Broadwood on this method of piano tuning. He began to instruct Broadwood's tuners in this new manner. From this time forward, Broadwood pianos were no longer tuned to unequal temperament, although most English organs would continue to be so – at least for several years.

1848 He befriended Chopin when he came to London. Hipkins noted that Chopin especially liked Broadwood's upright 'Boudoir Cottage' piano, "Two stringed but very sweet instruments". Although Chopin had brought a Pleyel to England, he played it only once, using Broadwoods from then on. The two men must have conversed in French, for Chopin didn't speak English.

1851 At the great Crystal Palace Exhibition, Hipkins gave 40 piano recitals.

1855 Hipkins met Wagner on his first visit to London and he became one of Wagner's first English 'disciples'.

1874 George Grove asked Hipkins to be on his staff of contributors to his forthcoming music dictionary.

1875 Hipkins was invited to contribute an article about the pianoforte as well as other articles in the 9th edition of the Encyclopaedia Britannica. The woodcut of Haward's spinet **16XX** was by his son, John.

1876 Hipkins was introduced to Dr Alexander Ellis. They would work together on issues of pitch and acoustics until Ellis' death 14 years later.

1881 Visiting Frederick-the-Great's palaces and examining three Silbermann pianos there, Hipkins determined they were of Cristofori's design and not Schroeter's, as had been believed, and he identified Cristofori as the piano's pioneer maker.

1884 Hipkins moved to Burkat Shudi's old premises (first occupied by him in 1742) at 33 Great Pulteney Street when Wm Dale, who had lived there, moved to Hampshire. He apparently lived there until shortly before his death in 1903.

1884 Together with Dr Ellis, and following their investigations of numerous arcane instruments, Hipkins printed a paper *Non-Harmonic Scales* in the Proceedings of the Royal Society.

1884-5 Hipkins' research on the acoustics of struck strings was reported in the Proceedings of the Royal Society.

1885 At the request of the Prince of Wales, Hipkins undertook the formation of the Exhibition's Loan Collection for which he received a gold medal.

1885 (October 21 and 23) Hipkins' lecture on "Spinets, Harpsichords, and Clavichords" was read in the Music Room of the Exhibition. His lecture was printed in the *Musical Times* (v.26 no.513 1Nov1885:646-49). He performed on a Hass clavichord, a 1755 Kirkman spinet, and three harpsichords. He played the Chromatic Fantasy, explaining it was "only endurable" when the instrument was tuned to equal temperament.

1886 (June 7) Hipkins read a paper "The Old Clavier or Keyboard Instruments; Their Use by Composers, and Technique". This was published by Taylor & Francis, Ltd on behalf of the Royal Musical Assn (Proceedings, 12th session, 1885-86:139-148). He performed nine works, including the Chromatic Fantasy, on four instruments.

1886 Hipkins was admitted as a Fellow of the Society of Antiquaries.

1886 Liszt called on Hipkins at his home on Great Pulteney Street and told him he had been to that house 60 years before.

1886 (June 7) When Hipkins read his paper "The Old Clavier or Keyboard Instruments" before the Musical Assn, Rubenstein, who was there, insisted on turning over the pages of Hipkins' music. It was reported that Rubenstein had never before seen a clavichord.

1888 Hipkins wrote a book, "*Musical Instruments, Historic, Rare, and Unique*", with illustrations by Wm Gibbs. Following in Engel's footsteps, it showed examples of instruments from places such as, India, China, Japan, and South Africa.

1889 In the year of completion of Grove's Musical Dictionary, the index showed there were 134 articles and paragraphs initialed "A.J.H.". The most important of these was his "Pianoforte" showing woodcuts of two spinets: a Hitchcock and Haward's **16XX.** This volume was issued in 1883.

1890 (Nov 25) Hipkins gave a lecture "The Old Claviers" at the Oxford University Music Club. This was published by the *Musical Times and Singing Class Circular* (v.31,No.574,1Dec1890). He played on Kirkman and Shudi harpsichords, a Hass clavichord, and two spinets: a 1703 Blunt and Haward's **1683**, then owned by Taphouse and restored by him four years before (see Appendix A).

1891 Hipkins gave three Cantor lectures at the Society of Arts, "Musical Instruments of All Kinds". It was later published.

1892 In the *Musical Times* (1Sept 1892:521-23) Hipkins wrote a detailed description of the Austrian, Hungarian, and German section. Although a 5-1/2-octave Shudi-Broadwood, "Haydn's harpsichord" was exhibited there in this section; the description of the British section, which was to follow, evidently never did.

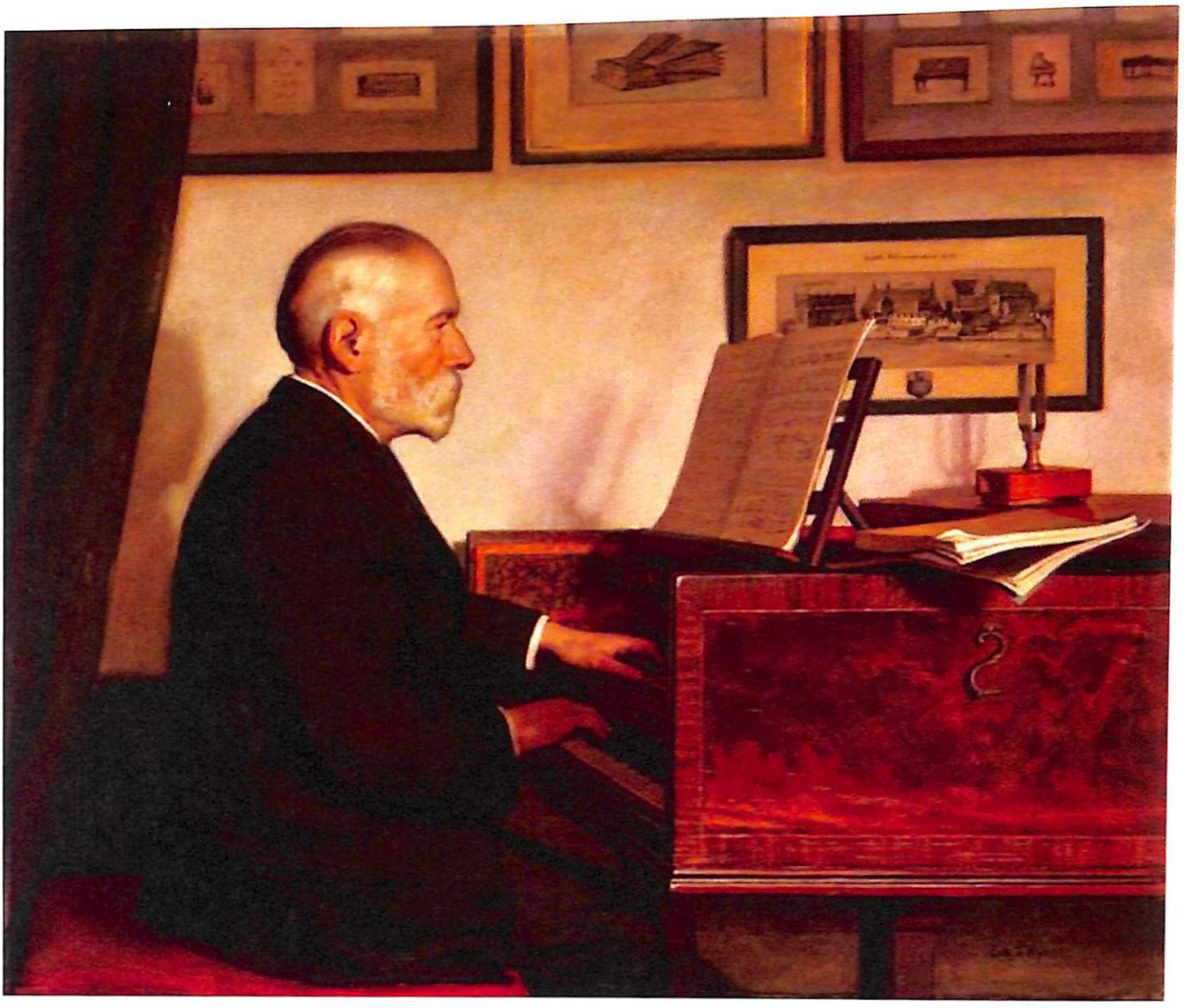
1896 Hipkins wrote the book for which he is best remembered today, "*A Description and History of the Pianoforte and of the Older Keyboard Stringed Instruments*" containing woodcuts by his son, John.

1896 Hipkins was asked to read a paper, "Standards of Musical Pitch", by the Society of Arts. His discourse was printed by the Society and he was awarded a silver medal. Hipkins was asked to join a committee that recommended the Hipkins-proposed A of 439 c/s (at 68 deg.). This seemingly odd value is understandable, for it assigns to the two most important notes, MC and C2, the integer frequencies of 261 and 522, whereas either 440 or 435 result in fractional values for the Cs.

1898 Hipkins' daughter, Edith Hipkins (1854 – 1945), painted her father seated at his Kirkman harpsichord that was either a gift, or a purchase, from Carl Engel. It portrayed her father playing the Goldberg Variations using both manuals. This painting was shown at the 1888 Exhibition of the Royal Academy.

1898 In a six-and-a half page eulogy, "Alfred James Hipkins", the *Musical Times* (1Sept98:581-86) wrote that he was "The greatest authority in this country – if not in the world – on the pianoforte and its precursors". (This article, written near the end of Hipkins' lifetime, contains a wealth of information – much of which is shown here.)

1903 (June 3) Hipkins died at the home of his daughter at 100 Warwick Gardens, Kensington, London.



APPENDIX E

CARL ENGEL (1818 – 1882) CHRONOLOGY

CARL ENGEL CHRONOLOGY

Given the importance of this organological pioneer, a chronology is not inappropriate. It should be pointed out that except for his probable ownership of a Hitchcock about 1874, there is no evidence he acquired any other spinets. He did own a 1773 Kirkman harpsichord that he gave or sold to Hipkins in 1882 along with a clavichord and a lute. Hipkins gave these instruments to the Royal College of Music in 1903, the time of his death.

1818 Carl Engel was born near Hanover, one of 14 children of a Hanover postmaster. He and his siblings were privately educated.

c.1835 Engel went to Weimar where he was a piano pupil of Hummel's and a student in counterpoint and composition of Johann Lobe.

1844-5 (Hipkins) or 1846 (Riemann) He moved to Manchester. This was two years or so before his contemporary and fellow-countryman, Carl Halle (Sir Chas Halle) (1819 – 95), a Westphalian, arrived. They must have known each other, then and later.

1850 Engel married an Englishwoman and settled permanently in Kensington, London.

1852 He wrote and had published a piano sonata ('Opus 9') – also, five *Charakterstucke* ('Opus 8') for the piano.

1853 He wrote his first book, *The Pianist's Handbook,* which dealt solely with the modern and conventional instrument.

1855 He wrote *A Pianoforte School For Young Beginners.*

1856 He wrote *Reflections on Church Music* – his first publication not piano-related.

1864 Eight years later, he wrote *The Music of the Most Ancient Nations Particularly of the Assyrians, Egyptians, and Hebrews.* By now, his focus had permanently shifted from the modern piano and its music towards the exotic and historic. Whether this change occurred gradually or more directly, perhaps, owing to some compelling acquisitions is unknown.

1866 Thinking globally and historically, he wrote *An Introduction to the Study of National Music* – a compilation of his research into popular songs, traditions, and customs.

1869 In conjunction with his work at the South Kensington Museum (V&A), he published *Musical Instruments of all Countries* – a folio volume with 20 "photographs". In addition he wrote *A Descriptive Catalogue of the Musical Instruments in the South Kensington Museum* (the museum had acquired their first keyboard instrument, apparently a German ottavino, in 1857.) There was an appendix, "Collection of Instruments Lent by Mr. Carl Engel" that listed 60 instruments of his.

1871 Based on a letter from Rimbault to Engel dated April 25th, the two men were about to meet for the first time. This is 11 years after Rimbault's ground-breaking book was published. Each of these men had to have been familiar with the other's writings.

1871 A committee of about 50 were chosen to arrange for "An exhibition of musical instruments made before the year 1800". Engel and Rimbault were both on the committee.

1872 (June) The "Special Loan Exhibit of Ancient Musical Instruments" opened. It consisted of over 500 instruments together with drawings and casts. Engel had prepared the catalogue arranged in eight classes, the first of which was stringed keyboard instruments – about 40. The cynosure was Queen Elizabeth's virginal. There were just two English spinets: a Player lent by Kirkman and a Hitchcock lent by Sterndale Bennett. Of the 500 instruments, about 125 belonged to the museum; the remainder were on loan.

1874 Engel prepared *A Descriptive Catalogue of the Musical Instruments in the South Kensington Museum*, preceded by an "Essay on the History of Musical Instruments". It ended with an appendix listing the now, up-to 107 instruments from Engel's private collection, then on loan to the museum. There was just one English spinet: a Hitchcock.

1875 With Wm Maskell, Engel wrote *Musical Instruments, Number 5* in a collection of South Kensington Museum art handbooks. The focus was on ethno-musical and pre-medieval instruments. There was only one spinet: a Player.

1875 Perhaps owing to ill-health, Engel offered to sell his collection to the South Kensington Museum. In a letter of July 21st, the museum requested a price list. Keeping only a harpsichord, a clavichord (one of four), and a lute, he sold his personal collection, 201 instruments, to the museum for £556. This sale may have been consummated as late as 1882.

1876 Engel published a two-volume work, *Musical Myths and Facts*.

1878 Over the following four years, Engel prepared several ethno-musical articles published in the *Musical Times: The Literature of National Music* (1879), *Music of the Gypsies* (1880), *Aelolian Music* (1882).

1879 In three installments in the *Musical Times*, Engel wrote of the clavichord – focusing on the four he (once?) owned. He had acquired these in Germany.

1881 A.H. Littleton of the publishing house of Novello, Ewer & Co agreed to publish three books for Engel:

1. *The History of Chinese Music* (to have been re-titled, *The Musical Opinions of Confucius*).
2. *Vox Populi*, a collection of national airs or folk songs.
3. *Researches into the Early History of the Violin Family*.

Of these, only the last was printed - but, posthumously, in 1883.

1881 Engel's wife died.

1881 According to the *Musical Times*, in preparation for his planned return to Hamburg, Puttick & Simpson auctioned his books and papers on music history and theory in May, other works in July, and his modern instruments (pianos, harmoniums, violins, cellos, etc.) in August.

1882 (Nov 21) The very day Engel was to be married again, he unaccountably and unexpectantly hanged himself. It was reported in the *London Times* (Nov 22) he was to have

married a "Miss Lawrence". In a note he left to her, along with £1000 "for her acceptance", he "expressed a fear" that he would die suddenly. In its obituary (Dec 1), the *Musical Times* called him "The first musicologist in Europe".

1883 In his preface to Engel's violin book, A J Hipkins wrote, "Respect for Carl Engel and his life's work will last as long as there exists any desire to know, and disposition to assimilate, those musical facts, historical or ethnological which lie outside our every-day experience".

1888 A J Hipkins wrote the first article on Carl Engel for Grove's Dictionary. (For an unknown reason, Engel had not been a dictionary contributor). In his article, Hipkins wrote "His attainments as a musician, his clear insight into books in many languages, his indefatigable perseverance in research, and the exercise of a rare power of discrimination, make him one of the first authorities on his subject in Europe".

1942 In addition to various articles in the *Musical Times,* a particularly comprehensive source of information about Engel is a 42-page article in the *Musical Quarterly* (v.28, No.3, July 1942), "Some Letters to a Namesake", by Carl Engel (1883 – 1944), who was born a year after the organologist's death; however, he was not related.

APPENDIX F

THE HAWES CHRONOLOGY

WILLIAM HAWES (1785 – 1846)

ELIZABETH MULLINEX HAWES (1788 – 1871)

MARIA HAWES MEREST (1816 – 1886)

THE HAWES CHRONOLOGY

This Hawes chronology is an important link to our understanding of Queen Anne's missing spinet. Wm Hawes (1785 – 1846) is the last of six masters of the children of the Chapel Royal who inherited her instrument. In c.1830, it was either restored by him or it remained in playable condition after 116 accounted-for years passing through Hawes' predecessors. It would later be remembered as "a fine instrument" in the 1840s. As late as the early-mid 1840s, it had to have been, then, still, in the living quarters of the Hawes home.

It was never passed on to the 7th master, as Queen Anne had instructed. Instead, in 1860, it was reported to have been taken to the Hawes' attic. This was most likely just after William's death in 1846. Maria Hawes Merest (1816 – 86) was living there for a year and a half after her father's death and before her marriage. She had to have been a party to what may have been a family decision not to pass this spinet on.

1816 Maria Dowding Billington Hawes (Maria) was born. She appears to have been the central figure in this chronology.

1817 (June) Wm Hawes (WmH), her father, was appointed "Master of the Children" of the Chapel Royal upon the retirement of J S Smith, and acquired a town-house, #7 Adelphi Terrace, to house both his family and his 10 boy-choristers. Earlier, he had been one of the choristers, himself. He would continue his involvement in the theatre as well as music composing, editing, and publishing. He would also continue as the "Master of the Choristers" at St Paul's – a position he had held for five years. In 1817, he also became lay-vicar of Westminster. At this time, he would have inherited Queen Anne's spinet from Smith, who had retired as the previous master.

1818 He edited the major collection of English madrigals, the *Triumphs of Oriana* (1601), and managed to write biographies of all 24 of its composers.

1824 He was appointed music director of the Lyceum Theatre, the English opera house. In this capacity, he introduced Weber's *Der Freischutz* for the first time in England. He also performed Mozart's *Così fan Tutti* and *Don Giovanni* among other operas. The following year, he directed various Lenten oratorios at Covent Garden; and by 1830 or so, he was similarly active in other theatres. In 1830 or shortly after, he took Queen Anne's spinet to a theatre and used it to accompany a song.

Over and above this kinetic bustle, as Master of the Children, WmH was expected to feed, clothe, house, discipline, and educate the boys in his care. He did do this – but assuredly, only

after a fashion. Like Smith before him, he was later remembered as a harsh disciplinarian and an indifferent tutor.

1840 (May 14) Maria received her first mention in the *Times* – as a concert participant. There would be several similar notices over the following seven years.

1840 (Sept 23) Maria, now age 23, was the principal contralto in the first performance of Mendelssohn's *Lobgesang.*

1841 (June 14) "Mr and Miss Hawes' Annual Concert" was advertised in the *Times.* There was also a mention of WmH's "warehouse" at 355 Strand.

1846 (Feb 18) WmH died at #7 – still master at both St Paul's and the Chapel Royal at the time of his death. Queen Anne's spinet was not passed on to his successor, Thos Helmore; Helmore may not have known about it; on the other hand, he may have turned it down.

1846 (August 26) Mendelssohn wrote "O Rest in the Lord" expressly for Maria. She sang it at the first performance of "The Elijah" held in Birmingham.

1847 (May 15) "Miss Hawes' Annual Concert" was mentioned in *The Times* alone, without her father's name. Maria had lived at #7 for 30 years, and the wording of the press announcement would seem to confirm she was still living there 15 months after her father's death. Most of her siblings may have been living there then, too.

1847 (July 19) Maria married James Drage Merest (JDM), age 56.

> JDM's first wife had died in 1842 at the Merest family home in Suffolk, leaving him with three sons and four daughters (the youngest, 16, in 1847). While he had received "a substantial Soham (Cambridgeshire) estate" from his father when he died in 1814, the courts granted his first wife only beneficial interest from the estate of her father when he died in 1820. Evidently, although probably illiquid, JDM owned three properties at the time of his second marriage: the "Mansion on the Angel-Hill" at Bury St Edmunds in Suffolk; "The Moat", a 525-acre estate at Soham in Cambridgeshire; and a home in Ryde, Isle of Wight, in the English Channel.

1847 (July) Maria and JDM moved initially to his Bury St Edmunds home and lived there for a year and a half. Bury St Edmunds is just under 15 miles north-west of the village of Bildeston (population, c.800 then). Bildeston Hall, from where Dale's Haward spinet had allegedly been taken, was deserted from the 1720s on, had disintegrated, and was finally demolished in the decade 1851 to 1861.

1849 (Feb) The couple sold their home in Bury St Edmunds and moved to their Soham, Cambridgeshire estate, 22 miles to the west. (Cambridgeshire is just to the west of Suffolk).

Before 1860 The couple moved again, to their Ryde home on the Isle of Wight.

1852 (May 14) Maria was invited to the Queen's birthday party in London; she appears to have been one of hundreds, however.

1855 (July 11) In a strange ad in *The Times*, one of Maria's three brothers, John, anonymously advertised his availability to "a surgeon or chemist" to "dispense and keep books, etc". He said he was "at liberty daily after 1 o'clock". His wife or his mother, "Mrs. Hawes" at #7 was named as the contact.

1856 (June 19) In another anonymous ad, Maria's brother advertised he was seeking, "a genteel handsome villa" with stables, greenhouses, shrubbery, etc, "for five to seven years" for himself and his wife. The ad was headed, "Required to Rent". Apparently, he was unsuccessful.

1860 (Dec 20) The headquarters of the London Welsh Rifles was now at #7. This organization had to have rented some of the Hawes' rooms. They were evidently the first to do so.

1860 Edw. F Rimbault published his ground-breaking book, *The Pianoforte*, in which he mentioned the past, and perhaps the present existence of Queen Anne's spinet in the Hawes' attic.

1860 (Xmas Day) JDM died at the Merest home in the Isle of Wight. He was 69.

1861 (March 25) Several officers of the Institute of Naval Architects went to #7 to "select apartments which are to be converted into permanent offices for the institution". This organization seems to have been the Hawes' second tenant.

1861 (July 1) JDM's will was proved – but a full six months after his death. Claims against the estate could be made as late as 23 Feb 1863.

1861 (May 14) *The Times'* first new mention of Maria said she was now back and living at #7.

1861 (Sept 9) There was a *Times* notice of a concert by Maria that night at the Isle of Wight.

1861 (Nov 15) Maria advertised she was "in town for the season". "Engagement inquiries at #7 - -". Her first London appearance may have been on December 10th for a performance of "The Messiah".

1862 (March 20) This was the first in a four-year series of ads and notices in the press, where Maria offered to give vocal lessons and compose and sell songs. She also requested engagements and held soirees at #7. Early in this period, she and her vocal ensembles also gave concerts at several London concert halls.

1863 (July 15) This date seems to mark the change in her focus from London to concert-giving in "provincial cities". Notices and reviews to this effect would continue for three-and-a- half years until Feb 1867.

1866 (March 28) John Hawes, still living at #7, advertised and attempted to rent the Merest home in Ryde, with a long-term lease of five to ten years. The home and grounds were described in detail in the *Times*. He was evidently unsuccessful. It was Maria's inheritance and she died there 20 years later.

1866 (June 22 – July 6) A number of ads and notices appeared in *the Times* for four "final" soirees and concerts to be held at #7. Maria's last soiree there was on July 13th. Her last London concert seems to have been at the George Hotel on November 3rd.

1867 (August 3) Maria relocated to #3 Harley Road, St Johns-Wood-Park, N.W. She asked that "all letters, professional engagements, and vocal classes" be addressed to her there. *The Times* and *Musical Times* show no further ads or notices about her. She had lived at #7 for the previous seven years.

1871 Elizabeth Mullinex Hawes, Wm's widow and Maria's mother, died – evidently, at #7.

Members of the Hawes family may have retained ownership of #7 as late as 1890. Records show the Victorian (Philosophic) Institute rented space there from 1880, and the Royal Literary Fund did so from 1883 or before. But in 1890, #7 was sold to the Savage Club, which annexed it to #6 and occupied both town-houses until Adelphi Terrace was lamentably demolished in 1936.

1886 (April 24)Maria died at the Merest home in Ryde, Isle of Wight – age 70. Her estate was valued at less than £900. Sixty years before, her father had been earning between £2000 and £3000 a year.

1890 (Sept 14) John Hawes died.

Osborne House was built on the Isle of Wight in 1845 -51. It was designed and built by Prince Albert (1819 – 61) in collaboration with Thos Cubitt (1788 – 1855) as a "bucolic getaway" for the royal family. Since it was used by Queen Victoria until her death in 1901, it is interesting to speculate whether Maria was ever a guest there.

APPENDIX G

BILDESTON HALL – LATE-2011 CORRESPONDENCE – TABLE OF CONTENTS

BILDESTON HALL

Wm Dale stated that his Haward spinet, **16XX**, had come from "an old hall in Suffolk" – "Bildeston Hall". The attached correspondence from 2011 contains all of the information we have concerning his claim and it puts his account of its provenance in doubt. The 1726 inventory of the hall's 26 rooms was very detailed – noting a barometer and pictures on the walls, for example. Not only were no musical instruments mentioned, but there was nothing that could be considered cultural anywhere there at that time.

Chas W. Wilson
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15 September 2011

Charlotte Ashley-Cowan, Editor
The Bildeston Bugle
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Can any of your readers help me? I'm trying to find when Bildeston Hall, the manor house, was torn down. I'm not looking for the exact year; the century will do.

I own a 17thC. wing spinet once owned by the diarist, Sam'l Pepys. It allegedly 'was being carted away from an old hall in Suffolk as practically worthless' around 1870. Later, the same owner said, 'The Haward spinet I show tonight came from Bildeston Hall in Suffolk'. The problem is, on a 19thC. map pictured on the Internet, the caption reads, 'Bildeston Hall is shown despite being demolished in 1764. On this map the Hall was shown just to the west of the parish church, St. Mary Magdeline.

An ad in the London Times from 1885 reads, 'Sale of Estate. 1st Class landed investment situated near town of Bildeston...comprising an excellent residence, the Hall, and Chapel House farm with capital homesteads and convenient off-premises, 5 cottages and in all 628 acres let to highly responsible tenants...sporting rights - exc. partridge shooting...Biddell & Blencowe (auctioneers) instructed by trustees of S.B White, deceased, to sell by auction...2 lots:
1. The Bildeston Hall farm with 379 acres...
2. Chapel House farm with 248 acres...
Auctioneers Lavenham, Suffolk and Bury St. Edmunds.

To me this suggests the manor house was still standing in 1885 and was probably last occupied by S.B.White.

One hundred fifty years earlier, in his book, The Suffolk Traveller (1735), the topographer, John Kirbye wrote, 'The church is a very good building standing on a hill on the west side of the town near which is the mansion of the late Bartholomew Beale, Esq'. Bartholomew Beale, 3d, in fact, was buried in St Mary's churchyard 8 Sept 1724. Bildeston Hall was one of at least three properties he owned in different parts of England.

'Wikipedia' mentions, 'Bildeston Hall, occasional home to lords who often had interests elsewhere, was to the south-west of the church'. It then says, 'The (Bildeston) weekly Wednesday market failed in 1764...the manor house was demolished following the death of Bartholomew Beale, the last lord of the manor 40 years before'. It also says, 'Ploughing in 1974 removed remains of a circular moat and what may have been a fish pond'. Adding to the confusion, 'Wikipedia' elsewhere states, 'The Bildeston Hall still survives but is now split into two private residences on the corner of High street and Wattisham Road'. 'Wikipedia's' 1764 date could be questioned, for it happens to be the year Kirby's son reissued his father's 1735 book. I believe it contained no new material.

Cont'd - - -

To: Charlotte Ashley-Cowan

15 Dept 2011

From: Chas W Wilson

There is a Beale family connection to Pepys: Bartholomew Beale, 2d, was the 'Auditor Beale' mentioned eight times in the Diary and he was a relative of Pepys' wife, Elizabeth. If Bildeston Hall was still standing in c.1870, then everything ties neatly together. On the other hand, if it had been demolished sometime before, then we might smell a 'cover'. After all, if you have a hot item you'd like to sanitize, why not claim it came from a no-longer-existing manor house. Who would challenge it. We could have the makings of a great detective story here!

Chas W Wilson

(717) 244 1223

CHAS.WILSON2010@GMAIL.COM

Chas W. Wilson
1105 Windsor Road
Red Lion, PA 17356

October 2. 2010 11

Dear Mrs Andrews,

I really appreciate our recent phone conversations - and your help!! As I told you, there seems to be clear evidence of a 1667-8 date and a Pepys provenance for my spinet. The problem is, how to account for the two centuries c.1670 - 1870 +/-5 years.

As you can see, the claim was made that it was "being carted away"from Bildeston Hall. This had to be around 1870. If we can determine Bildeston Hall was finally demolished at about that time and not before, then I can accept that claim at face value. Sarah Steggles of the Suffolk Record Office seems to support that. In her letter to me, she says that an 1830 book "County of Suffolk" (G A Cooke) implies the hall was still there by the church. Also, the "Tithe map" of 1841 shows the Hall/Manor house still there then. But the "Ordnance Survey" maps of 1886 and 1940 just mark the "site of the Manor House." You have pointed out that the hall was not demolished in 1764, but just stripped of its wainscotting and possibly gutted. You also said it was still being taxed in 1782. The auction ad I'm enclosing from August 1885 suggests to me that the hall was still standing at that late date, though it was clearly not the "excellent residence" as touted in the ad. It's reasonable to assume the buyer could have torn it down for tax reasons shortly after the August 1885 sale. As I told you, the pattern of worm damage to the spinet suggests to me attic storage on the floor up against the wall. If the worms made it that far up, they must have done a jolly job along the way! You said the hall had not been occupied after 1724 (1726?). Since both Beale daughters probably moved to their husband's estates, this seems reasonable. But why a succession of owners were willing to pay taxes on it and not rent it out is hard to understand.

But if a 4th quarter 19thC demolition can be determined and a Wm Dale claim accepted, I'm left with these concerns:

1. You told me, in the inventory of 1706, the hall was totally unfurnished: Wm Revett had completely emptied it and everything there had to come from Barth. Beale after this date. But you told me in the probate inventory of 1724 (1726?) which included three of the four attic rooms, no musical instrument was listed. At that time, the spinet, although close to 60 years old, was not yet obsolete and shouldn't have been stashed in that 4th attic room where lumber was stored. This is astonishing: It simply <u>had</u> to have been there in the hall, but it apparently wasn't.

2. Wikipedia claims a relationship between "Auditor Beale" (Barth. Beale II - my term) and Pepys' wife. This is clearly wrong. Latham & Matthews claim a relationship between him and Pepys, himself. I question this. Pepys' great-grandfather had a daughter who married "Robt Beale of Whittlesey" but does his family tie to the Bartholomew Beales? Beale is not an uncommon name: There are several Beales in the Diary. Any possible relationship is distant. Regardless, Pepys was always trying to befriend those above him, and "Auditor Beale" was just this sort of individual.

3. Nevertheless, "Auditor Beale" was not the father of Bildeston's Barth. Beale (IIA) but his uncle - father of another Barth. Beale (IIB). The son of the painter, Mary Beale is still a third Barth. Beale - (IIC) - a third, first cousin! Before purchasing Bildeston Hall in 1706, IIA had lived on High Street, Kensington, London for two years and could have acquired the spinet, somehow, from his cousin who might have inherited it from his father. But earlier, IIA had lived in Goodestone, Kent, some distance away. With this information, though, we might try to hypothesize an ownership trail: Pepys 1668-c1670; "Auditor Beale" c1670-1674 (the year of his death): His son, Barth. IIB) 1674-1704/5; Barth. IIA 1704/5-1724. But none of this goes beyond "possible."

- -

The alternative explanation is that Wm Dale's story is pure fabrication - something 'cooked-up' by Maria Merest and the pioneer organologist, Carl Engel, who did buy the spinet around 1870. If so, it is Queen Anne's cherished Haward spinet, and it would have been given to her by Pepys when the 5-year old returned from France in 1670 with her eye affliction uncured. Pepys terminated his diary in May 1669 because of his concern about his eyesight. Princess Anne had just lost the three women (including her mother) most central to her. Pepys lost his wife, Elizabeth, in late 1670 after they returned from the Continent. The Duke of York was becoming increasingly important to Pepys - mentioned almost daily in the last few months of his diary. X 2020

Queen Anne kept her spinet until her death in 1714, and willed it to a succession of Masters of the Children of the Chapel Royal for the boys in the years ahead. It did pass through six Masters, the most prominent being Wm Croft (St Anne's hymn)

Maria Hawes Merest, daughter of the sixth Master, Wm Hawes, married Jas Drage Merest in 1847. The couple moved initially to Bury St Edmunds, 15 miles from Bildeston, and lived there 1½ years. In 1849 they sold their home in Suffolk and moved to another of her husband's houses in Cambridge. In 1860 she became a widow and moved back to her late-father's town house in Adelphi Terrace. She received little from her husband's estate and seems to have badly needed money.

We know Queen Anne's spinet was still playable (or put into playing order) in 1830 or so. It was regarded as a "fine instrument" in the 1840s. It was then taken to Wm Hawes' attic and not passed on. It was believed to be there as late as 1859-60.

It is my belief that Queen Anne's spinet was not destroyed at this late date and it has to be still with us - one of the six surviving Haward spinets. The other five all date from the 1680s and Chas Haward died 1689. Princess Anne was married in the early 1680s and her marriage with George was a happy one. They lived together in the "Cockpit" in London.

If my Haward came out of Bildeston Hall, it can be ruled out. This is why my research is vitally important: I would hate to malign a couple of decent people by making a spurious claim - or even a broad hint.

Thsnks for your help, and thanks for hearing me out!

Chas W Wilson

17 Manor Road
Bildeston, Ipswich
Suffolk, IP7 7BG

5 November 2011

Charles Wilson
1105 Windsor Road
Red Lion
Pennsylvania 17356

Dear Charles

After your October telephone calls, I saw your piece in *Bildeston Bugle*. Did you get any response?

The problem is that two buildings have had the name 'Bildeston Hall': [1] the manor house on the hill by the church and [2] a farmhouse at the end of Duke Street. The site of [1] and the position of [2] are both shown on the post-card that I sent you with the map dated 1884. I enclose a further copy in case you did not receive the card.

I also enclose a booklet *Bildeston Hall: Manorial Residence*, which I wrote twenty-one years ago. It concerns [1] but has a short note about [2] on page 12. This letter will repeat some of those details but will also add more information for you to consider!

First of all, I would like to explain the term 'manor'. A manor was a territorial system of lordship, which also functioned as a basic unit of seigniorial estate administration. During the medieval period, it consisted of land for the lord's own use known as demesne; lands allocated to dependant tenants; other economic resources such as fisheries, mills and mineral rights; and other rights in the form of customary and legal jurisdictions over these lands and resources. The lord's house was called the hall but if he or she was resident elsewhere, the hall became the home of a steward, who ran the manor on the lord's behalf. Demesne land could be directly exploited to provision the lord's household, while surplus crops could be sold; alternatively, it could be leased out in exchange for rent. For their lands, tenants owed various rents and services that bound them by a range of personal ties and obligations to the manor and its lord. By the 16th century, these services had been commuted to monetary rents. Sometimes the house and demesne lands were sold away from the manorial rights, as was the case at Bildeston.

[1] *Bildeston Hall* - the manor house

In 1705, when William Revett sold the Manor of Bildeston, that is, the title to lordship and the whole landed estate of 360 acres – the manor house was emptied except for a few fixtures and fittings.[1] Bartholomew Beale of Kensington, only son of Henry and Sarah Beale of Walton in Buckinghamshire,[2] was the purchaser[3] and he lived here with his wife Elizabeth and their two daughters, Elizabeth and Jane. Beale died in 1724 and his wife died two years later; they are buried in the vault under the chancel of Bildeston parish church, there being a memorial tablet to them on the north wall of the chancel. At his widow's death in 1726, an inventory was taken of the contents of *Bildeston Hall*, which shows that there were twenty-six rooms plus cellars below ground but there was no mention of any musical instruments.[4]

Both daughters inherited a half share in the lordship and in the landed estate but as they were now married and living with their respective husbands, so *Bildeston Hall* was no longer needed as a manorial residence. Owing to laws concerning the ownership of real estate by married women, the sisters' husbands held the title of lordship and the estate in right of their wives. However, in

1735, mention is made that 'near [the church of Bildeston] is the mansion house of William Alston'.[5] Elizabeth Beale had married William Alston of Bramford, Suffolk; she died in 1741 and her husband in 1749. As they were buried at Bramford and a memorial there is dedicated to them, it would seem that they were owners but not occupiers of *Bildeston Hall*.

The manorial rights eventually passed in 1764 to Jane Beale's son William Beale Brand of Polstead in Suffolk and, in 1814, through his widow to his great nephew Thomas William Cooke. His family were lords of the Manor of Bildeston until the end of the 19th century.[6]

After 1749, what happened to the manorial real estate, that is, the manor house and demesne lands, is not clear. However, in 1753-4 and again in 1756-7, George Chaplin was assessed to pay poor rates 'for the Hall' and in 1773-4, Thomas Chaplin was similarly assessed 'for the late Hall'.[7] Presumably, these assessments were not just for the manor house but also for the accompanying lands. Meanwhile, in 1762, Mr Chaplin, William Hines, Thomas Coull and William Johnson of Bildeston put *Bildeston Hall* up for sale, not as a dwellling-house but as a source for re-usable structural materials and features.[8] However, the building was not demolished, witness the reference to 'the late Hall' in 1774, which probably indicated that the building no longer has any manorial connections but just functioned as a farm house to the estate.

At sometime, Richard Wilson of Bildeston House became the owner and in 1822, he had a map drawn up to show the extent of the Bildeston Hall Farm and Street Farm. This survey shows the former manor house near to the church.[9] The house is also shown on the first Ordnance Survey of the 1830s,[10] with the tithe map of 1839 indicating that Thomas Bakewell White was owner-occupier,[11] having, as occupier, purchased Bildeston Hall Farm and Street Farm at the sale of the Wilson estate earlier that year.[12] White was also owner-occupier of other property and it appears that he was using the old manor house for his workers, as the census of 1841 shows that *Bildeston Hall*, now called 'Hall Farm' had been sub-divided with an agricultural labourer and his family living in one part and the other part unoccupied.[13] In 1844, a travel writer recorded that 'the ancient manor house stands near the parish church'.[14] The census for 1851 retained the name 'Hall Farm'[15] but censuses of 1861[16] and 1871[17] record 'Hall Cottages'. Does this indicate that *Bildeston Hall* had been demolished and new workers' cottages erected? The next edition of Ordnance Survey in the mid 1880s shows '*Bildeston Hall* (site of)' [1] and neighbouring cottages on the hill near the church and Bildeston Hall [2] at the west end of Duke Street by the river.[18]

Conclusion: Although the lordship of Bildeston was retained, Bildeston manorial estate and its residence *Bildeston Hall* were sold sometime between 1735 and 1753. The building was eventually demolished sometime between 1851 and 1861.

[2] Bildeston Hall – farmhouse to Street Farm

Lying to the east of Bildeston Hall Farm, Street Farm has its farmhouse at the western end of Duke Street near the river. In 1822, Richard Wilson was owner [19] and it would seem that Street Farm and Bildeston Hall Farm,, which he also owned, were amalgamated under one name, this is, Bildeston Hall Farm. In 1851, Thomas B. White was living at the farmhouse of Street Farm[20] and in 1861 and subsequently, his son Samuel B. White was head of household.[21] Mid 1880s maps show this farmhouse at the west end of Duke Street as Bildeston Hall,[22] the name it has today. It is a late medieval building that has been enlarged sometime in the 18th century.

After Samuel B. White died, in 1885, his trustees advertised his property for sale. Lot 1 consisted of Bildeston Hall Farm, which totalled 379¼ acres, of which 51 acres were copyhold.[23] The capital homestead referred to as 'the Hall' was not the former manor house but the building that had formerly been known as Street Farmhouse.

Conclusion: Sometime after the amalgamation of Bildeston Hall Farm and Street Farm, the farmhouse of Street Farm took on the name Bildeston Hall and has been known as such since at least 1884.

Abbreviations:

BM	British Museum
SROB	Suffolk Record Office Bury St Edmunds
SROI	Suffolk Record Office Ipswich

Notes:

1. SROI, S1/1/47.20.
2. W.A. Copinger, *Manors of Suffolk*, vol.3 (1909), p.138.
3. SROI, S1/1/47.10-11.
4. SROB, IC55/3/45/9.
5. J. Kirby, *The Suffolk Traveller* (1735), p.55-56.
6. W.A. Copinger, *Manors of Suffolk*, vol.2 (1905), p.181.
7. SROB, FB79/G1/1 & 3.
8. *Ipswich Journal*, 11 Sept 1762.
9. BM, Additional Manuscripts 43737AA.
10. *Ordnance Survey One-Inch Old Series*, Sheet 155 (2006).
11. SROB, T95/1-2.
12. *Ipswich Journal*, 11 May 1839.
13. S & N British Data Archive *Suffolk 1841 Census* (2006).
14. A. Page, *Supplement to the Suffolk Traveller* (1844), p.988.
15. S & N British Data Archive, *Suffolk 1851 Census* (2006).
16. S & N British Data Archive, *Suffolk 1861 Census* (2005).
17. S & N British Data Archive, *Suffolk 1871 Census* (2004).
18. Ordnance Survey 6-inch, LXIV.SE (1st edition, 1884) & 25-inch, LXIV.16 (1st edition, 1885).
19. BM, Additional Manuscripts 43737AA.
20. S & N British Data Archive, *Suffolk 1851 Census* (2006).
21. S & N British Data Archive, *Suffolk 1861 Census* (2005) & *Suffolk 1871 Census* (2004).
22. Ordnance Survey, 6-inch, LXIV.SE (1st edition, 1884) & 25-inch, LXIV.16 (1st edition, 1885).
23. *The Times*, 25 July 1885.

I hope that this information is of interest to you. I do not think that it resolves the problem of which 'Bildeston Hall' was the home of your spinet. I will leave it up to you to decide.

With all good wishes

Sue Rivers

December 11, 2011

Sue Andrews
17 Manor Road
Bildeston, Ipswich
Suffolk IP7 7BG England

Dear Mrs Andrews:

Thank you for your highly informative letter and your 1990 "Bildeston Hall" booklet you sent me last month. There is more I will write you about later, but with no further delay, I want to get you something now.

You asked if I had any response to my piece in the "Bugle." I received just one message - a particularly valuable one - from a Polly Bying. I assume her house is close to the manor house. If her 1850 date is certain, the conversion of her coach house into a dwelling that year must coincide with the building of the other cottages on the property. And that could coincide with the final demolition of the Hall. After all, the census of 1851 was probably from data collected the year before.

From your booklet, I infer that the Newberry Farm farmhouse (22 High St) was apparently built or enlarged from bits and pieces of the manor house. Also, today's Bildeston Hall has been recently described by "British Listed Bldgs" as, "A timber-framed building possibly of 16thC or 17thC origin but considerably altered in the 19thC with a wing rebuilt or added at the west side..." Presumably both houses shared parts of the demolished manor house, and if so, a reasonably close date might be possible.

As to "which Bildeston Hall" was home to my spinet; today, I'm inclined to say, neither - even assuming a late-1861 demolition.of the manor house. If you are interested, I'll write you in detail about this later.

Meanwhile, have a very Merry Christmas!

Chas W Wilson

17 Manor Road
Bildeston. Ipswich
Suffolk. IP7 7BG

23 December 2011

Charles Wilson
1105 Windsor Road
Red Lion
Pennsylvania 17356

Dear Charles

Thank you for your card and enclosed letter. Please. it is Sue (and not Mrs). My husband is Coleman. a name I do not use.

I am afraid that Polly Byng's information does not add anything to your story as she lives in Bildeston High Street south of what is labelled as *Cocoa Nut Matting Factory* on the 1884 map. Her home used to be the coach-house for *The Mansion*. which is now called *Bildeston House* and has nothing to do with [1] *Bildeston Hall*. the manor house or [2] *Bildeston Hall*. the farm house at the end of Duke Street.

I do not think that I have told you that I have a master's degree in local history and that I am honorary archivist for Hadleigh Town Council. For the last year. I have been producing a local history magazine called *The Hadleigh Historian*. which has received a very favourable reception.

Re-reading all my research concerning Bildeston in order to pass details to you. I came to the conclusion that I had sufficient information (drawers. folders and boxes full) to produce a similar magazine for Bildeston. I enclose a copy of Issue 1 for your interest.

Seasons Greetings and all good wishes for the coming New Year 2012.

Sue

APPENDIX H

SAMUEL PEPYS – AN R. L. STEVENSON TRIBUTE, 1894 – TABLE OF CONTENTS

SAMUEL PEPYS – AN R. L. STEVENSON TRIBUTE

The following tribute was found among the "Essays English and American" in the Harvard Classics (1909-14) – Pres. Chas Eliot's "Five-Foot Bookshelf" (in Vol 28 of 51 volumes). It was written by Robt Louis Stevenson (1850 – 94) in the last year of his life. Although lengthy, it is an extraordinarily sensitive and elegantly written eulogy and will be generally unfamiliar to today's readers. Hence, I am quoting it in full here.

A Liberal Genius

Pepys spent part of a certain winter Sunday, when he had taken physic, composing "a song in praise of a liberal genius (such as I take my own to be) to all studies and pleasures." The song was unsuccessful, but the Diary is, in a sense, the very song that he was seeking; and his portrait by Hales, so admirably reproduced in Mynors Bright's edition, is a confirmation of the Diary. Hales it would appear, had known his business; and though he put his sitter to a deal of trouble, almost breaking his neck "to have the portrait full of shadows," and draping him in an Indian gown hired expressly for the purpose, he was preoccupied about no merely picturesque effects, but to portray the essence of the man. Whether we read the picture by the Diary or the Diary by the picture, we shall at least agree that Hales was among the number of those who can "surprise the manners in the face." Here we have a mouth pouting, moist with desires; eyes greedy, protuberant, and yet apt for weeping too; a nose great alike in character and dimensions; and altogether a most fleshly, melting countenance. The face is attractive by its promise of reciprocity. I have used the word greedy, but the reader must not suppose that he can change it for that closely kindred one of hungery; for there is here no aspiration, no waiting for better things, but an animal joy in all that comes. It could never be the face of an artist; it is the face of a viveur – kindly, pleased and pleasing, protected from excess and upheld in contentment by the shifting versatility of his desires. For a single desire is more rightly to be called a lust; but there is health in a variety, where one may balance and control another.

The whole world, town or country, was to Pepys a garden of Armida. Wherever he went, his steps were winged with the most eager expectation; whatever he did, it was done with the most lively pleasure. An insatiable curiosity in all the shows of the world and all the secrets of knowledge, filled him brimful of the longing to travel, and supported him in the toils of study. Rome was the dream of his life; he was never happier than when he read or talked of the Eternal City. When he was in Holland, he was "with child" to see any strange thing. Meeting some friends and singing with them in a palace near The Hague, his pen fails him to express his passion of delight, "the more so because in a heaven of pleasure and in a strange country." He must go to see all famous executions. He must needs visit the body of a murdered man, defaced "with a broad wound," he says, "that makes my hand now shake to write of it." He learned to dance, and was "like to make a dancer." (He learned to sing, and walked about Gray's Inn Fields "humming to myself (which is now my constant practice) the trillo". He learned to play the lute, the flute, the flageolet, and the theorbo, and it was not the fault of his intention if

he did not learn the harpsichord or the spinet. He learned to compose songs, and burned to give forth "a scheme and theory of music not yet ever made in the world." When he heard "a fellow whistle like a bird exceeding all," he promised to return another day and give an angel for a lesson in the art. Once, he writes, "I took the Bezan Hope, taking great pleasure in learning the seamen's manner of singing when they sound the depths." If he found himself rusty in his Latin grammar, he must fall to it like a schoolboy. He was a member of Harrington's Club till its dissolution, and of the Royal Society before it had received the name. Boyle's Hydrostatics was "of infinite delight" to him, walking in Barnes Elms. We find him comparing Bible concordances, a captious judge of sermons, deep in Descartes and Aristotle. We find him, in a single year, studying timber and the measurement of timber; tar and oil, hemp, and the process of preparing cordage; mathematics and accounting; the hull and the rigging of ships from a model; and "looking and improving himself of the (naval) stores with "-hark to the fellow! – "great delight." His familiar spirit of delight was not the same with Shelley's; but how true it was to him through life! He is only copying something, and behold, he "takes great pleasure to rule the lines, and have the capital words wrote with red ink"; he has only had his coal- cellar emptied and cleaned, and behold, "it do please him exceedingly." A hog's harslett is "a piece of meat he loves." He cannot ride home in my Lord Sandwich's coach, but he must exclaim, with breathless gusto, "his noble, rich coach." When he is bound for a supper party, he anticipates a "glut of pleasure." When he has a new watch, "to see my childishness," says he, "I could not forbear carrying it in my hand and seeing what o'clock it was an hundred times." To go to Vauxhall, he says, and "to hear the nightingales and other birds, hear fiddles, and there a harp and here a Jew's trump, and here laughing, and there fine people walking, is mighty divertising." And the nightingales, I take it, were particularly dear to him; and it was again "with great pleasure" that he paused to hear them as he walked to Woolwich, while the fog was rising and the April sun broke through.

He must always be doing something agreeable, and, by preference, two agreeable things at once. In his house he had a box of carpenter's tools, two dogs, an eagle, a canary, and a blackbird that whistled tunes, lest, even in that full life, he should chance upon an empty moment. If he had to wait for a dish of poached eggs, he must put in the time by playing on the flageolet; if a sermon were dull, he must read in the book of Tobit or divert his mind with sly advances on the nearest women. When he walked, it must be with a book in his pocket to beguile the way in case the nightingales were silent; and even along the streets of London, with so many pretty faces to be spied for and dignitaries to be saluted, his trail was marked by little debts "for wine, pictures, etc.," the true headmark of a life intolerant of any joyless passage. He had a kind of idealism in pleasure; like the princess in the fairy story, he was conscious of a rose – leaf out of place. Dearly as he loved to talk, he could not enjoy nor shine a conversation when he thought himself unsuitably dressed. Dearly as he loved eating, he "knew not how to eat alone;" pleasure for him must heighten pleasure; and the eye and ear must be flattered like the palate ere he avow himself content. He had no zest in a good dinner when it fell to be eaten "in a bad street and in a periwigmaker's house"; and a collation was spoiled for him by indifferent music. His body was indefatigable, doing him yeoman service in this breathless chase of pleasures. On April 11, 162, he mentions that he went to bed "weary, which I seldom am"; and already over thirty, he would sit up all night cheerfully to see a comet. But it is never pleasure that exhausts the pleasure – seeker; for in that career, as in all others, it is failure that kills. The man who enjoys so wholly and bears so impatiently the slightest widowhood from joy, is just the man to lose a night's rest over some paltry question of his right to fiddle on the leads, or to be "vexed to the blood" by a solecism in his wife's attire; and we find in consequence that he was always peevish when he was hungry, and that his head "aked mightily" after a dispute. But

nothing could divert him from his aim in life; his remedy in care was the same as his delight in prosperity; it was with pleasure, and with pleasure only, that he sought to drive out sorrow; and, whether he was jealous of his wife of skulking from a bailiff; he would equally take refuge in the theatre. There, if the house be full and the company noble, if the songs be tunable, the actors perfect, and the play diverting, this old hero of the secret Diary, this private self-adorer, will speedily be healed of his distresses.

Equally pleased with a watch, a coach, a piece of meat, a tune upon the fiddle, or a fact in hydrostatics, Pepys was pleased yet more by the beauty, the worth, the mirth, or the mere scenic attitude in life of his fellow-creatures. He shows himself throughout a sterling humanist. Indeed, he who loves himself, not in idle vanity, but with a plenitude of knowledge, is the best equipped of all to love his neighbors. And perhaps it is in this sense that charity may be most properly said to begin at home. It does not matter what quality a person has: Pepys can appreciate and love him for it. He "fills his eyes" with the beauty of Lady Castlemaine; indeed, he may be said to dote upon the thought of her for year; if a woman be good-looking and not painted, he will walk miles to have another sight of her; and even when a lady by mischance spat upon his clothes, he was immediately consoled when he had observed that she was pretty. But, on the other hand, he is delighted to see Mrs. Prett upon her knees, and speaks thus of his Aunt James; "a poor, religious, well-meaning, good soul, talking of nothing but God Almighty, and that with so much innocence that mightily pleased me." He is taken with Pen's merriment and loose songs, but not less taken with the sterling worth of Coventry. He is jolly with a drunken sailor. But listens with interest and patience, as he rides the Essex roads, to the story of a Quaker's spiritual trials and convictions. He lends a critical ear to the discourse of kings and royal dukes. He spends an evening at Vauxhall with "Killigrew and young Newport – loose company," says he, "but worth a man's being in for once, to know the nature of it, and their manner of talk and lives. "And when a rag-boy lights him home, he examines him about his business and other ways of livelihood for destitute children. This is almost half-way to the beginning of philanthropy; had it only been the fashion, as it is at present, Pepys had perhaps been a man famous for good deeds. And it is through this quality that he rises, at times, superior to his surprising egotism; his interest in the love affairs of others is, indeed, impersonal; he is filled with concern for my Lady Castlemaine, whom he only knows by sight, shares in her very jealousies, joys with her in her successes; and it is not untrue, however strange it seems in his abrupt presentment, that he loved his maid Jane because she was in love with his man Tom.

Let us hear him, for once, at length: "So the women and W. Hewer and I walked upon the Downes, where a flock of sheep was; and the most pleasant and innocent sight that every I saw in my life. We found a shepherd and his little boy reading, far from any houses or sight of people, the Bible to him; so I make the boy to read to me, which he did with the forced tone that children do usually read, that was mighty pretty; and then I did give him something, and went to the father, and talked with him. He died content himself mightily in my liking his boy's reading, and di bless God for him the most like one of the old patriarchs that ever I saw in my life, and it brought those thoughts of the old age of the world in my mind for two or three days after. We took notice of his woollen knit stockings of two colors mixed, and of his shoes shod with iron, both at the toe and heels, and with great nails in the soles of his feet, which was mighty pretty; and taking notice of them, 'Why,' says the poor man, 'the downes, you see, are full of stones, and we are faine to shoe ourselves thus; and these,' says he, 'will make the stones fly till they ring before me.' I did give the poor man something, for which he was mighty thankful, and I tried to cast stones with his horne crooke. He values his dog mightily, that would turn a sheep

any way which he would have him, when he goes to fold them; told me there was about eighteen score sheep in his flock, and that he hath four shillings a week the year round for keeping of them; and Mrs. Turner, in the common fields here, did father one of the prettiest nosegays that ever I saw in my life."

And so the story rambles on to the end of that day's pleasuring; with cups of milk, and glow-worms, and people walking at sundown with their wives and children, and all the way home Pepys still dreaming "of the old age of the world" and the early innocence of man. This was how he walked through life, his eyes and ears wide open, and his hand, you will observe, not shut; and thus be observed the lives, the speech, and the manners of his fellow-men, with prose fidelity of detail and yet a lingering glamour or romance.

It was "two or three days after" that he extended this passage in the pages of his Journal, and the style has thus the benefit of some reflection. It is generally supposed that, as a writer, Pepys must rank at the bottom of the scale of merit. But a style which is indefatigably lively, telling, and picturesque through six large volumes of everyday experience, which deals with the whole matter of a life, and yet is rarely wearisome, which condescends to the most of fastidious particulars, and yet sweeps all away in the forthright current of the narrative; such a style may be ungrammatical, it may be inelegant, it may be one tissue of mistakes, but it can never be devoid of merit. The first and the true function of the writer can never be devoid of merit. The first and the true function of the writer has been thoroughly performed throughout; and though the manner of his utterance may be childishly awkward, the matter has been transformed and assimilated by his unfeigned interest and delight. The gusto of the man speaks out fierily after all these years. For the difference between Pepys and Shelley, to return to that half whimsical approximation, is one of quality but not one of degree; in his sphere, Pepys felt as keenly, and his is the true prose of poetry – prose because the spirit of the man was narrow and earthly, but poetry because he was delightedly alive. Hence, in such a passage as this about the Epsom shepherd, the result upon the reader's mind is entire conviction and unmingled pleasure. So, you feel, the thing fell out, not otherwise; and you would no more change it than you would change a sublimity of Shakespeare's a homely touch of Bunyan's, or a favored reminiscence of your own.

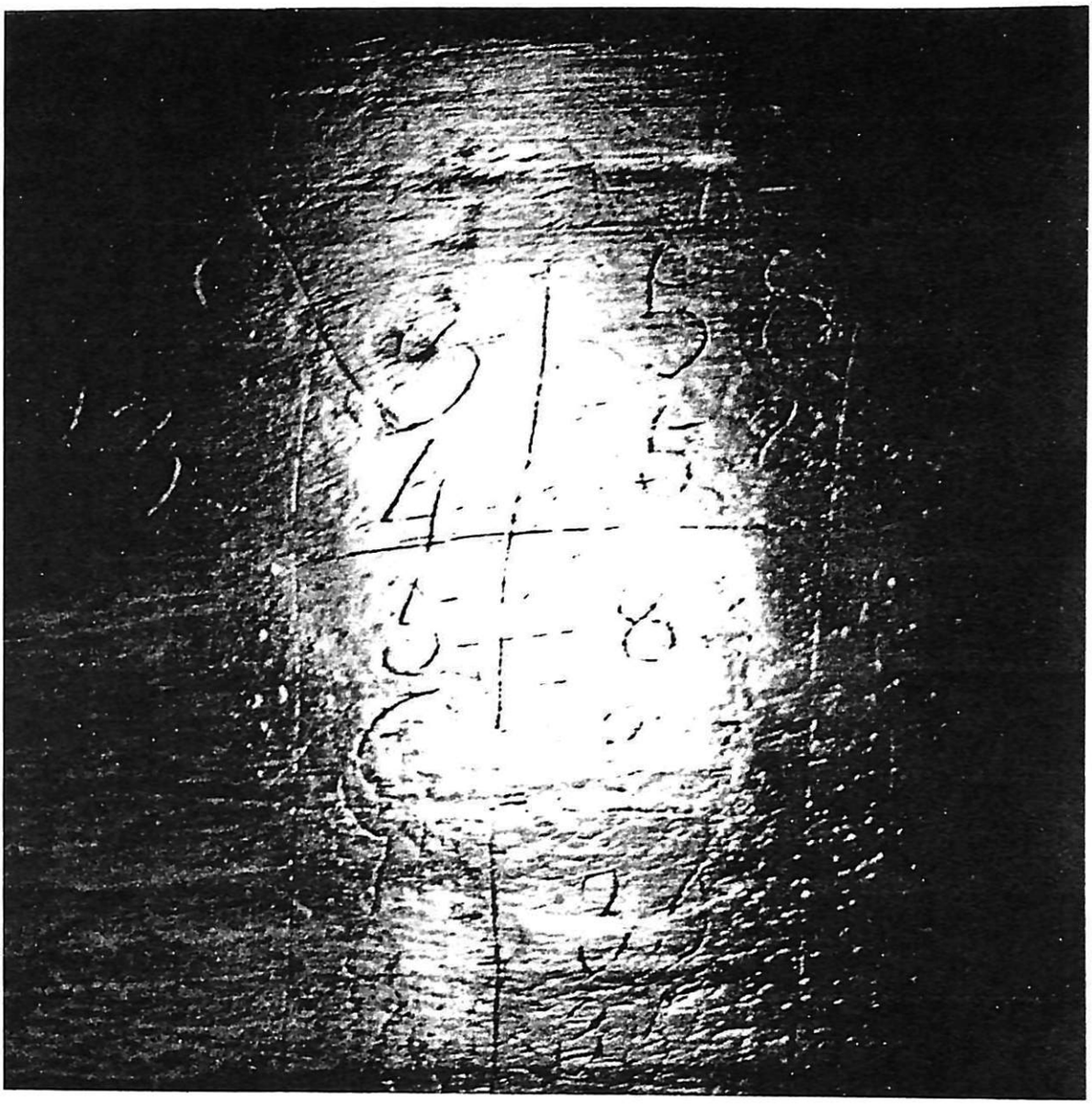
There never was a man nearer being an artist, who yet was not one. The tang was in the family; while he was writing the journal for our enjoyment in his comely house in Navy Gardens, no fewer than two of his cousins were tramping fens, kit under arm, to make music to the country girls. But he himself, though he could play so many instruments and pass judgment in so many fields of art, remained an amateur. It is not given to any one so keenly to enjoy, without some greater power to understand. That he did not like Shakespeare as an artist for the stage may be a fault, but it is not without either parallel or excuse. He certainly admired him as a poet; he was the first beyond mere actors on the rolls of that innumerable army who have got "To be or not to be" by heart. Nor was he content with that; it haunted his mind; he quoted it to himself in the pages of the diary, and, rushing in where angels fear to tread, he set it to music. Nothing, indeed, is more notable than the heroic quality of the verses that our little sensualist in a periwig chose out to marry with his own mortal strains. Some gust from brave Elizabethan times must have warmed his spirit, as he sat tuning his sublime theorbo. "To be or not to be. Whether 'tis nobler" – "Beauty retire, thou dost my pity move" – "It is decreed, nor shall they fate, O Rome"; – open and dignified in the sound, various and majestic in the sentiment, it was no inapt, as it was certainly no timid, spirit that selected such a range of themes. Of "Gaze not on Swans," I know no more than these four words; yet that also seems to promise well. It was,

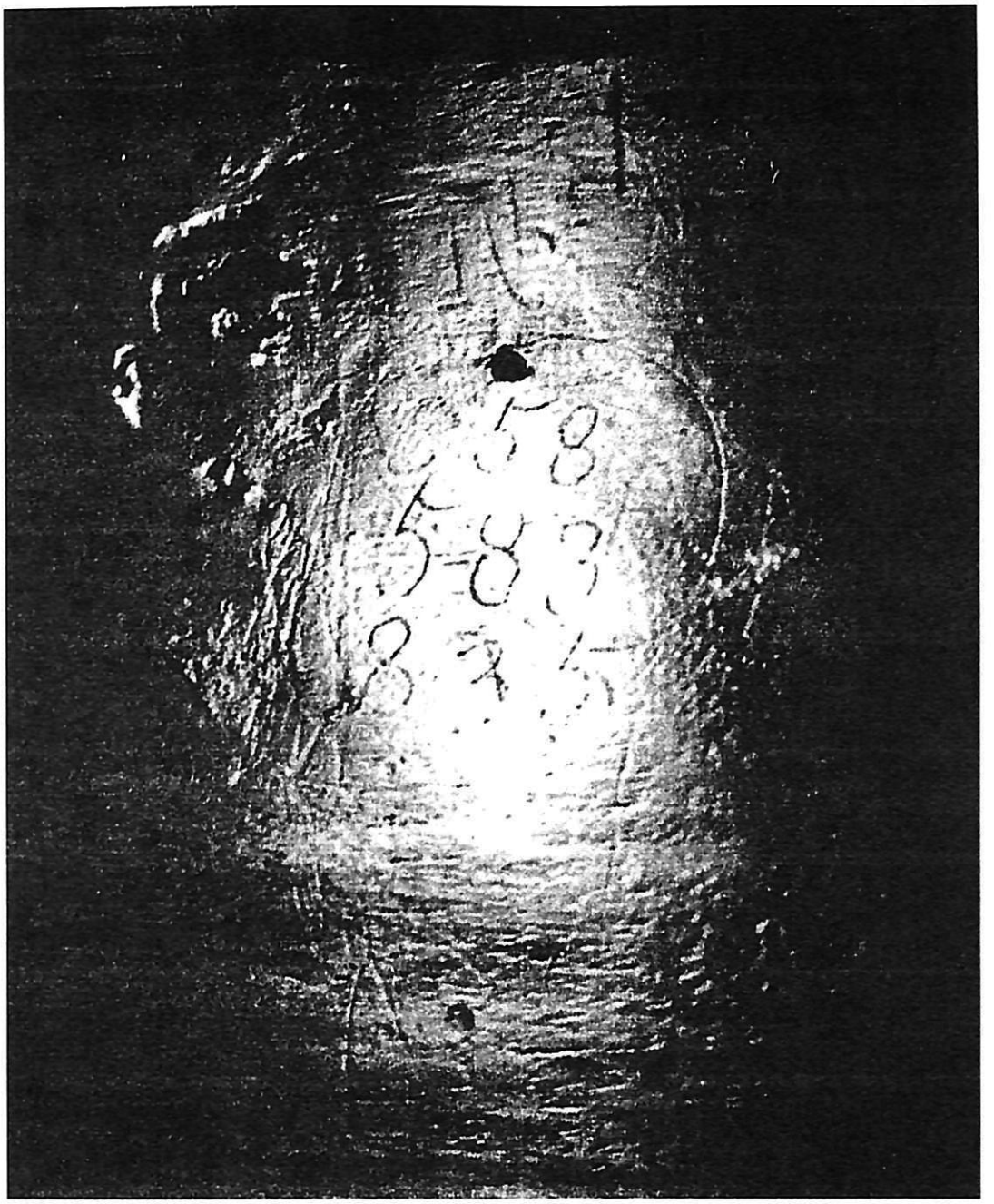
however, not a probably suspicion, the work of his master, Mr. Berkenshaw – as the drawings that figure at the breaking up of a young ladies' seminary are the work of the professor attached to the establishment. Mr. Berkenshaw was not altogether happy in his pupil. The amateur cannot usually rise into the artist, some leaven of the world still clogging him; and we find Pepys behaving like a pickthank the man who taught him composition. In relation to the stage, which he so warmly loved and understood, he was not only more hearty, but more generous to others. Thus he encounters Colonel Reames, "a man," says he, "who understands and loves a play as well as I, and I love him for it." And again, when he and his wife had seen a most ridiculous insipid piece, "Glad we were," he writes, "that Betterton had no part in it." It is by such a zeal and loyalty to those who labor for his delight that the amateur grows worthy of the artist. And it should be kept in mind that, not only in art, but in morals, Pepys rejoiced to recognize his betters. There was not one speck of envy in the whole human-hearted egotist.

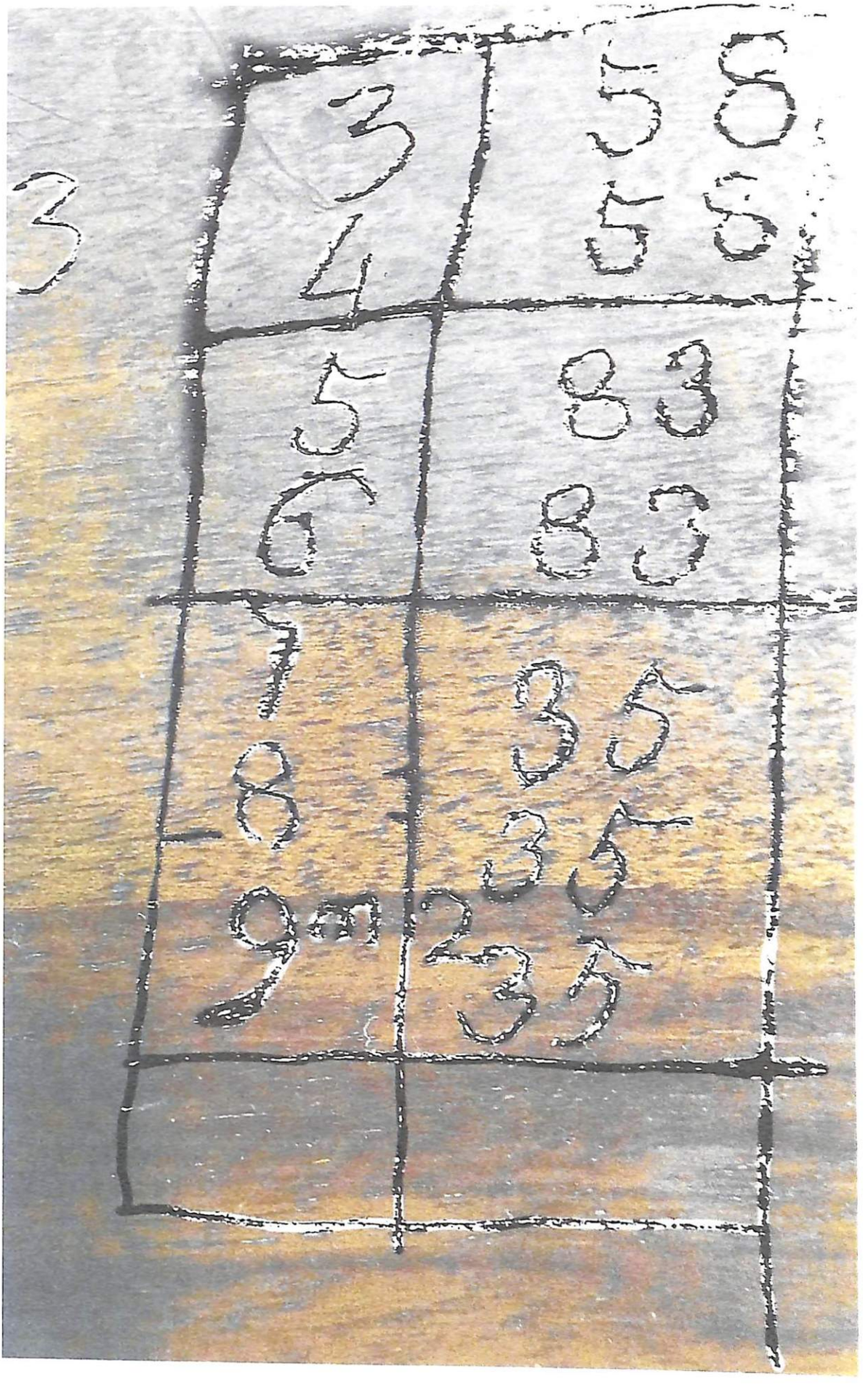
APPENDIX I

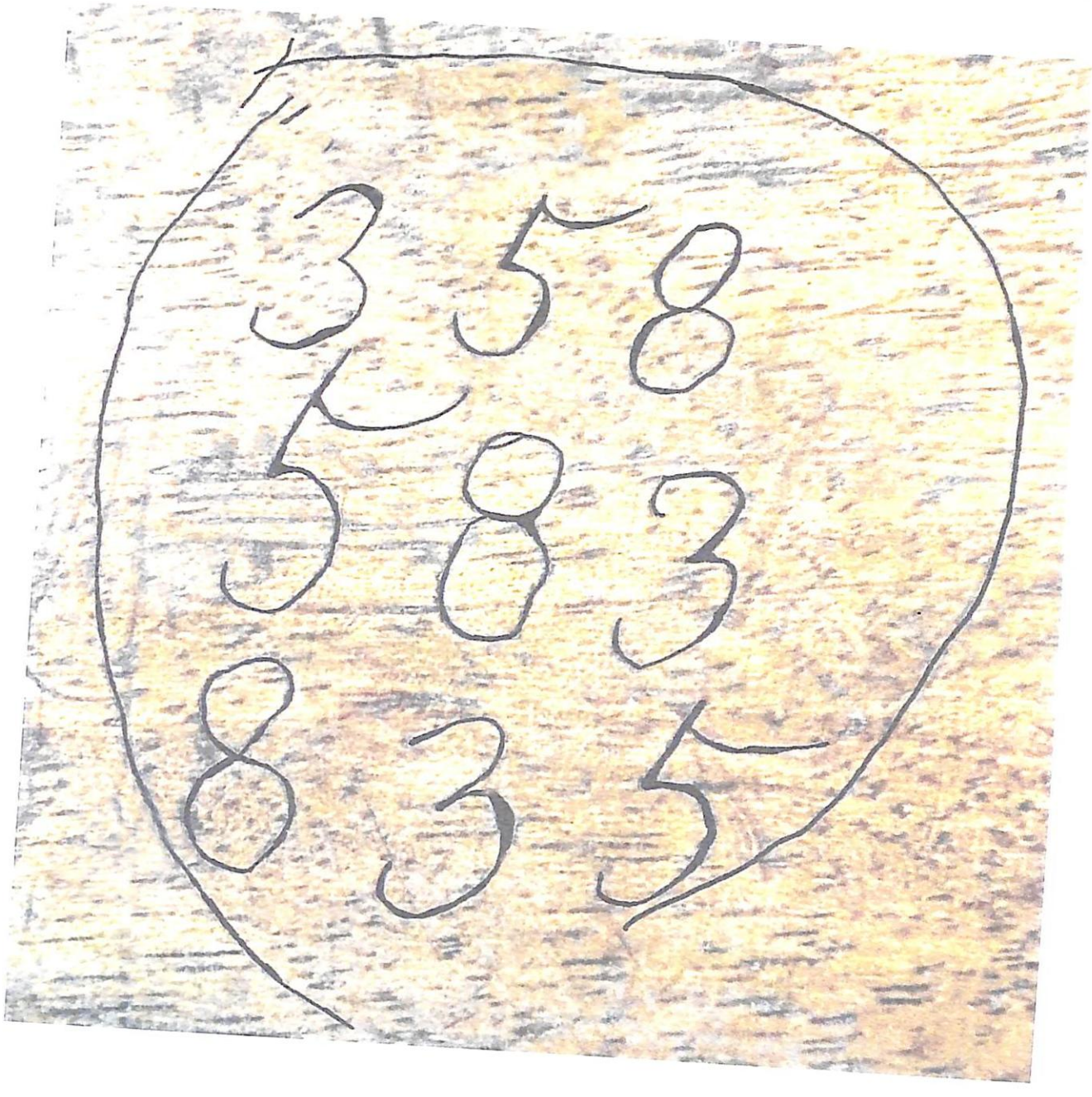
16XX MISC. – TABLE OF CONTENTS

This appendix brings together the most important evidentiary material for Haward spinet **16XX**. Although each of these documents and illustrations, trimmed, can be found elsewhere in this thesis, they are scattered. The ink-enhanced illustrations, showing evidence of both John Haward and Samuel Pepys are particularly important.





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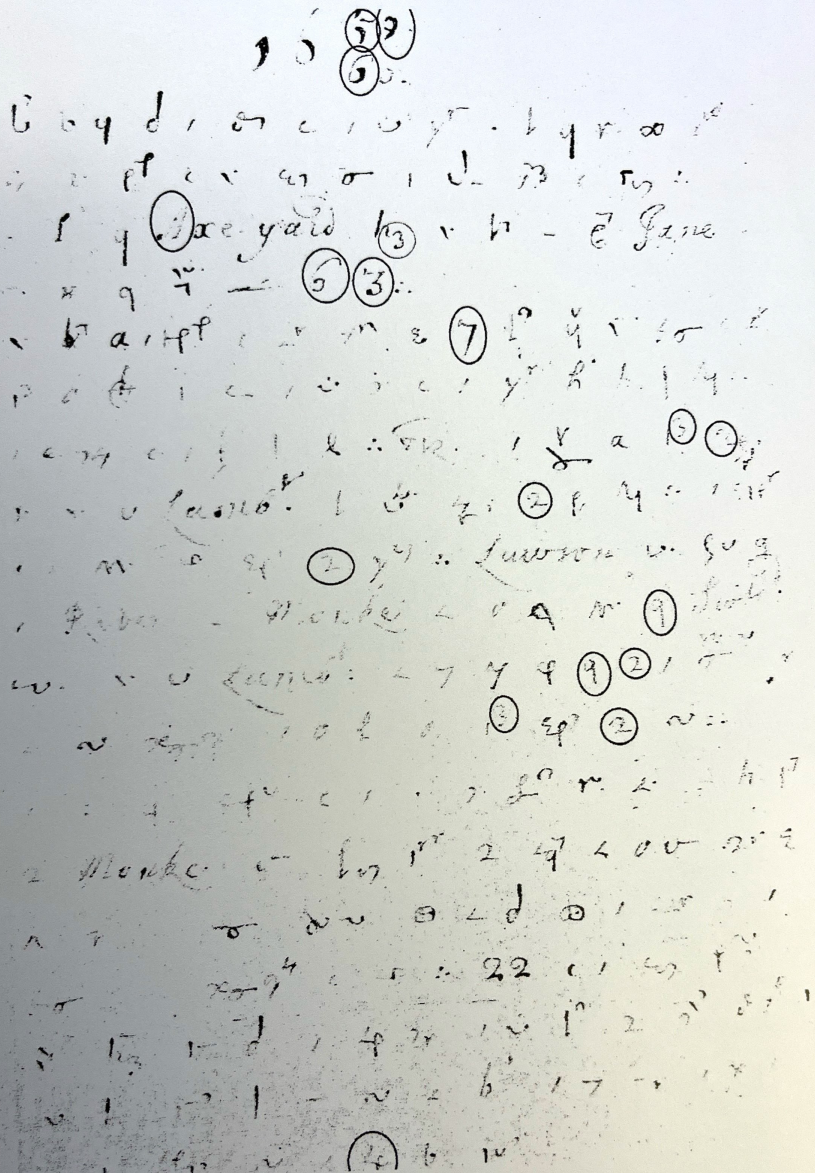

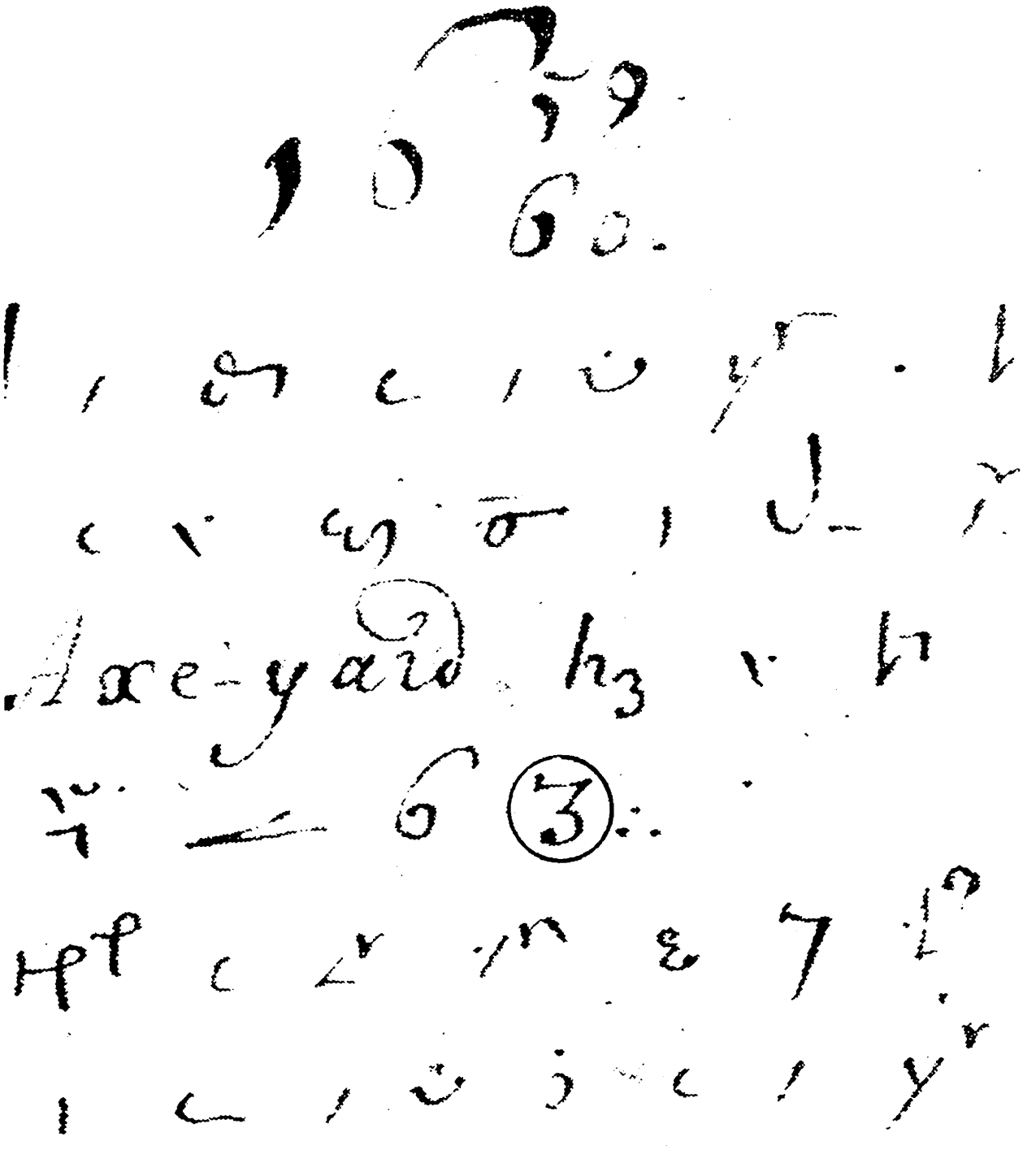

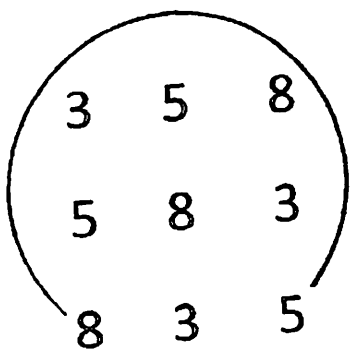
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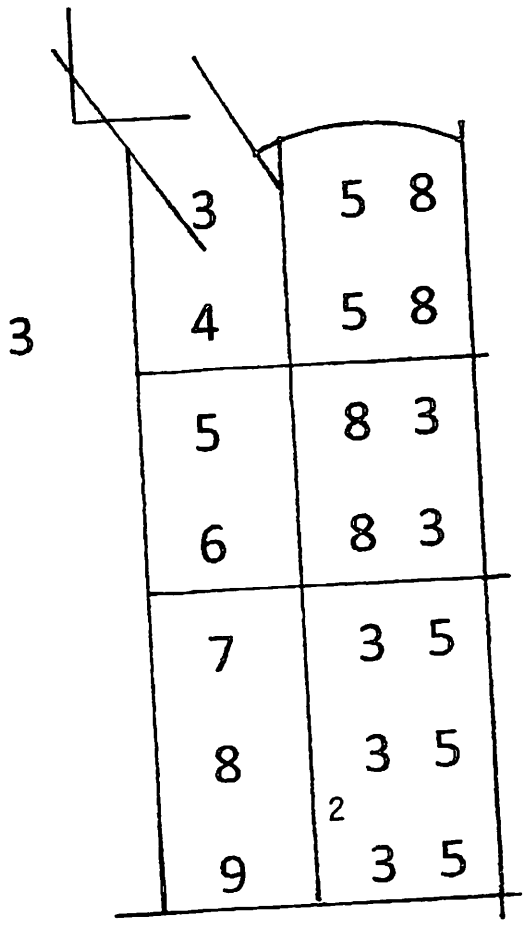
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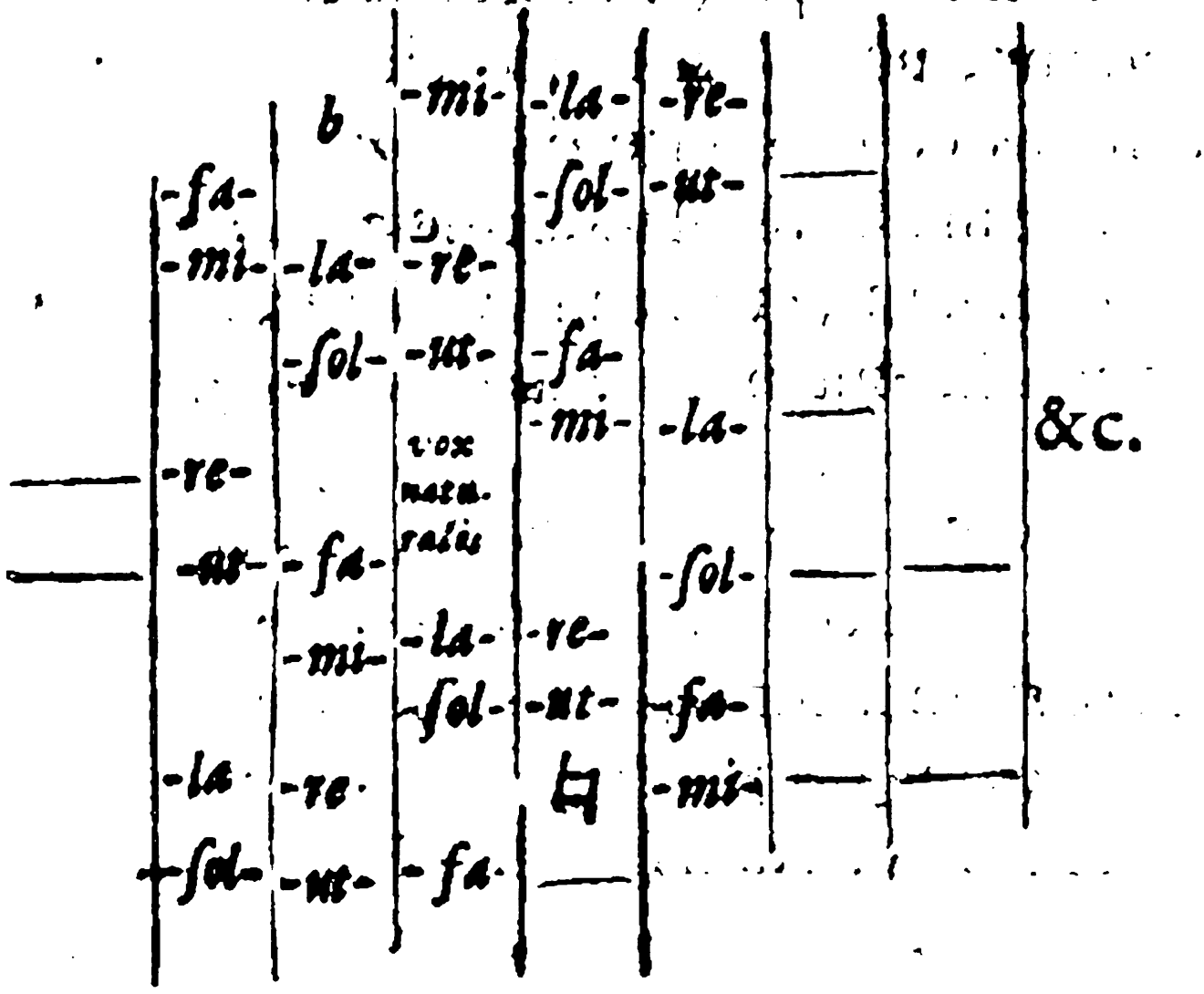
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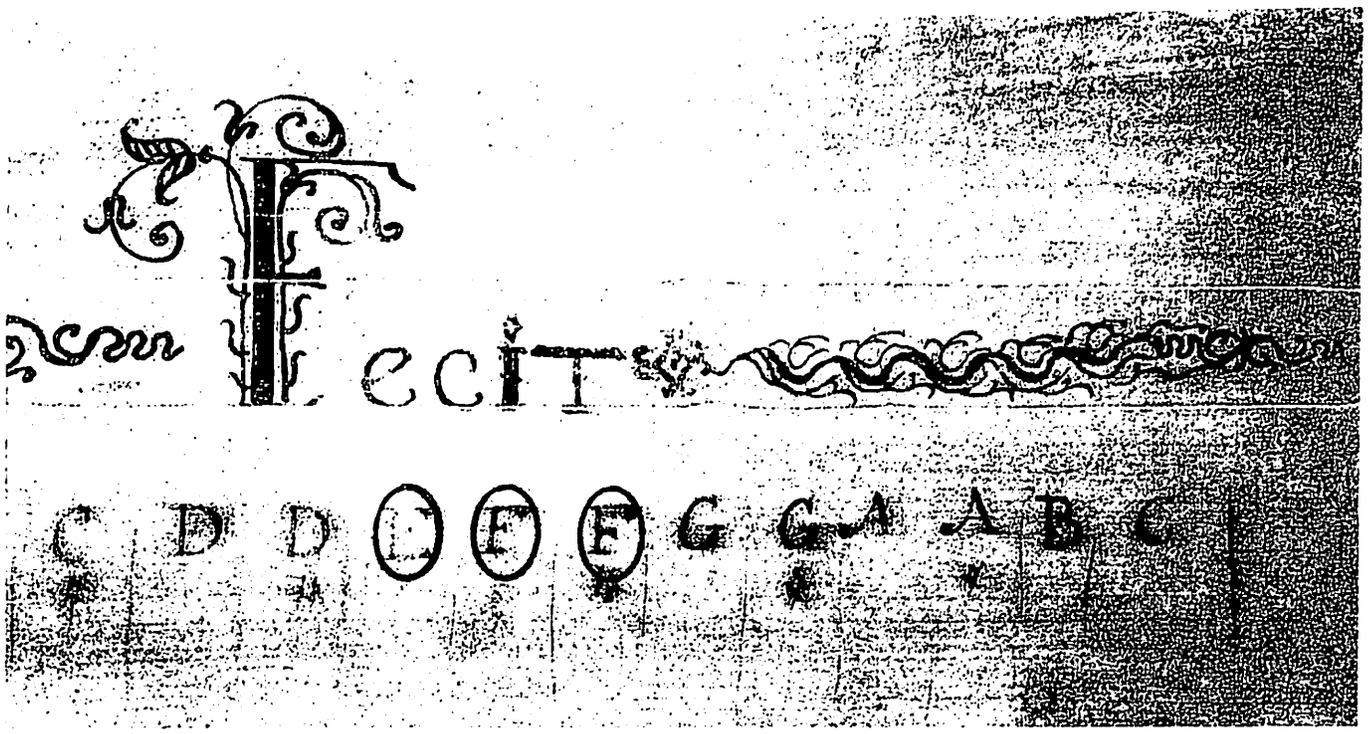
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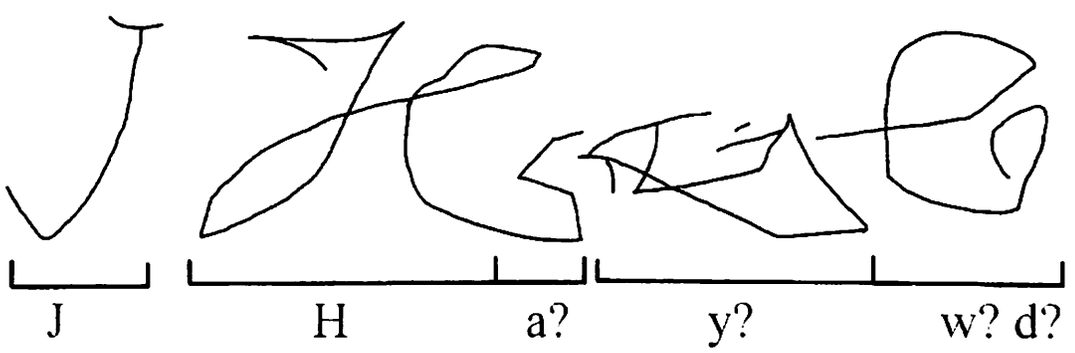
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Edmund C. Legg & Son,
Antiques
29 Castle Street, Cirencester.
Telephone 3512

31st May 1966

Dear Mr. & Mrs. Phillips,

I have pleasure in giving you the history of the Charles Haward Spinet as far as I know it.

It came to my Fathers notice first in the early nineteen thirties through the good offices of G.J. Morley when it was on loan to the V and A. I dont know quite how long we had it, not long I think, when we sold it to Dr. Brazil. The doctor died soon after the war and I bought it in an auction of his effects held in London - 1948 I believe. The instrument is not dated but I believe it to be 1668. It is illustrated in Groves Dictionary of Music and Musicians, 1898 editions (and possibly other editions)and described at fair length, and there is a fine illustration, with comments under the makers name, in Donald Boalch's 'Makers of the Harpsichord and Clavichord' 1440-1840 which was published in 1956. In 1951 I lent it to the Galpin Society for their exhibition by arrangement with the Arts Council of Great Britian Aug. 7 - 30 and it was shewn on television and described on the radio about the 23rd Aug. Again I lent it to a Museum in Bath for a short period about four years ago.

This is about all I can think of, but there may be other details I could supply should there be anything that puzzles.

Thanking you for your Saturday visit.

Yours sincerely,

A.C. Legg

UNDATED HAWARD SPINET

RECENT OWNERSHIP

Carl Engel, Kensington	to before 1882
Wm Dale, London	Before 1882 to After 1904
Edmund Legg, Cirencester	After 1904 to c.1924
Dr W H Brazil, Coventry	c.1924 to 1947
C Allen Legg, Cirencester	1947 to 1966
Howard Phillips, London	1966 to 2008
Chas W Wilson, Penna, USA	2008 to

PICTURED

Grove's Dictionary	1883 - 1980 (97 years)
Encyclopaedia Brittanica	1880s - c.1920s (perhaps 40 years)
Rockstro's "General History of Music"	1886
Dictionary of English Furniture (the "DEF")	1924 - 1927 + 1954 (rev.)
Antiques Magazine (art packers/movers ad)	Sept 1927 - Jan 1928
The Antiquarian (art packers/movers ad)	Sept - Oct 1927
Connoisseur 87 (pp 39-40)	Jan 1931
Tha Antique Collector	1937
Boalch's "Makers of the H'chd & Clavichord"	1956
Shorter Dictionary of English Furniture	1964

PLACES SHOWN

1885, Oct 21 & 23	Historic Loan Collection, Int'l Inventions Exhibition, London	
1888, April 18	Hampshire Literary & Philosphical Society	PLAYED
1904, June 16	Society of Antiquities, London	PLAYED
c.1932, "Some years"	V & A Museum, London	
1951, August 7-30	Lent to the Galpin Society	
1951, August 23	Shown on National Television (BBC)	
c.1962, "Short period"	Museum in Bath.	

APPENDIX J

THE 1622 KNOLE HARPSICHORD

Beginning in the mid-20thC and continuing over several decades, a number of organologists have examined the shell of the harpsichord at the Knole House in Kent. Their recorded observations have failed to resolve this harpsichord's probable layout and in my view this harpsichord's certain maker. These two matters are not disconnected.

Its layout assumptions, based solely on its case dimensions, its scored bottom board lines, and its few surviving elements, remain unsettled: Every tentative layout seems to be improbable – but each for a different reason. Its maker, whose engraved name contains 14 letters – three missing – is, today, generally believed to have been resolved. His first name, missing its leading letter, is not in question: The name is clearly the Latin form of John. It has to begin with an 'I' and its remnants and its spacing shows that it was an elaborately decorated letter and not the first of a series of conventional Roman letters. The MacTaggarts' determination in 1978 of a highly decorated 'H' as the leading letter of the surname is convincing. It can be related to the decorative 'I'. McGeary's determination five years before, that the surname's third letter is an 'S', though, has to be reexamined, because the maker's identity depends on it.

DESIGN OF THE 1622 KNOLE HARPSICHORD

With its lower register, wrestplank, wrestpins, and hitchpin rail still in place, we can conclude that this harpsichord had 53 keys, three sets of strings, three sets of jacks, three nuts, one set of wrestpins along a narrow outer hitchpin rail, a slightly angled register, and no sockets cut into the liner to secure one or two soundboard-located hitchpin rails for shorter strings. Scribed lines remaining on the tops of the full-length bottom boards show the positioning of the nuts (two vibratory) and the location of the single rose. Every one of about half a dozen possible layouts that have been proposed presents its own unique problem. Three unison strings would suggest three strings attached to each liner hitchpin. Most (but not all) examiners, therefore, have believed there had to be one long string and two shorter. A 16 x 8 x 8 has been ruled out because the narrow case would have been inappropriate for the low-pitched strings. An 8 x 4 x

4 was also ruled out because any 4-ft choir would mean its bridge would be positioned directly over the indicated rose. In addition, both of these arrangements have been dismissed as being musically 'unattractive' (a strong argument), and 'without precedent' (in this case, a weak argument).

Just one, let alone two, shorter-length strings, however, regardless of pitch, would imply a soundboard connection. But any string attachment to this soundboard would, at best, be to an unsupported batten glued to the underside of the soundboard. With no side support, it would act as a vibratory member – further compromising any 4-ft's already fragile tuning stability. With this harpsichord's slender case, there would be room for just a second bridge and a single hitchpin rail to accommodate the pair of shorter strings.

Several excellent scale drawings have been made by Mould (1976) (who made a total of nine scale drawings of this harpsichord for his thesis), Koster (1980:57), and Martin (2003:341). In addition, McGeary (1973) has taken an excellent top-down photograph and Russell earlier took one as well (1959:56). All of these show clearly that a normal 4-ft bridge would have collided with the rose, and that there was inadequate space for more than one bridge and one hitchpin rail, presumably needed for two sets of strings of an intermediate pitch and length.

Hubbard made a particularly compelling argument for a 3 : 4 length relationship for the strings, giving a pitch difference of about a fourth (1967:141-2). Assuming this is what the maker did, he would have achieved with a single manual and just three choirs much of what Ruckers was offering with two manuals and four choirs. Ruckers had a 4-ft; the designer of the Knoll harpsichord had a lute – as well as a full keyboard for both pitches. Finally, as Hubbard wrote, "By providing a transposing choir rather than a transposing keyboard activating the standard choirs, the English were able to use a variable tuning". In other words, the shorter strings could be tuned in more than one way.

It is not my intent to add to this layout speculation except to point out that its design is, and must have been then, unorthodox – perhaps, creative. Its only surviving English predecessor, the 1579-dated Theeuwes, appears to have been given a conventional 8 x 8x 4 layout. It is important to point out that the determination of a third nut located at the proximal edge of the Knole harpsichord's wrest plank confirms that this instrument was given a lute stop close to a century before this device would become more widely used on English harpsichords. It seems to be the earliest known use of such a stop. There is also tacking evidence showing evidence that this harpsichord also had a buff stop originally – a Flemish device. The maker of the Knole harpsichord had enough confidence to build what had to be an experimental instrument into an expensive case that he believed he could sell. It was unlikely to have been a design specified by the customer. Its design was very likely to have originated with its creative maker.

The case of this harpsichord also seems to reflect innovated thinking. Its oak sides are particularly thin. Although this may seem to follow Italian practice, it might have had an acoustic intent. Its heavy panel framing and its possibly unique oak spine could have been intended to reinforce the box, marginally strengthened at its top with a hard-wood cedar or cypress soundboard. Mention should be made of its keyboard layout. Given its 53 keys, Hubbard (1967:140) offered two possibilities: C – e3 (chromatic) and GG/BB – d3 (with a single split sharp). Citing the example of the 1700 Tisserand, Mould showed a preference for GG/BB – d3 with this single split sharp in both his 1974 thesis draft and his 1976 thesis. Giving as their reason, that such a split key was never found on virginals, both Koster (1980) and Martin (2003) rejected this hypothesis. Neither of these examiners were, apparently, aware that Chas Haward

used a single split sharp on three of his extant spinets and also, that four of his spinets ascend to d3.

With so little left of the interior of this harpsichord, every apparent piece of evidence will have exaggerated importance. Martin (2003:343) pictured a short strip of triangular mounding inside the harpsichord's cheek. It appears to be identical to the distinctive shape found throughout Chas Haward's **1683** spinet. I have referred to it as 'triple reed'. It is the only moulding found in **1683** but it is not found on the earlier spinet, **16XX**. Could a plane-blade with this unusual shape have been passed down and then reused 51-years later?

CRAFTSMANSHIP FOUND ON THE 1622 KNOLE HARPSICHORD

With the Knole harpsichord we have the carcass of an extravagantly constructed harpsichord that had to have been made by several workmen displaying varying talents. This would suggest a large shop headed by an exceptional master. In 1622, records show that John Haward had three apprentices that had to be employed as workmen and two of them were to become free two to three years later. John Haward's shop had to be a large one judging by the number of apprentices he trained over the years.

There is no proof that the Knole harpsichord trestle was not sub-contracted in its entirety. Its ten legs had to be lathe-formed by a turner, but each of them was then fluted by a carver. The arches were carved to outline their curvatures and to enrich their flat spandrels. All of this carving had to have been done before the complicated trestle was assembled.

It should be noted that while this trestle was extensively carved, there is no carving on the harpsichord, itself. The case, however, in its entirety, had to have been made in the harpsichord maker's shop. All four sides, including the spine, are oak. All three connection points are dove-tailed. Dove-tail corners reflect cabinet-making – more prestigious than joinery, which is characterized by mortise and tenon joints. These three corners had to be precisely cut and then fitted. Someone in that shop had to have had cabinet-making skills. The lettering on the fixed faceboard corresponds with the extensive lettering just above the soundboard along the inside of the spine, the tail, and the bentside. This had to have been carried out before the soundboard was installed, and undoubtedly before the case was joined together. The letterer, probably aware of oak's adhesion problem with most pigments, seems to have employed orpiment (As2 S3) as a binding agent for his carbon-black letters.

His Roman lettering shows he had an advanced knowledge of the classical alphabet, as updated, where the new letters – the 'U's and the 'J's were moved to their adjacent Roman letters – 'V' and 'I". The third new letter, the 'W', however, would have required a stand-in letter - an adjacent letter would not do. We can conclude that in addition to a cabinet-maker, this shop also had an accomplished artist who was responsible for the extensive lettering on this harpsichord. Presumably, there were others in this shop who were capable of fabricating jacks, keyboards, and other precision parts needed by all keyboard instruments.

THE 'PEDAL'

In *Musick's Monument,* (1676:235), Thomas Mace credited John Haward with being the 'innovator' of the 'pedal', an expensive £20 harpsichord controlled by two pedals. Hubbard has confirmed Mace's claim of 24 available registrations (1967:147). He described it as having four registers on one manual: 2 x 8, 1 x 8 (lute), 1 x 4, and a buff stop. Hubbard, no admirer of modern harpsichords' pedal controls, nevertheless, referred to Haward's device as, "one of the most interesting developments in the seventeenth century".

The 'pedal' does establish John Haward as an exceptional inventor, and in this case, a highly successful one. It also shows Haward's early 17thC incorporation of a lute stop. I suggest that the same inventive genius who pioneered the 'pedal' and then went on to create the English spinet – a new instrument of Zenti's initial design, could very possibly be the maker of the Knole harpsichord showing so many anomalies.

THE 1683 CHAS HAWARD HARPSICHORD

Haward idiosyncrasies were not restricted to John. Sixteen years after John Haward's death; Chas Haward built, or in that year, rebuilt, a harpsichord of his evident design. Almost all of the recent investigators of the Knole harpsichord have sandwiched it between descriptions of the 1579 Theeuwes claviorganum and the 1683 Haward. Because it has survived intact, and because it is the sole-surviving intact and unquestioned English harpsichord made before 1700, this instrument has been thoroughly studied. Yet, no investigator has tried to relate it to the Knole harpsichord. Superficially, these two have little in common. But major similarities are the evidence of lute stops in both, the registers of both angled slightly clockwise, and the absence on either of any evidence of an original 4-ft soundboard attachment. Hubbard suggested the lute was evidently being substituted for a 4-ft as a brightening device (1967:149). But was this the 17thC English practice – or Haward's? Like the Knole harpsichord, the **1683** was unorthodox. In its original form, it had two unison strings and two lute stops (later eliminated). It is interesting that the octave key-width of 6-1/3 inches (485) on this harpsichord is shorter than Haward's **1683** and **1684** spinets of 6-1/2+ inches (500+) but it is in agreement with the two newer Haward spinets of the late-1680s. The Knole harpsichord and Haward's early spinets share the particularly wide span of about 6-1/2 inches.

There seems to be, at this time, support for Haward-family aberrational thinking. In his *A Vindication of an Essay to the Advancement of Musick...* Thomas Salmon (1648 – 1706) wrote in 1672 (p68):

> "...t'other day I met with a curious pair of Phanatical Harpsichords made by that Arch Heretick *Charles Haward*, which were ready cut out into Octaves, easily found, as lying in the same posture, in every one of their Octaves. And that, Sir, with this advantage, that so soon as the Scholar had learn'd one hand, he understood them both, because the position of the Notes were for both the same"

Apparently, Haward was advocating a notation system much like Salmon's where all three staffs (Bass, Mean, Treble) would share the same notes on comparable lines; and here, Salmon has extended Haward's nonconformity to his instruments as well.

"__OHANNES __A__ARD"

The MacTaggarts, Ann and Peter (1978:2), determined the first letter of the first name, 'Johannes' and chronicled the various assumptions about the name of the maker of the Knole harpsichord beginning with Rimbault in 1860. For many decades it had been assumed to be 'John Haward', based, in many cases, solely on the familiarity of the various writers with this maker's name. With the carbon black almost entirely missing for three letters, this name was a convenient fit. The eleven existing identifiable letters were all upper-case Roman and it was, therefore, assumed that the missing three were too.

The first letter of the first name, 'Johannes', was never in question: It had to be an 'I', and five years before the MacTaggarts, Thomas McGeary had assumed the surname began with an 'I'

as well. Determining the third missing letter was an 'S', McGeary came up with the name, 'Iasard' and it was found that a person with this surname actually lived in London at the time.

Shortly afterwards, Michael Thomas came up with an even more improbable name of 'Izzard'. Thomas' first 'Z' would share the angularity of a Roman 'A', but based on the few remaining black specks, his choice of a second 'Z' is interesting: His first chosen 'Z' could accommodate a second 'A', but two 'A's with a broad space at the top but inherently less space below would not. Thomas had to assume two broad-based 'Z's – not just one, and this would have required the elimination of the first 'A'. Evidently, no one checked to see if there was a 'John Izzard' living in London at the time. Thomas' 'discovery' was soon put aside.

The MacTaggarts managed to discover an initial 'H' when they broke free of the expectation of an all-Roman-letter inscription. Their proposal of a highly-embellished 'H' resembled a side chair in profile rather than a single-step ladder. However, accepting McGeary's 'S', they came up with the name, 'Hasard', and this surname has been accepted by the organological community ever since.

As a justification they claimed, strangely, "...a 'W' – even the overlapping version 'W' could not have been fitted into the space allocated for the third letter...". (This is the space between two upper case Roman 'A's). No photograph – let alone a close-up photograph has ever been printed by any writer. The MacTaggarts, however, did craft a hand-done, hand-spaced drawing locating the carbon remains with their printed letters superimposed. Their spacing between the two 'A's is broad – even at the bottom, though, and, if accurate, could accommodate a great many letters without broad bases (such as the letter 'Z'). A funnel-shaped Roman 'V' or a conventional 'W' would actually require less space than they show.

In the 1974 draft of his thesis, Chas Mould questioned McGeary's newly published statement, "The letter though faint is clearly an 'S'". Mould wrote, "But I cannot endorse this for the sloping stroke...is a little too far to the left. Nevertheless, and this is just possible, and McGeary's ascription of the instrument to John Iasard is quite consistent" (1974:11). Mould also wrote then, "It is unlikely that the identity of the builder will be established beyond doubt" (p10). Two years later in his published thesis, Mould reduced his 17 pages and twelve paragraphs devoted to the Knole harpsichord to just a single page of two paragraphs. Fortunately, his nine scale drawings were all printed in his thesis' final form. As to its maker, he now wrote "...recent research has shown the traditional ascription of the instrument to John Haward to be incorrect. The inscription on the nameboard which is now distressed probably originally read "Johannes Iasard Fecit Londini MDCXXII". The certainty of McGeary's letter 'S' has continued to today through the MacTaggarts, the Boalch 3d Edition, Koster, Martin, and to Grove Music Online (under 'Hasard, John').

A major problem with this general acceptance is that unlike 'Haward' or even 'Iasard', no one has been found in London with the surname, 'Hasard'. The MacTaggarts have thoroughly researched this matter. They have found a William Hassard, a virginal maker who died in 1617. They have found a John Hasart, who was married in 1604 and a John Hazard (several contemporary records all use the 'Z') who died in 1630. The MacTaggart's concluding paragraph is worth quoting in its entirety:

> "The identification of John Hasard the virginal maker with John Hazard of the parish of St Bartholomew behind the Exchange rests on the facts that: records of no other John Hazard in the City of London have survived for this period; that he was a member of the

> Joiners' Company; that one son became a chorister and that his daughter married a virginal maker. However, it is easy in the search through manuscript material, to lose sight of the most important piece of documentation of his existence – a harpsichord signed 'JOHANNUS HASARD FECIT LONDIDI MDCXXII'."

The MacTaggart's excellent research is compromised by their last sentence. It is circular logic to claim we can establish that a John Hasard was real and also a virginal maker because we can claim him as the maker of a harpsichord - the very thing we are endeavouring to prove.

Until now, all attention has been directed to the letters' few black carbon remains and not to the orpiment. If, as I believe, this toxic yellow substrate was intended as a bond or primer between the oak and the carbon, it should correspond to the outline of the original black letters and much of it may remain as potential evidence. Unfortunately, since all lettering on this harpsichord is on the case, itself, nothing can be conveniently removed for laboratory analysis. Koster claims to have confirmed the surname 'Hasard' – "by infrared photographs which I took in September 1977" (1980:54). These photographs were not printed, however, and if they had been, they might not have helped our identification, assuming they showed only the visible black specks that have long been seen.

I H – I H S

We have found on Haward's spinet **16XX** what appears to be a combined monogram / Christogram on the wrestplank: 'I H' with an 'S' worked into the centre of the 'H'. On the Knole harpsichord, the MacTaggarts have found the names beginning in letters 'I' and 'H' to be highly decorated and inconsistent with the remaining identified Roman letters. An 'S' could form the third letter to 'I H S'. Could this missing letter be of a hybrid form as the combined 'H' and 'S' were on spinet **16XX**? Could it be decorated?

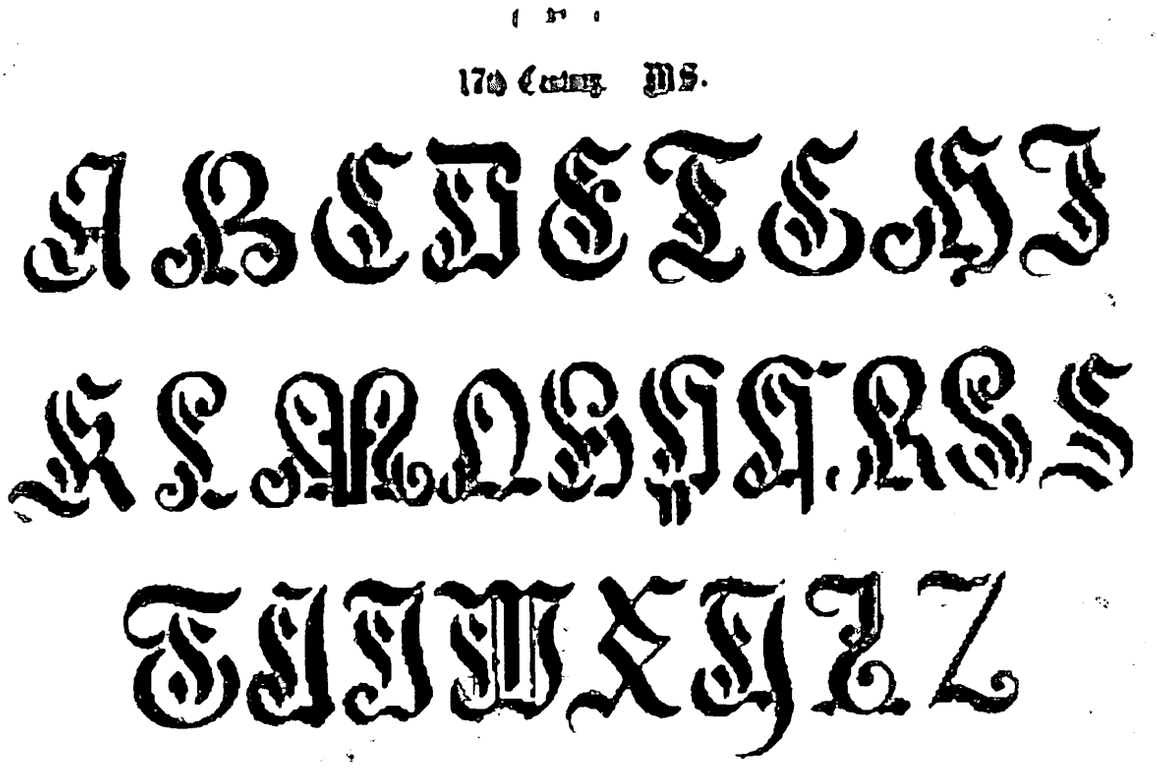
The 'W' is a letter not found in the Roman alphabet. It has had a long, interesting history. In Britain when it was a Runic 'Wynn' or 'Wyn', it was often pictured resembling a shepherd's crook. At other times, it was pictured as a digraph – a pair of round-bottom 'U's spaced apart. Although its shape would become standardized in the 17thC; in 1622, I believe, an artist could have still felt free to come up with a third spirited design – as he did with his 'I' and his 'H' – one possibly reflecting letter ambiguity.

I am attaching pictures of several alphabets, all, I believe, of the 17thC. These examples show 'W's with curved sides – most with cyma-reversa sides that are also found on the LH sides of 'S's. The employment of one of these decorative 'W's might respond to Mould's initial reservation about a possible 'S' on the Knole harpsichord, as having its 'sloping stroke' too far to the left.

A possible test: There is an existing, legible, unembellished, Roman 'S' on this faceboard – at the end of 'JOHANNES'. If such an 'S' was once painted in the middle of 'HA_ARD', then the remaining flecks of black, today, should be contained within the space of the terminal letter of 'JOHANNES'. The most compelling test, however, would require an examination of the outline of the orpiment for each of the letters.

E ij

17th Century German



17th Century M.S. from The Book of Ornament

1622 KNOLE HARPSICHORD – RELATED REFERENCES

1950 Frank Hubbard "Two Early English Harpsichords" *Galpin Society Journal* v.3 pp.12-18.

1959 Raymond Russell *The Harpsichord and Clavichord* pp.65-75 pl. 55-56.

1965 Frank Hubbard *Three Centuries of Harpsichord Making* pp.140-1, 146-7.

1973 Thomas McGeary "Early English Harpsichord Building – a Reassessment" *The Harpsichord Magazine* v.1 No.1.

1974 Donald Boalch *Makers of the Harpsichord and Clavichord II* (B2) p.67.

1974 Charles Mould *The English Harpsichord with Particular Reference to the Work of Kirkman* Thesis draft pp.10-17.

1976 Charles Mould PhD Thesis, Jesus College, Oxford University pp.4-5.

1978 Ann and Peter MacTaggart "The Knole Harpsichord – a Reattribution" *Galpin Society Journal* v.31 pp.2-8.

1980 John Koster "The Importance of the Early English Harpsichord" *Galpin Society Journal* pp.54-73.

2003 Darryl Martin PhD Thesis *The English Virginal* University of Edinburgh pp.340-352.

2008 *Grove Music online* "Hasard, John".

2009 Darryl Martin "The Native Tradition in Transition: English Harpsichords Circa 1680 – 1725" *The Historical Harpsichord V.5 Aspects of Harpsichord Making in the British Isles* p5.

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APPENDIX K

CONSTRUCTION CONSIDERATIONS – WIDE D's

Whenever a wooden plate is cut to create key levers, straight-through cuts will be made between B-C and E-F providing two sections for each octave – one, three naturals wide and the other, four. Since each of the natural pads must be even in width, their section-width ratio will be three to four, or 75-percent.[1] If a keyboard consisted only of natural keys: seven per octave, each key lever could be of equal width. The problem arises when the sharps are added – the C-E section has two sharps and the F-B has a disproportionate number of three. Five of each octave's 12 keys will be in one section and seven will be in the other. With the sharps added, the two-block ratio will drop from 6/8 to 5/7, or to just 71.4-percent – a proportion that falls short of the required 75-percent mandated by the seven keypads. The shortage is in the C-E section.

There are certain layout constraints. Just as all natural keypads must be equally wide, every sharp must be also. For a uniform appearance, the four tails for E-F and B-C which straddle the two blocks must be identical. The two tails for G and A must be finger-width and also identical. This leaves the D as the isolate.

To a degree, the discrepancy can be ameliorated by narrowing all the sharp levers, for this will trim the larger section more than the smaller. Assuming each natural tail is 1/2-inches wide (typical), and each sharp lever is trimmed to 7/16-inches, as found on the Haward spinets (again, typical), this will only slightly reduce the shortfall, raising the ratio from 71.4-percent to 71.7-percent – still well short of the required 75-percent. The two sharps in the C-E section cannot be made wider than the other three and the two outer natural tails cannot be made wider than their adjacent notes. This leaves the D as the sole expandable note: its expansion will be almost unnoticed.

Assuming each natural tail except D is ½-inches wide, each sharp lever is shortened to 7/16-inches, and the D is broadened to 5/8-inches, the ratio will now be 75.5-percent, or close enough given the variability of the saw cuts.

Most keyboard instruments have wide-D's, but a few show natural tails of identical width. This has to be accounted for by a 'fudging' in the clearance widths. It is easier to explain the use of wide-D's than their absence.[2]

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[1] Since each keypad is about 7/8-inches wide, the theoretical width of the seven pads (ignoring the necessary clearance between them) would be 6-1/8-inches (467) and the theoretical width of the two sections would be 2-5/8-inches and 3-1/2-inches.

[2] My 1773 Shudi-Broadwood has a D-width of ½-inches whereas my 1791 Kirkman has a D-width just under 5/8-inches. Yet, both harpsichords have an octave span of 6-3/8" (486). It is interesting that my 1808 Broadwood grand has a 5/8 D-width with an octave-span of 6-7/16", reflecting a design change by this company.

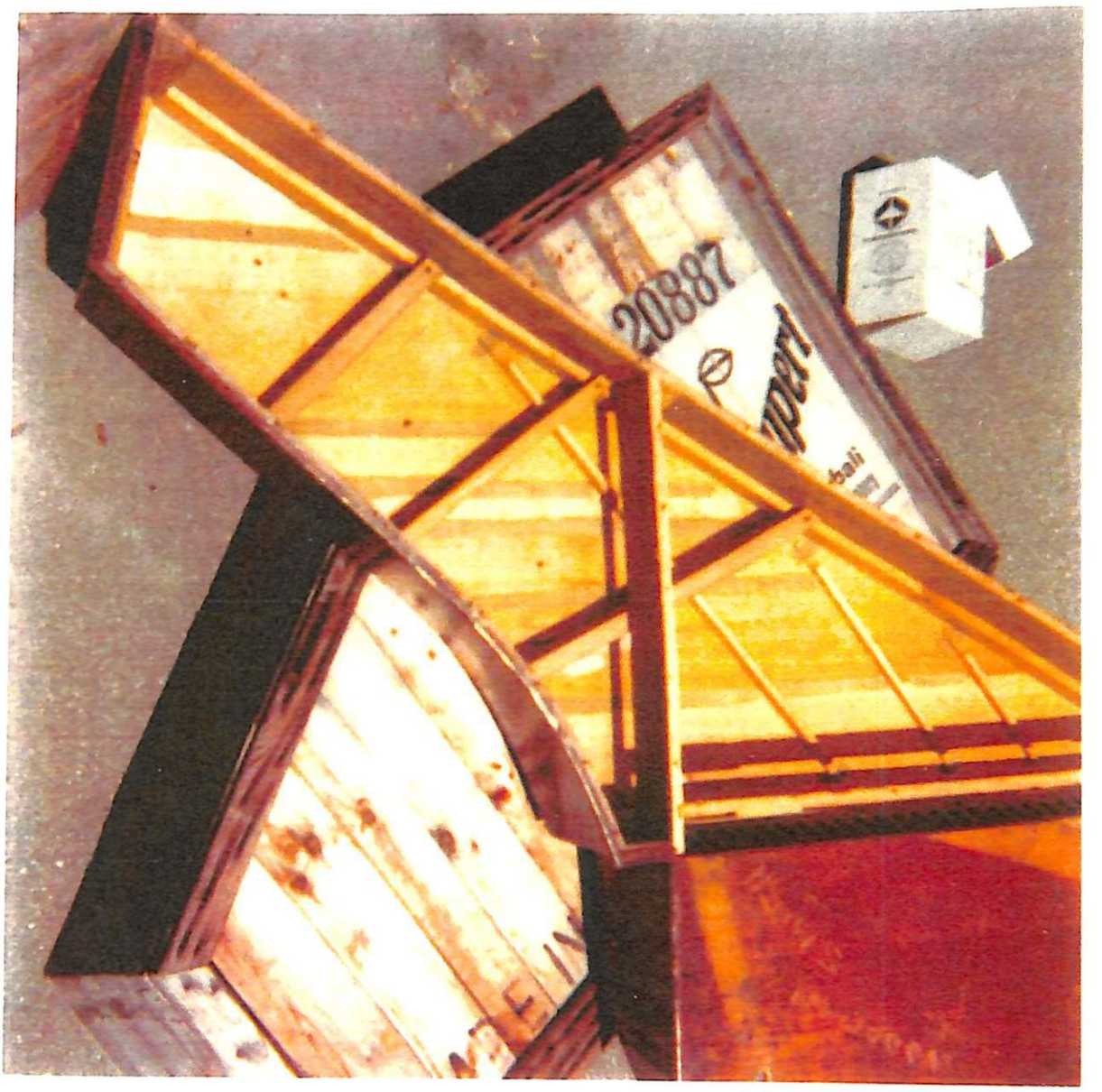
APPENDIX L

CONSTRUCTION CONSIDERATIONS – BOTTOM-FIRST / LAST CONSTRUCTION

In the mid-20thC, there was a fundamental change in motor car design – from the traditional 'body-on-frame' to unified, frameless, 'monocoque', construction. While this was not noticeable in a car's outward appearance, it transformed both the car's assembly and its later restoration. An exactly comparable change occurred with spinets, from 'bottom-first' to bottom-last construction. In 'bottom-first', the bottom board, analogous to a car's chassis, is the starting point, on which the upper parts are mounted one-by-one. In 'bottom-last', the sides and the soundboard are assembled first and the bottom board is nailed on last. This change had to coincide with the introduction of elevated, bentside-to-spine bracing that made it essential. Since this newer design has been found on the Keene-Brackley spinet, the subject of John Barnes' 1985 monograph, it may have been pioneered (in England) by Keene – possibly before the 18thC.

To see the earlier bracing-to-the-bottom expected in a 'bottom-first' spinet, refer to the Haward **1689** photographs in Appendix A. Triangular braces will always be glued to the baseboard but never nailed. Except for exposed nailheads expected on 'bottom-last' construction, there may be no other means of outward identification. But a determination is of key importance to the restorer.

Here are two photographs showing the newer, "bottom-last" bracing.



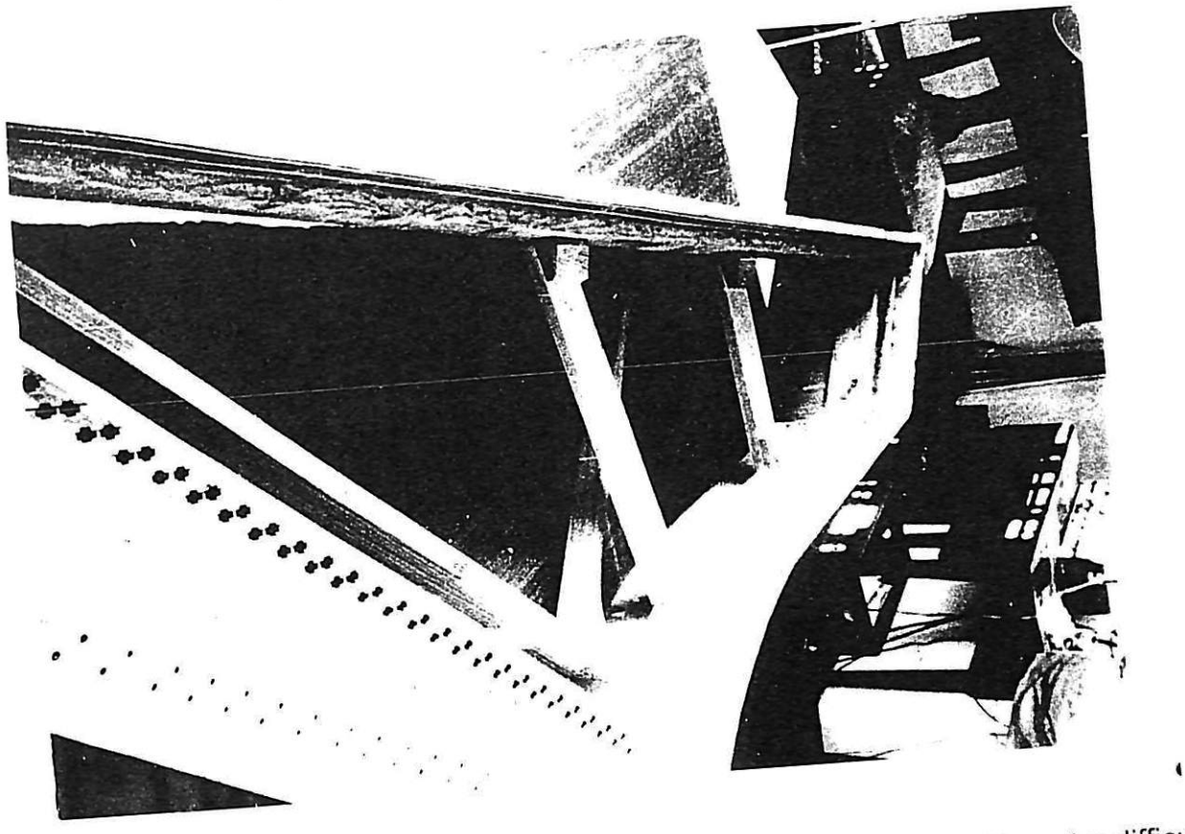
This photograph is by Bjarne Dahl of a 1789 Argent spinet. Some spinets have two elevated braces – this spinet has three. Note these braces were nailed to the liners – impossible if this form of bracing were attempted with 'bottom-first' assembly. Note how, as on all spinets, the RH transverse brace adds rigidity to the spine board – ideally at its mid-point. Not visible are the

triangular glue blocks between the liners and both ends of the braces. These blocks show that the braces were nailed and glued in place and then the blocks were glued in just before the soundboard was installed, followed, finally, by the bottom board. As in all spinets regardless of assembly order, notice that the sides are visible from the bottom, and, except at the spine, nailing is from the side, and this nailing is then covered (spinet **1689** may be the sole surviving exception) without moulding.

Like the later Kirkman spinets, this Argent has a long, harpsichord-like treble scale (c2=13+"). Unlike the Kirkmans, however, its soundboard grain is parallel to the keyboard, like most spinets. Note the generous primary soundboard area in the bass and, with this spinet's long scale, a gradual convergence of the bridge towards the treble liner requiring no supplementary stiffening ribs.

This exceptional spinet by a Cambridge organ builder is the latest dated surviving English spinet.

(10/74) Part way through my gluing the braces back.



This spinet by Chas Slade, dated 1734, shows just two elevated braces. Note the difficulty a maker would have mounting and securing these braces with "bottom-first" assembly. After gluing (and ideally, nailing) the cross-braces from the bottom, the maker would have glued the triangular blocks to the top before gluing in the soundboard.

This spinet, marked decoratively on top of the lowest key "CS 1734", may have been made by a son or relative of Benjamin Slade – he is unrecorded.

APPENDIX M

A SPINET BUFF STOP

A gentle, slightly muted 'harp' or 'buff' sound can be created by placing a soft leather pad against a conventionally plucked string as close to the nut as possible. With a harpsichord, this is easily accomplished by gluing a pad at each major string gap onto a batten just to one side of each string. When this batten is moved side-ways, one of the harpsichord's two unison strings will be semi-muted. If this were done with a spinet, however, only every other note would be affected. John Harris solved this problem on a 1757-dated spinet (B2:3) by using two battens and two hand controls, both of which had to be actuated together. Tannenberg, an American organ builder, solved the problem vertically and more elegantly on a surviving spinet by mounting a spring-loaded batten, topped with a continuous strip of soft leather just below the strings.

Here, in the attached article, the problem has also been solved by vertical rather than horizontal actuation. While complex, varying timbres are possible with this design.

ANSWER TO BUFF STOP PROBLEM

Many builders of the old Zuckermann Transverse Spinet have found that while they like the instrument's sturdy construction and portability there were some design problems with the buff stop, music desk and lid stick. Dr. Wolfgang Fahrenbach, inventor of the Fahrenbach microtuner *(Vol. III. No. 3, 1970 pg. 13 The Harpsichord)* put his design creativity to work on this instrument and came up with some excellent solutions. The Zuckermann Transverse Spinet was taken off the market a number of years ago, but many of these instruments are still in use and these modifications can make a good harpsichord better.

Wallace Zuckermann never liked the buff stop arrangement on this instrument. As I recall, he even mentioned this in his instruction book and wished that someone would come up with a better design. The problem is inherent in all instruments with opposing jacks on the same choir of strings. Because of the closeness of the strings, the usual buff stop consisting of pads of felt or soft leather fastened to a moving slide can not be used. The dampening action must come from the top. The Zuckermann design lifts the damper from the right hand side of the instrument but the lift is unequal. Also, when the stop is "on" the total weight of the brass bar which holds the felt rests on the strings. This adds more pressure to the felt than is necessary and causes the sound to decay much too soon.

Solution. Photograph No. 1 shows how Dr. Fahrenbach solved the problem. He cut a reverse "V" notch into the end of the brass bar which holds the felt. He then added two brass pins which act as guides and fit over the end of the hand stop. Next, he built a bracket which holds a pin crossways in a slot. The brass buff bar slides in this slot and when the hand stop is moved to the right or left, the bar moves up or down. The notched bar, pins, bracket and end of hand stop are all clearly shown in photo No. 1. Photograph No. 2 shows everything in place, ready for playing. Note in photo No. 2 that the pivot screw on the hand stop contains a spring and a washer so the tension on the hand stop can be adjusted. This is important if one is going to get full benefit from the new buff stop modification. In order to keep this vertical action even throughout the range of the instrument a similar arrangement must be made at the left of the instrument. This is illustrated in photo No. 3. The beauty of this arrangement is that the pressure of the felt on the strings is controllable. If a heavy buff is wanted, the entire weight of the brass bar can be rested on the

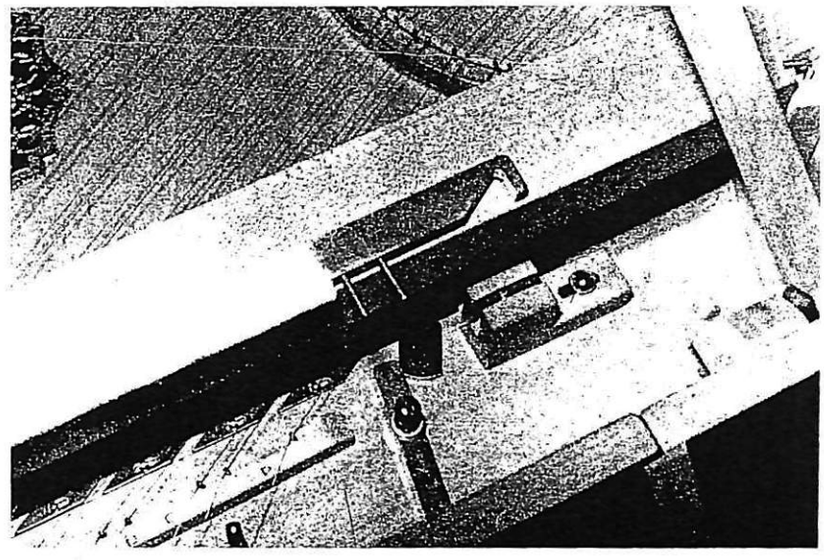


Photo 1

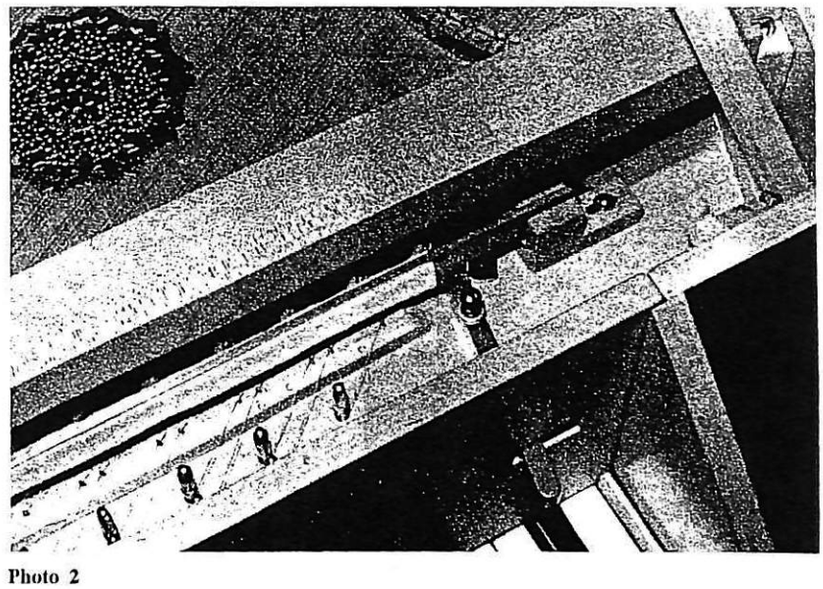


Photo 2

strings. If a very light buff is wanted, that is also possible by just moving the hand stop part way. The spring tension on the pivot screw must be strong enough to keep the bar elevated at the desired position, without being so tight as to make movement of the hand stop lever uneven.

The lid stick in the Zuckermann kit was unattached and was just to be stored loosely in the case when not in use. Zuckermann mentioned that this was often done by early makers and the sticks seldom were lost. (Of course that was back when the same family lived in the same house for three centuries and the first U-Haul trailer was yet to be rented.) Dr. Fahrenbach placed his stick on a 2-way hinge and when it is not in use, it folds neatly over the wrest plank. This arrangement is shown on the right side of photo No. 1.

The music desk on the original Zuckermann was removable but there was no place to put it after it was removed. Dr. Fahrenbach redesigned the desk and mounted metal brackets on the front. These brackets slip into anchors which are screwed into the back of the name board. He also placed similar anchors on the bottom of the instrument, under the keyboard. When the desk is removed, it is simply stored under the instrument where it is out of sight and can not be mislaid.

The Zuckermann Transverse Spinet had a lot of good things going for it. For one thing it was probably the sturdiest instrument Wallace ever designed. It had a double case even though the instrument was quite small. The keys were shorter than a regular harpsichord which forced the player into proper finger positioning for harpsichord playing since it is impossible to use the lazy, stretched-out, flat-fingered piano playing technique with a short key. The carrying ability and clarity of the sound was remarkable. It lacked the subtle tonal color of a larger instrument but since it was not a large insrument, it could not be expected to sound like one. It was the most portable of Zuckermann's instruments and could easily fit into a small sports car. One professional musician I know traded his large Zuckermann for this Spinet for that very reason.

I have been told of a number of churches that keep a Zuckermann Transverse Spinet in the choir loft where space is limited, since they want to combine the sound of the harpsichord with that of the voice. I do not know how many of these kit instruments were sold but even though they are not now available, I feel sure they will be around for a long time to come.

HLH

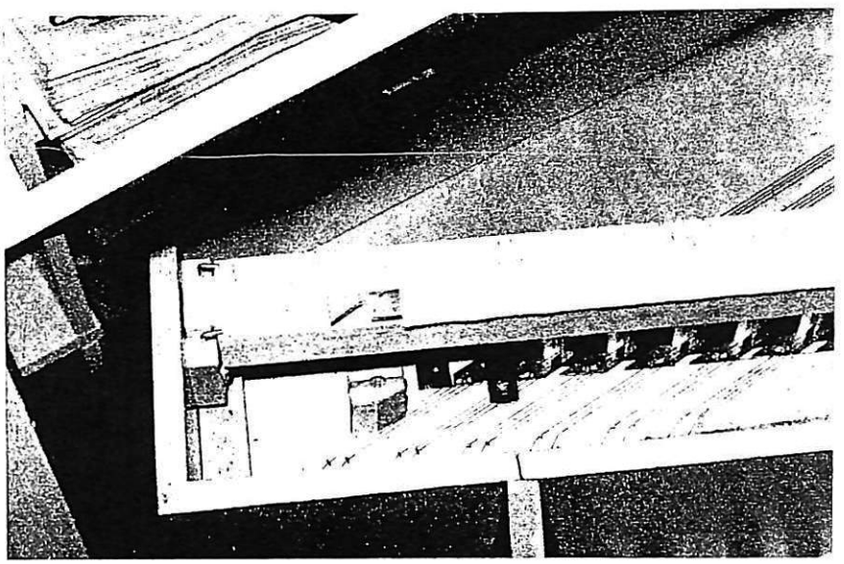


Photo 3

Photo 4

APPENDIX N

SPINET - C2 EQUIVALENT – LOW C LENGTHS

Much has been written claiming early spinets have weak basses owing to their short cases, resulting in short bass string lengths. A study of the c2-equivalent lengths of low C strings in a number of spinets shows this observation to be true – but only to a degree. The reason is that early spinets descend to just a single note below C, whereas a typical Georgian-period spinet descends five additional notes to GG and these added notes are part-justification for their lengthened cases.[3] While all C's will ordinarily be on the right, short side, the spinet's alternating string-length difference, which has some importance in the treble, will be inconsequential in the bass.

The attached table shows the c2-equivalent lengths of the important low-C strings in 42 spinets. Twenty of them, close to half, have equivalent lengths between 6.8-inches and 7.1-inches. Because we have found that so many have equivalent lengths of exactly 7.0-inches (1780), this low-C, particularly with the Thomas Hitchcocks, would almost seem to be part of the maker's design layout. Just one of five Hawards and four of nine Keenes, however, fall into this range and none of these early spinets have equivalent lengths as long as 7.0-inches.

A greater problem than string lengths could attenuate the basses of early spinets: the diminished size of the resonant cavity of their smaller case sizes not taken up by the bracing and the keyboard assembly. This is a problem all spinets have in contrast to harpsichords, but it is a particular problem on the smallest spinets.

Note that the equivalent C of the Kirkman spinet is close to its harpsichord length. Note, too, the short, wound low-C string on a 5-1/2-octave square piano in contrast to its counterpart on a 5-1/2-octave grand.

[3] Compromising this overly-simple observation is the fact that few early spinets come with bass 'short-scales'. The more typical early spinet will add one or two more notes in the bass creating what is known as a 'broken scale'. This will reduce the string difference from five to three or four. A c2-equivalent length of 7.0-inches would mean an actual low-C length eight times as great - or 56-inches.

C 2 EQUIVALENT LENGTHS

	inches	mm
HAWARD		
1683	5.8	1470
1684	6.0	1520
1689	6.0	1520
16XX	6.1	1550
c.1685	6.8	1730
PLAYERS		
Chinois	6.0	1520
Smith	6.3	1600
KEENES		
1700	6.1	1550
Greg.	6.2	1570
H.W.	6.3	1600
1711	6.4	1630
G-RCM	6.6	1690
1704	6.8	1730
1707	6.8	1730
T. Strange	6.9	1750
K. + Brack	6.9	1750
OTHER: UNDER 7.0" 1780		
'c.1705'	5.6	1420
'1708'	6.5	1640
TH 471	6.8	1730
TH 616	6.8	1730
c.1795 Rouchead	6.9	1750
TH 1287	6.9	1750
'TA'	6.3	1600
Sison	6.4	1630

	inches	mm
OTHER: 7.0" AND OVER		
B Harris 1776	7.0	1780
Logan (Stew.) c.1774	7.0	1780
JH	7.0	1780
JH 1520	7.0	1780
TH 1335	7.0	1780
TH 1243	7.0	1780
TH 1279	7.0	1780
Haxby 1764	7.1	1800
N Stewart	7.1	1800
J Mahoon	7.1	1800
TH 1241	7.1	1800
B Harris	7.2	1830
Woffington	7.3	1850
L & B 1785	7.3	1850
Tannenberg	7.4	1890
Crang 1758	7.5	1905
Kirkman 1750	7.8	1981
HARPSICHORDS (Long 8')		
Kirkman 1764	8.0	2030
Sh-Br 5 1/2 oct: 1783	8.2	2080
PIANOS		
1795 L & B Square	6.0	1520
1808 Broad, Grand	7.6	1080

Note: "TH" and "JH" are Hitchcock Spinets.

APPENDIX O

A KEENE RESTORATION

This remarkable account not only describes much about this spinet and its nearly 70-year-old restoration, but it also shows the extent of spinet-related knowledge in America at the time.

This spinet is evidently Mole No.15 and Boalch, B2 – 11 and BM3 – n.d.3.

Based on its convincingly original trestle with a moderately low-mounted stretcher and its LH case tail angle, I would date this Keene to c.1690 – or possibly the early-1690s.

the Stephen Keene Spinet

by ALDEI GREGOIRE

Mr. Stephen Keene, Maker of Harpsycons and Virginals, dwelleth now in Threadneedle Street at the sign of the Virginal, who maketh them exactly good, both for sound and substance.

THE above advertisement appeared in the sixth edition of John Playford's popular *Introduction to the Skill of Music*, published in 1672. At some time between that date and 1685, Londoner Stephen Keene, possibly with the help of his son, built a particularly beautiful spinet of French walnut, trimmed with holly and cypress, which somehow found its way to the American Colonies. It might be very romantic to know something of its early history, but we know only that it came to the Willard Manse in Deerfield, Massachusetts, was used and presumably enjoyed there for an indeterminate period of time, was eventually replaced by a newfangled Clementi square piano and exiled to either the attic or the barn. There it was the prey of destructive mice and even more destructive children. When it was finally given to the local museum in the latter half of the nineteenth century it dejectedly settled itself in a dark corner hoping, I'm sure, to escape detection. Its top was missing, its keyboard was lost except for two naturals and one sharp, all of its jacks had long since been scattered, its strings were completely gone, its case was open at all glued seams, its solid brass hardware had been consigned to other duties, and what little was left of its soundboard was hopelessly eroded by weather to half of its original thickness.

In the spring of 1950 I was introduced to the Keene spinet, and it was decided that I should try to restore it. A search for missing parts, even one missing part which might give me a clue about materials or design, proved fruitless, so the spinet sat patiently in my shop while I chewed by fingernails and wondered about my sanity. This was no Babcock piano or even a Zumpe and Buntebart Hammerklavier; this was an instrument built before Bach was born, and for the first time in my life I felt afraid to begin a restoration. So I took off for New York as I usually do when I have a problem.

There seems to be very little biographical material on Mr. Stephen Keene. I certainly remembered nothing about him from anything I'd read, because, I suppose, Ruckers, Haward, Hitchcock, and a few others may be considered far more important builders, but I discovered during my first day at the 42nd Street Library that Keene was thoroughly respected by his contemporaries. I learned that his craftsmanship was excellent and that his sense of design was far better than either Hitchcock's or Haward's. The reason he is not so well known today could be that he wasn't so prolific as other builders or that fewer examples of his labor remain in existence.

Research

Half of each day of my week in New York was spent in the library. The result was a notebook crammed with material, some very interesting but entirely irrelevant, some absolutely worthless, a fair dribble of information which made it possible for me to plan a *modus operandi* and to know what materials I needed to procure, and five pages of lovely doodles.

My afternoons were mostly spent at the Metropolitan Museum, where I was reprimanded one day by the guard on duty in the Morgan Room for lightly plucking the string of the nun's fiddle. The string was easily half an inch in diameter and could have held up a locomotive. He was frightfully put out by my lack of respect and informed me that all the instruments there were very old and that I'd have to leave if I touched anything else. I assured him I'd cooperate, but he stayed within ten feet of me through my entire stay. The next day I was in the sanctum sanctorum where Mr. Moffitt, the remarkable expert in charge of musical instrument restorations, presides. There, surrounded by literally hundreds of priceless treasures dating back to the fourteenth century, I was allowed to browse practically at will. I did hesitate, however, whenever Mr. Moffitt handed over something for me to examine, because I imagined I could still feel that guard's hot breath on the back of my neck.

Perhaps the most stimulating fact I learned during this period of research was that there are apparently no other Stephen Keene spinets in America. None of the experts I spoke to knew of any, but it is of course conceivable that there may be some others reposing in attics or barns as was this Deerfield example. The impression I got from articles and papers that I read was, moreover, that there are apparently but very few left in England. Grove's *Dictionary* mentions three, two of about the same period and one of a later

(Continued on page 16)

GREGOIRE

(Continued from page 14)

date.

(Editors Note: Since this article was written, evidence has been uncovered which indicates that Stephen Keene spinets are not as rare as originally believed. Boalch has located 16 spinets by Keene and one is currently for sale by Musica Antica in Chicago.)

Such a discovery made me all the more determined to use nothing but authentic materials, but in this day of plastic and other synthetic materials a determination such as this one can really get you into deep water. The first three wood suppliers I approached laughed at me when I asked for French walnut. Someone even said there was an embargo on the stuff. It was only after consulting with Mr. Moffitt of the Metropolitan Museum that I found my source of supply, at A. L. Wild's obscure but well-stocked shop on the lower East Side.

I understand the Bowery is now the center of the world's diamond industry. With the possible exception of Ivoryton, Connecticut, it's also perhaps the only American source of raw ivory. One afternoon I explored almost the entire Bowery before I found what I was looking for — a billiard ball manufacturer. He had just that week received a new shipment of ivory, and although I had worked with ivory for years I was fascinated by its appearance in the raw state. There were hundreds of tusks, all different in size, shape, and color, strewn about the floor of the shop. There was bull ivory and cow ivory, fine-grained and course-grained; some tusks were flawlessly symmetrical while others were scarred and even broken. After a half hour of standing about and letting my imagination run rampant through scenes of Kipling, I reluctantly left with with my ten-pound package of ivory "points" wrapped in several layers of newsprint to insulate them against quick changes in temperature.

The actual restoration of the Keene spinet, once the necessary materials were assembled, was pretty much routine. Fortunately, I had some hundred-year-old spruce which I uncached for the soundboard and ribs. Crow-quill for the plectra which pluck the strings is never much of a problem if you're surrounded by New England cornfields, and by farmers who simply throw away hog bristle at slaughtering time, (and buy paint brushes made of bristle that Chinese farmers didn't throw away). By way of explanation, the hog bristle acts as a sensitive spring which maintains the tongue, in which the crow-quill is inserted, in the necessary position for the quill to attack the string. Good crow-quill, properly seasoned in olive oil, has surprisingly longevity, but performers on the spinet should be able to replace and adust their quills whenever the rather frequent breakdowns from broken quills occur.

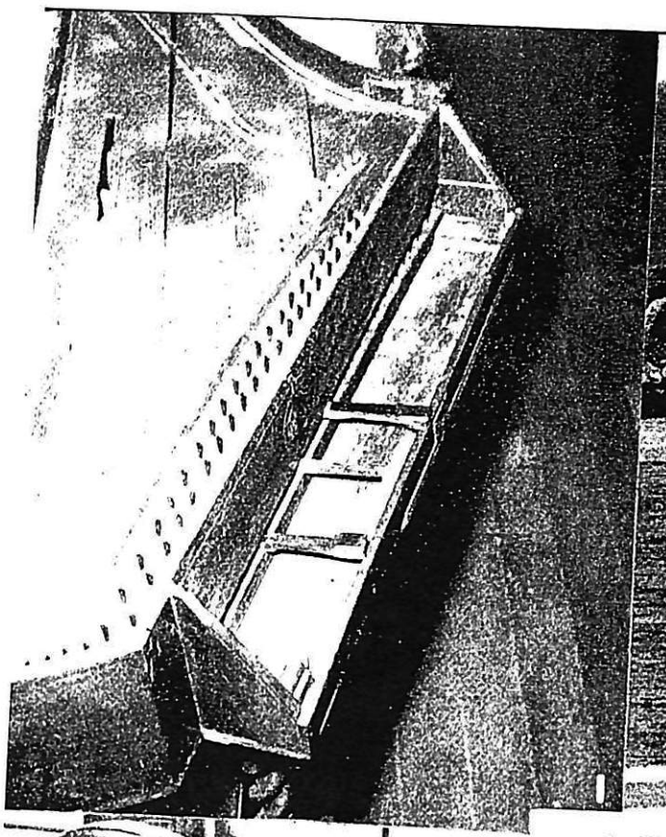
One of the first and most important discoveries I made when I began to lay out the keyboard was that Keene had used a short-octave arrangement by cutting the lowest two sharps. This was apparent only from the arrangement of the balance pins, since all the keys were lost except three in the middle of the keyboard. One day, quite a long time after I had built the keyboard, when thumbing through my Groves I came unexpectedly upon a tuning scheme for this very cut-sharp device. In addition to the important revelation of exactly what values these cut-sharps must have, it also corroborated that the spinet was built before 1685, because Keene is said to have discarded cut-sharps in that year. For the benefit of those who do not know, a cut-sharp is ostensibly one key with a lateral cut through its middle; that is, in a line parallel to the front of the keyboard. Actually, however, there are two separate and independent keys which increase the range of the instrument without increasing the length of its keyboard. This always involves only the lowest end of the keyboard. By this method we get a range down to G rather than B and end up with a keyboard of the same size.

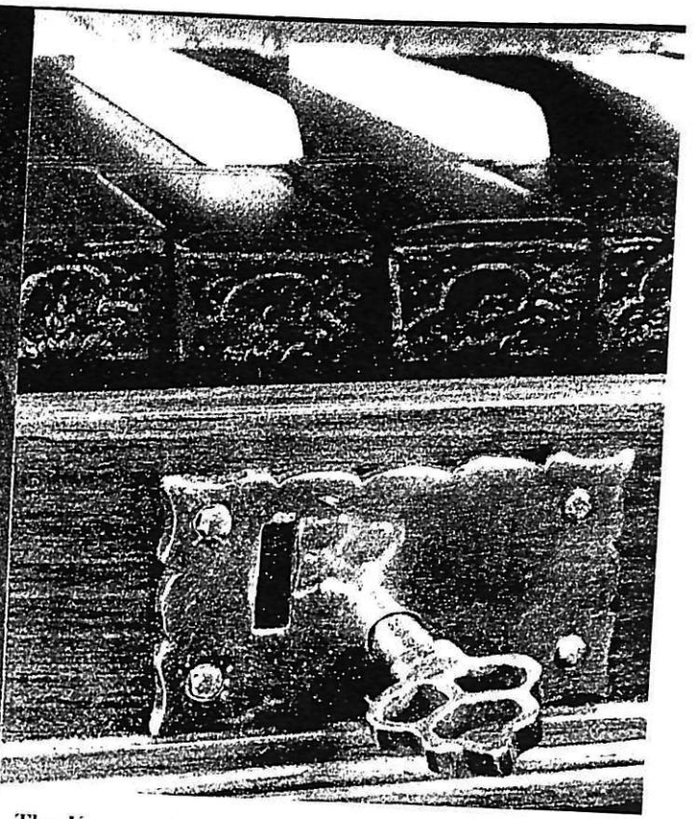
Beyond Description

A description of the Keene Spinet could never do it justice. One must see its lines and the patina of the wood to appreciate its beauty. The five-cornered case is French walnut with the exception of the back panel and bottom, which are oak and pine respectively. Cypress, inlaid with holly, comprises the inner surface trim, thump board, and inner case in the most discreet of simple designs. The cedar keys are overlaid with ebony for the naturals, and the sharps are solid ivory blocks. The key-fronts are tooled sheepskin painted black. The soundboard, as I have already said, is spruce, the mortise board is end-grained cypress, and the wrest-plank is beech. The jacks are pearwood, weighted with lead, and have holly tongues, crow-quill plectra, hog-bristle springs and felt dampers. The strings are all steel. Keene may have used half brass and half steel, but I found only vestiges of steel wire. The tone from these is beautifully lyrcial and full. The amplitude of the instrument is remarkably large, but it would be much larger had Keene utilized a rose (decorative, perforated hole) in the soundboard or a soundway somewhere in the bottom. This is the only factor of design on which I disagree with Mr. Keene. I have decided to make reproductions of this instrument, and the only difference between them and the original will be the addition of the rose.

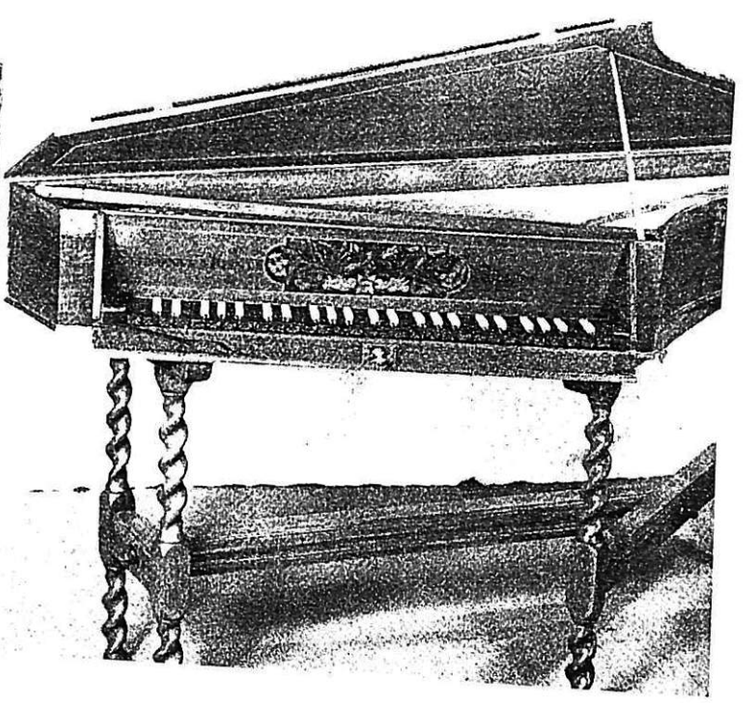
The case, which, incidentally, is 5 feet long, 2 feet through its greatest width, and 8 inches thick, weights about 75 pounds and rests on a beechwood trestle of simple design. The legs of this trestle are Jacobean, I think. The handsome hardware, most of which had to be replaced, is brass.

Working on this spinet has been one of the greatest pleasures I have ever experienced. I feel inspired to perpetuate Stephen Keene's design by making replicas which will live in the homes of friends and give them pleasure. I can never adequately express my gratitude to Mr. Henry Flynt for making the restoration possible and to Mr. Paul Hawks, who felt for years that something should be done to make this beautiful instrument speak again.





1. The Keene spinet before restoration was begun.
2. Detail of keys and lock.
3. Mr. Gregoire doing a job of tuning.
4. The completed restoration—again a thing of beauty.



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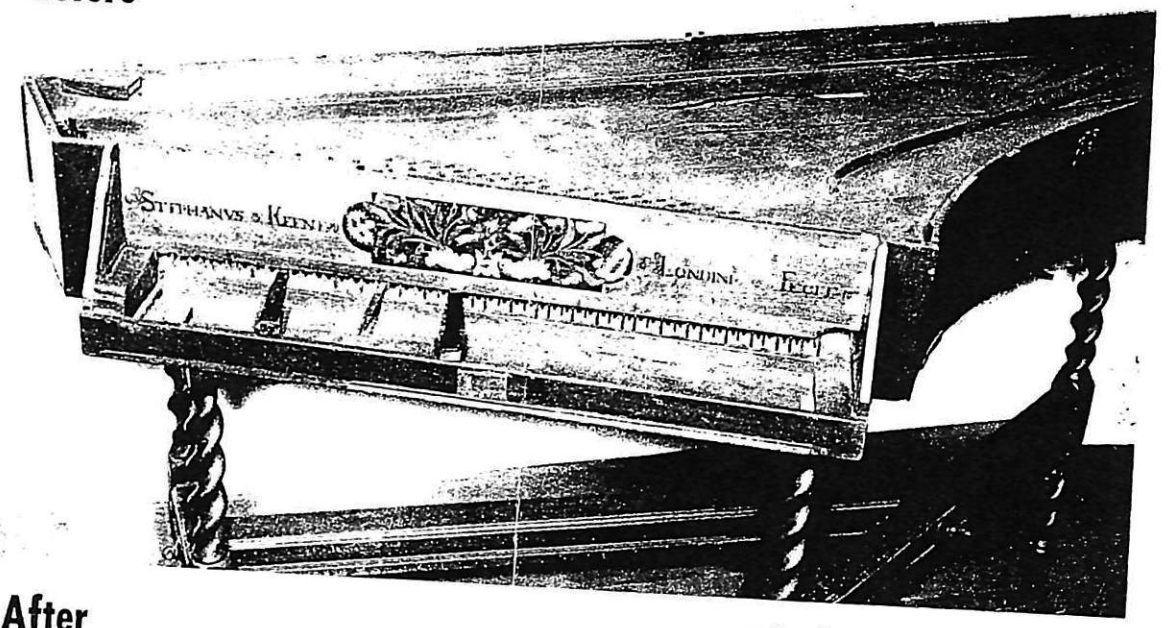

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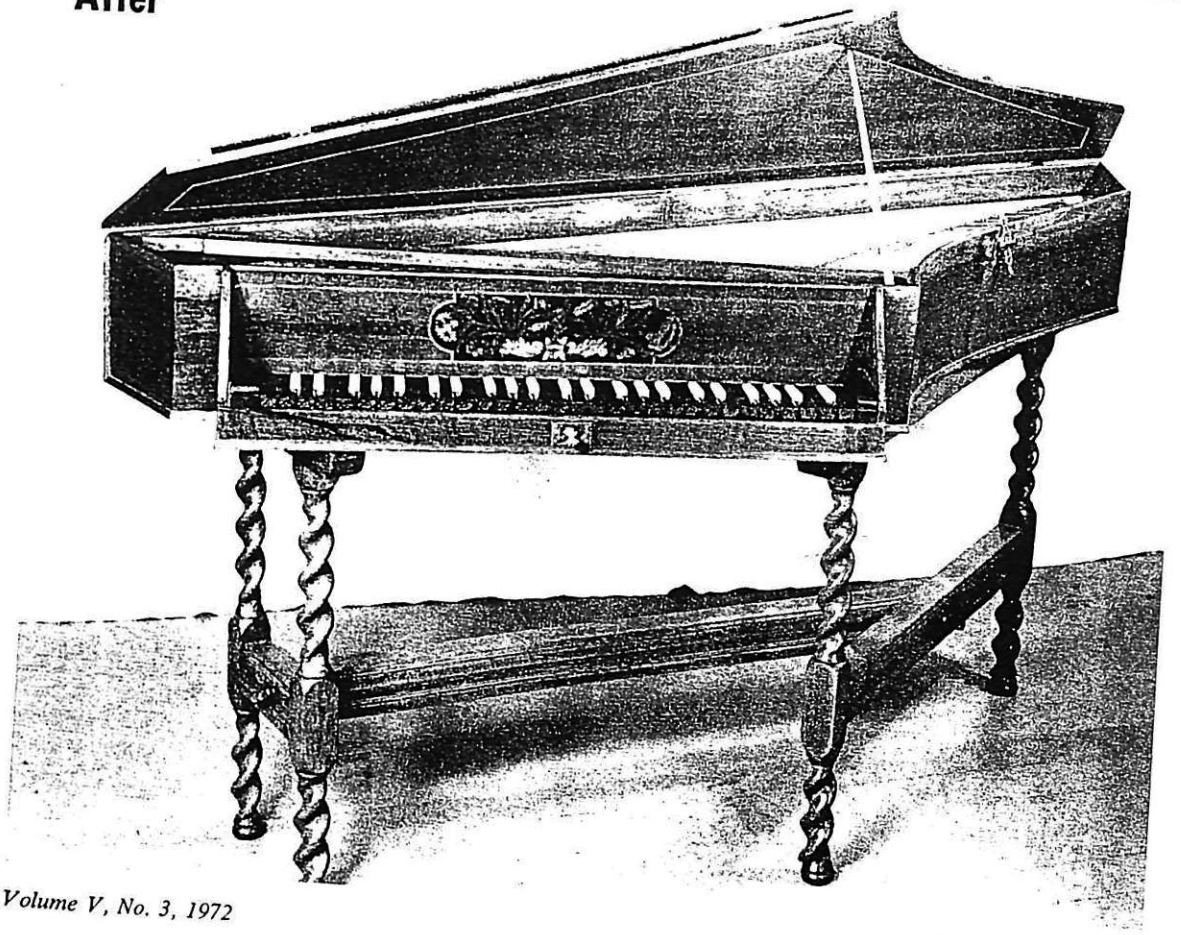


Gregoire Harpsichord Shop
Sassmann Harpsichords
Charlemont, Massachusetts
Tel. 413-339-6662

3 Nov 72

Mr. C.W. Wilson,
Certain-teed Products Corp.,
General Office,
Valley Forge, Pa 19481

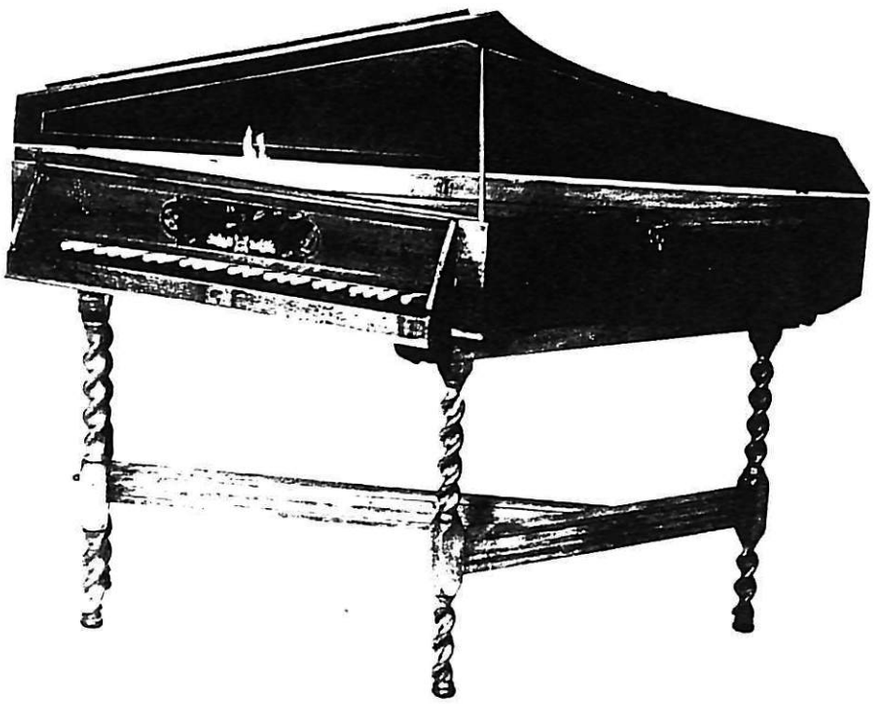
Dear Mr. Wilson:

I hope this is what you want. No hurry about returning the negative.

Best of Luck with your project.

Sincerely,

Aldei Gregoire



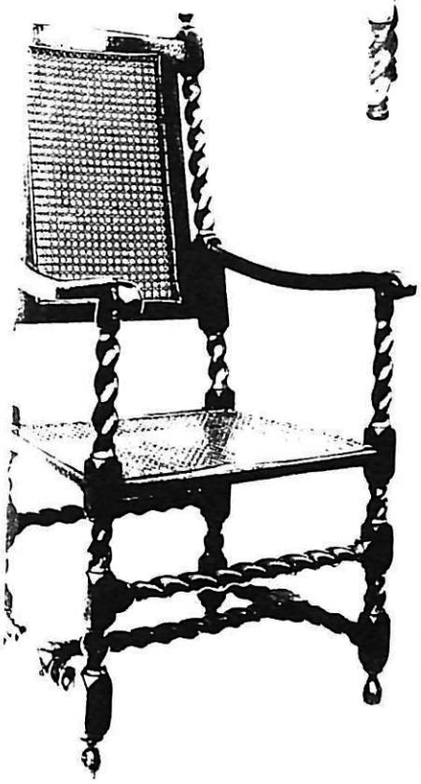


Fig. 2. Spinet made by Stephen Keene, apparently owned during the eighteenth century in coastal New England and during the nineteenth by the Willard family of Deerfield, Massachusetts; signed *Stephanus Keene Lomani Fecit, c.* 1685, walnut with other woods. Height 30½ inches; width across back, 61⅛ inches. *Pocumtuck Valley Memorial Association; gift of Samuel Willard.*

Scott MacDonald notes in his research in the files of the association that Samuel Willard, the first owner of the spinet in Deerfield, moved there after his marriage in 1808 to Susan Barker of Hingham, Massachusetts. Aldei Gregoire records details about the instrument and his restoration of it in the *Music Journal.* (Vol. IX, 1951, pp. 12-13, 41-43).

Fig. 3. Armchair with a tradition of ownership by William Penn; *c.* 1665, English, walnut. Height 47⅛ inches. *Historical Library, Pennsylvania Hospital.*

When Henry S. Drinker gave this chair to the hospital in 1810, he stated to the board of managers that he had acquired it in 1795 with a tradition of ownership by William Penn. The history gains credence through his additional statement that the chair had remained with this tradition at Pennsbury, the Proprietor's estate in Bucks County, through a succession of tenant farmers from the late seventeenth century until Drinker obtained it.

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APPENDIX P

THE COMPOSITE TRESTLE / A PHILADELPHIA ARMCHAIR

The Composite Trestle

The Baluster Turning – The Cabriole Leg

The Philadelphia Chair

The Composite Trestle

The inspired, English composite trestle has been recently misunderstood and criticized. It has been labelled, 'Jacondale',[4] meaning: 1, it is a mix of more than one style, and 2, such a mix is inherently wrong.[5] It has been described as having, "Two alien limbs – one grafted onto the other – the combination 'bizarre'". This charge can hardly be supported.[6]

The Baluster Turning / The Cabriole Leg

The baluster turning and the cabriole leg, both employing the compound, or cyma curve, actually began together in the late (essentially the final quarter) of the 17thC. Both were replaced at a similar time about 75-years later. The cabriole was superseded by the square-section Marlborough leg, as commonly seen on late 19thC spinet trestles and early square pianos, and then by the square, tapered Hepplewhite leg found on 'French stands' in the 1790s. In the third quarter of the 18thC, the baluster was succeeded by the straight, tapered Tuscan column.[7]

The cabriole leg, contemporary with the baluster, is, itself, a baluster at its two outer sides. Like the turned baluster, it has a 'cyma-reversa' form – but with a more effusive expression.

Even if the composite trestle's leg and turning were from two different eras, this would hardly have constituted a visual mistake: it is unimportant where a designer gets his inspiration. What is important is what he does with it.

The Philadelphia Chair

The featured chair was made in Philadelphia as late as the 1760s by Wm Savery, arguably, Philadelphia's leading chair maker at the time. It is not a country piece: Philadelphia was the second-largest city in the Empire at the eve of the Revolutionary War. This chair is featured here because it so successfully combines elements from four distinct periods of English

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[4] *The Historical Harpsichord*, V.IV, 2002, Germann.

[5] The term, 'Jacondale', is a combination of Chippendale and Jacobian.

[6] The writer responsible for Volume IV in its entirety ("Harpsichord Decoration – a Conspectus") has introduced the organologist to a visual appreciation of harpsichords and their varied supports – a stunning and original achievement. It is an expansion of an earlier, and, I believe, unpublished, monograph of hers, *Musical Furniture* (1970). The composite trestle was pictured with two spinets and called, then, just as combustibly, "a bastard style" (p.28-9).

[7] Note the same substitution on clock hoods from mid-century on.

furniture design that together create an exceptionally tight, dramatic statement. On this eclectic chair, note the Chippendale 'cupid's-bow' crest-rail crowning a 'parrot's-beak' Queen Anne splat, rising from a Wm & Mary foundation below which is a Cromwellian stretcher layout. Oriental references abound: the crest-rail suggests a pagoda roof. The solid splat, the boxed-stretcher base, and the compound-curved seat skirt can be found together on many Chinese Huanghuali chairs from the 17thC and later.

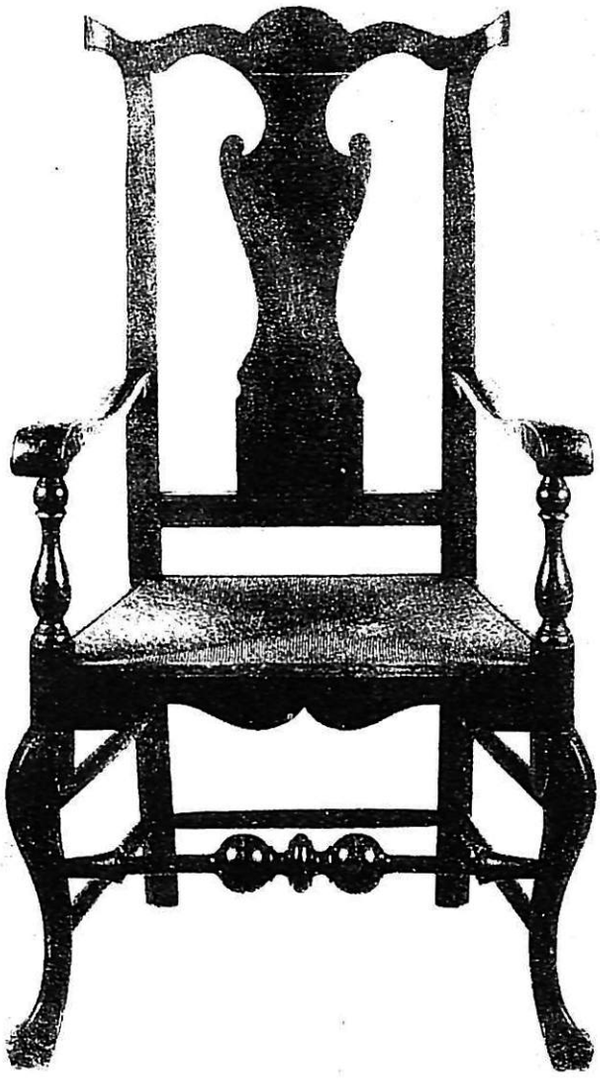
It is a highly sophisticated form. Note how the curved stiles echo the arms rotated 90-degrees. Note how the chair rails echo the legs and arm supports – again, rotated 90-degrees. Note the exuberance created by the pairing of similar terminations of the crest-rail and the front feet – the four located at the chair's outer corners.

It is pictured and described here because it relates very directly to the compound trestle found on late English spinets. The important, horizontal, central element in the English trestle is seen on this chair: the trestle's lateral line is its stretcher; the chair's lateral line is its seat. Both are functional, practically and visually. Above the horizontal line of each is a 'cyma-recta' baluster form, and below is an inverted, 'cyma-reversa' baluster form, elongated and emboldened. Both of these cyma-curved elements serve to frame the seat on the one, the stretcher on the other. Although carved rather than turned and shaped only on its outer sides, the cabriole leg is, nevertheless, a baluster.

This chair is a symphony of compound curves: I have counted 22 on three planes. It has been the subject of critical acclaim. Albert Sack (*Fine Points of Furniture,* 1950:20) (see illustration) called it "one of the masterpieces of Pennsylvania early furniture". Furniture scholar, John T Kirk (*American Furniture,* 2000:122-3) referred to its "significant sculptural presence" and described its maker as having "an extraordinary sense of rhythm and balance". Its aesthetic importance has not been lost on the market: in October 1996 one was auctioned for $134,500 (Christie's, NYC).

There are a number of sophisticated 18thC furniture forms showing cabriole legs rising to a platform, which, like the spinet's compound trestle, are surmounted by turned balusters: early tilt-top tables, wig stands, fire screens, Regency dining tables, Regency card tables all come to mind. But nothing justifies this platform better than this Savery chair. It is my belief that this chair does much to validate the compound trestle. It shows that multiple compound curves and balusters can be synergistic. It shows that these curves can be strengthened when juxtaposed against straight-line shapes such as trestle stretchers. Most important, it shows that the bold cabriole leg can enhance the top-most compound-curved form if it is kept separate from it. This is apparent with the Haward spinet **c.1685** pictured in Appendix A. Although not original, this trestle, nevertheless, enhances this spinet's outline better than the original could have.[8]

[8] The two chair pictures are from Sack's *Fine Points of Furniture* (1950:20) and Sothebys (NYC) catalogue of 21 Jan 2017 (L.6011).



BEST

Early Queen Anne armchair with cabriole legs and solid splat, Pennsylvania, circa 1720-1730. One of the great masterpieces of Pennsylvania early furniture. Note the magnificent, vigorous turned stretcher and the many effective refinements such as the scalloped apron and the chamfered edges of the cabriole legs. The proportions are excellent.

Side view of chair. The lines and detail are as impressive from this angle as from the front. The scalloped skirt on the side is exceptionally beautiful as is the shape of the horizontal arm with its knuckle terminal. Note the subtle serpentine sweep to the back post which adds to the comfort of the chair as well as to the line.