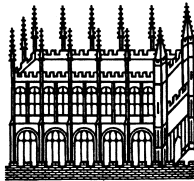


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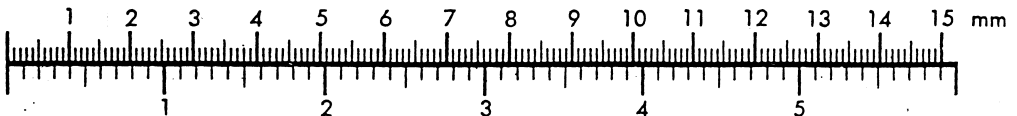
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# The Development of the English Harpsichord with particular reference to the work of Kirkman

Charles Mould

## Abstract

This thesis is an attempt to summarise the extent of the current knowledge concerning the development of the harpsichord in England. This knowledge is derived partly from documentary sources, partly from a review of the modern writers who have treated the subject, but mostly from careful examination, measurement and recording of the surviving instruments. The work is divided into two main parts, of which Part I treats the English harpsichord before the time of Kirkman. The first eleven pages are given over to a brief summary of the instruments before the time of Tabel, the maker to whom Kirkman was apprenticed. Tabel's one surviving harpsichord receives a more detailed treatment as does a double manual harpsichord by another of his apprentices, John Wilbrook. The surviving harpsichords by Joseph Mahoon are also examined, and it is noted that it is quite likely that two harpsichords by Francis Coston are still extant. Patents and other inventions of this period are also treated, and the section ends with an overall survey of the development until the time of Kirkman. The author traces no particular theme in the period until the last quarter of the seventeenth century, influence from Italy, and the Low Countries being found alongside elements of entirely native practice. It is noted however, that probably by the last quarter of the century English makers were beginning to make double manual instruments in imitation of the Flemish harpsichords of the time, but this took place alongside the development of a school of makers producing simple single manual harpsichords with 2x8ft choirs only. These harpsichords also contain elements of continental practice with the use of English case styles, native woods and a particular type of diagonal bracing. These instruments are so similar that they might well be called the English school of the period. At the beginning of the eighteenth century this school began to develop double manual harpsichords in the same case style, but also drawing on aspects of design probably introduced to this country by immigrant workmen such as Tisseran. It was at the turn of the century that the dogleg 8ft register was probably first introduced to England. It was to hold sway in all double manual English harpsichords for the next one hundred years.

In part II, the work of Kirkman is examined closely. It is noted that the layout of the string band for the 8ft choirs is the same in all Kirkman harpsichords regardless of the presence of a 4ft choir or a lute stop. It is also demonstrated that there was an interesting change in length of the Kirkman harpsichord from 96.75" in 1745 down to about 92.5" in the early 1760s and then increasing back to around 94" in the late 1780s. This change in length was accompanied by a change in the length of the FF string from 71" down to about 68" and then back to about 70". No explanation for this can be offered. Other aspects receiving detailed treatment in this section are the structure of the instruments, the types of roses, the signing of the nameboards (a change in the order of the wording is noted between 1758 and 1760), keyboards, jacks, slides, stringing, voicing etc. There are sections on the other instruments by Kirkman, the Changeable Harpsichord, marquetried harpsichords, Queen Charlotte's harpsichord, the instruments by Faulkner, and a comparison with Shudi harpsichords of the period. The section is terminated by a summary of the patents on musical instruments of the period and a summary of the overall development in the period 1730 - 1800.



The thesis is complemented by a number of Appendices. Of these, the first is a detailed look at the life and times of Kirkman, revealing him to have been a man of some substance and resource. Having acquired a good grounding in his work from Tabel, and having married Tabel's widow when on the threshold of his career, he soon made enough money to start speculating and lending money so that by the 1770s he probably spent little time in harpsichord making and gave himself to pecuniary matters. Other Appendices complement this first appendix, giving further details of such matters as Kirkman's friends, relatives, property, legal dealings and domestic matters.

One appendix is given to a report on the way in which the harpsichords seen during the survey have been measured and recorded. Finally, there are nine tables, giving general data on the harpsichords up until the time of Kirkman, surviving harpsichords from the period 1744-1800, chronological development of English furniture styles, a chronological table of events in the development of the harpsichord from 1439 - 1800, and more specific details and dimensions of Kirkman harpsichords. The thesis ends with some 75 illustrations all of which are original.

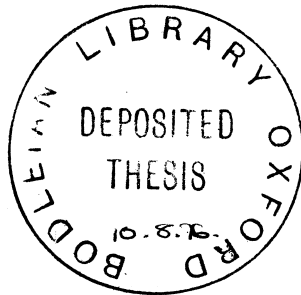
UNIVERSITY OF OXFORD

Thesis for the degree of Doctor of Philosophy

The Development of the English Harpsichord with particular  
reference to the work of Kirkman

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B.Sc., C.Eng., MIEE, MBCS

Jesus College



# The Development of the English Harpsichord with particular reference to the work of Kirkman

Charles Mould

## Introduction

There are four works which may be considered to be the standard modern reference books on the harpsichord:-

Philip James, Early Keyboard Instruments, Holland Press 1930 (reprint 1960)

D.H. Boalch, Makers of the Harpsichord and Clavichord, 1440-1840, (First Edition) George Ronald, London 1956, (second edition) O.U.P 1974.

Raymond Russell, The Harpsichord and Clavichord, London 1959, (revised edition by Howard Schott, 1973)

Frank Hubbard, Three Centuries of Harpsichord Making, Harvard, 1956

Between them, these books cover most of the extant sum of knowledge of the harpsichord in general terms, and detailed research by a small but enthusiastic band of devotees has added much specialised information in the past few years. With the exception of Boalch, the above works treat all the schools of harpsichord building, including the Italian, Flemish, French, English, German and Spanish, and the treatment of the English instruments has been governed by the limitations of space, and the audience for which the authors were writing.<sup>1</sup> English instruments are continually being discovered, and apart from a number of hitherto unknown Kirkman harpsichords, at least three important instruments from the period before 1730 have come to light even since Hubbard was published. It is therefore the purpose of this thesis to summarise in some detail the present knowledge concerning the development of the harpsichord in England, mainly by examination of surviving instruments, and with a particular emphasis on the work of Kirkman. The thesis is divided into two parts, part I dealing in summary with the harpsichords before Kirkman though the instruments of Tabel and Wilbrook receive a fairly full treatment. In part II the harpsichords and other instruments by Kirkman receive a full treatment, and the work of other makers is also touched on. The main body of the thesis is supported by a number of appendices, one of which contains much new material on the life, times and family of Jacob Kirkman, and this is supplemented by other appendices on detailed matters

1. William Dale in his monograph Tschudi the Harpsichord Maker, London 1913 has added a little more specialised knowledge, but no one work covers the development of the English harpsichord as a whole.

which are relevant to him.

In such a study it has been necessary to draw heavily on the work of the above mentioned authors, and readers familiar with them will no doubt recognise the part they have played in my findings. It is difficult to give credit to specific authors at every point where I have drawn on them, and I must at the outset acknowledge the great debt I owe to these four works. In addition I am greatly indebted to a large number of kind people without whose help I could not have undertaken the work. The study has been essentially of a practical nature and has involved inspection and measurement of over 70 harpsichords, a list of which appears in the acknowledgements below.

Throughout the work, as far as possible the terminology of Hubbard has been used simply because it is the clearest in typescript, and any departures from this practice are noted when first encountered. A selective bibliography is included, though this is by no means exhaustive and is mainly a list of the works referred to in the text.

The thesis is supported by 75 illustrations (all original), nine tables and the appendices referred to above, and is approximately 90,000 words long.

Brill  
Buckinghamshire

Charles Mould  
February 1976

## Acknowledgements

During this study I have been aware of the great debt I owe to a number of people who have given freely of their knowledge and help. In particular I would like to thank my two supervisors, Professor F.L.L.Harrison and Donald Boalch, and John Barnes, the late John Feldberg, Thomas Goff, Miss Betty Matthews Dr. Roger Mirrey, Grant O'Brien, J.J.K. Rhodes and W.R. Thomas, Edwin Ripin, Howard Schott, Michael Thomas, Peter Williams, and Charles West Wilson.

In addition a large number of harpsichord owners have made their instruments freely available, and I give below the list of instruments seen with their owners to whom I would like to give my grateful thanks. (In the case of Museums and other organisations I give as well the name of the curator who has been instrumental in allowing me access to the harpsichord).

In the following list, @ denotes a full examination, \* denotes a short examination and + denotes a cursory examination only

### Pre 1730 harpsichords

1. 1579, Ludovic Theeuwes @ - V & A Museum, Peter Thornton Esq
2. 1622, John Iasard? @ - Lord Sackville, H. Sackville West Esq
3. 1683, Charles Haward @ - The late Sir William Worsley
4. 1700-1712, Joseph Tisseran @ - Thomas Burns Esq
5. 1709 Thomas Barton @ -
6. Undated, Benjamin Slade @ - Dr. Roger Mirrey
7. Undated, William Smith @ - Mrs. Audrey Blackman
8. 1720, Thomas Hancock @ - Russell Collection, Edinburgh, John Barnes Esq<sup>1</sup>
9. Undated Thomas Hitchcock @ - V & A Museum, Peter Thornton Esq
10. 1721, Herman Tabel @ - County Museum, Warwick, Miss Jocelyn Morris
11. Unsigned dated 1623 on soundboard @ - Michael Thomas Esq
12. 1634, signed Johannes Ruckers @ - V & A Museum, Peter Thornton Esq
13. 1730, John Wilbrook @ - Dr. Roger Mirrey
14. Unsigned, undated @ - Sir Peter and Lady Orde.

---

1. Thanks are also due to the Director, Dr Peter Williams

# Kirkman Harpsichords

|     | Boalch No | Date | Examination | Owner                                                  |
|-----|-----------|------|-------------|--------------------------------------------------------|
| 15. | 02        | 1749 | @           | N.L. Wright Esq                                        |
| 16. | 1a        | 1750 | +           | C.F. Colt Esq                                          |
| 17. | 2         | 1752 | @           | National Trust                                         |
| 18. | 3         | 1754 | @           | C. Warburg Esq                                         |
| 19. | 4         | 1755 | @           | Russell Collection, John Barnes Esq, Dr Peter Williams |
| 20. | 7         | 1757 | @           | Bristol Museum, Trustees of Lady Burdett Fletcher      |
| 21. | 12        | 1760 | *           | Messrs Sotheby                                         |
| 22. | 15        | 1761 | @           | R. Cooke Esq M.P.                                      |
| 23. | 18        | 1762 | *           | National Trust                                         |
| 24. | 21a       | 1763 | @           | Mrs D.O. Graesser                                      |
| 25. | 30a       | 1765 | @           | Mrs Alys Luttrell                                      |
| 26. | 32        | 1766 | @           | Lord St. Oswald                                        |
| 27. | 33        | 1766 | @           | The late Captain Robert Berkeley                       |
| 28. | 36        | 1767 | +           | Messrs Sothebys                                        |
| 29. | 46        | 1771 | @           | Aberdeen University, Reginald Barrett-Ayres Esq        |
| 30. | 49        | 1772 | @           | The Ashmolean Museum, Gerald Taylor Esq                |
| 31. | 60        | 1776 | +           | Dr Roger Mirrey                                        |
| 32. | 60a       | 1776 | +           | V & A Museum                                           |
| 33. | 61a       | 1776 | +           | Trinity College Dublin                                 |
| 34. | 62        | 1777 | @           | Thomas Goff and Anthony Sharp Esq                      |
| 35. | 63        | 1777 | @           | National Trust                                         |
| 36. | 70        | 1781 | @           | Messrs Forsyth                                         |
| 37. | 71c       | 1785 | +           | Mrs J. Tomlin                                          |
| 38. | 73        | 1785 | @           | R.R. Henshaw Esq and N.L.Wright Esq.                   |
| 39. | 74        | 1786 | @           | John Barnes Esq                                        |
| 40. | 79a       | 1787 | @           | Messrs Morley, John Morley Esq                         |
| 41. | 81        | 1788 | +           | Edward Croft-Murray Esq                                |

# Kirkman harpsichords (continued)

|     | Boalch No | Date    | Examination | Owner                 |
|-----|-----------|---------|-------------|-----------------------|
| 42. | 82        | 1788    | @           | Messrs Forsyth        |
| 43. | 87        | 1790    | @           | Taunton Castle Museum |
| 44. | 92        | 1796    | *           | John Baines Esq       |
| 45. | 95        | 1800    | +           | C.F. Colt Esq         |
| 46. | 99        | undated | @           | H. Sackville West Esq |
| 47. | 107a      | undated | @           | Dr and Mrs Huntsman   |
| 48. | 109       | 1745    | @           | Lord Wemyss           |

In addition, I would like to record my thanks to those who have kindly supplied me with details of Kirkman harpsichords which I have not seen including Edwin Ripin, Charles West Wilson, D.O. Graebe Esq., Dr Guy Oldham; Dr Michael Swann, Smithsonian Institution, Metropolitan Museum of Art, Rev James Simpson, Messrs. J.J.K. Rhodes and W.R. Thomas.

## Instruments by other Makers

49. 1749, Shudi + Mrs Mary Potts
50. 1761, Shudi @ National Trust
51. 1766, Shudi J.J.K. Rhodes and W.R. Thomas
52. 1770, Shudi and Broadwood + National Trust
53. 1772, Shudi and Broadwood \* Michael Thomas Esq
54. 1773, Joshua Shudi + O.R. Bagot Esq
55. 1781, Shudi and Broadwood @ Music Faculty, Oxford University
56. 1782, Shudi and Broadwood + V & A Museum
57. 1789, Shudi and Broadwood @ George Braithwaite Esq
58. 1790, Shudi and Broadwood + Messrs Forsyth
59. 1791, Shudi and Broadwood + Manchester Central Library
60. 1793, Broadwood + Russell Collection, John Barnes Esq
61. 1770, Robert Falkener, @ Glasgow University, J.J.K. Rhodes and W.R. Thomas
62. 1773, Robert Falkener, @ Russell Collection, John Barnes Esq
63. Unknown Maker, made to look like Kirkman, property of K. Skeaping Esq., seen during repairs by permission of John Barnes Esq
64. 1777, Thomas Haxby @ York Castle Museum
65. Undated, Longman and Broderip @ National Trust
66. Undated, Longman and Broderip + Music School, Cambridge University
67. 1785, Culliford @ A.C.N. Mackenzie Esq
68. Undated, Baker Harris @ Mrs. K. Thompson
69. Thomas Blasser \* Messrs. Sotheby

70. 1738, Joseph Mahoon + C.F. Colt Esq

71. 1769, John Kirshaw + Alan Legge Esq

In the research carried out in Greenwich and Blackheath, I have been greatly helped by a number of people, and my thanks are especially due to The Rev. Cecil Morrison, H.Sewell Esq., Mrs. B.Platts, Mrs Birkett, D.Leggatt Esq., Mrs. Mann, the late Mr Magnaldi, owner of The White House, Messrs Stocker and Roberts, and A.R.Martin Esq.,

Finally I would like to thank Mrs Jane Macmillan and Mrs Jane Webber for their assistance, Mrs Anne Crump for undertaking some of the proof reading and my wife for encouraging me to continue the work over many years.



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## **Part I**

### **The Development of the English Harpsichord before Kirkman**

## The Development of the English Harpsichord before Kirkman

There is no firm evidence to show that the harpsichord existed in England before the fifteenth century. Several writers have traced the instrument from the psaltery and more recently Ripin<sup>1</sup> has again looked at the instrument known variously as the eschequier or chekker etc., but the exact date at which the keyboard was added to the psaltery remains elusive. The earliest conclusive evidence for the harpsichord in England comes from the windows of the Beauchamp Chapel in St. Mary's church, Warwick.<sup>2</sup> One of these windows, made by John Prudde between 1439 and 1447 shows the characteristic wing-shaped instrument, and though there is no evidence of wrest plank or action, there is a keyboard. Of much the same date (1465-1468) is a corbel in the nave of Manchester Cathedral<sup>2</sup> bearing a carved angel playing an instrument which has keyboard, action, and a bridge on the soundboard. Finally also from the fifteenth century comes a representation of a harpsichord played by an angel on the base of a wall post in St. Wendreda's Church, March, Cambridgeshire.

Extrapolating backwards from these examples, it would seem likely that they would have been represented in this fashion only if their respective artists had had some reasonable experience of the harpsichord as an instrument used in the worship of god. It is therefore possible that the wing-shaped harpsichord existed some years before 1439 and may well have been in use in the early years of the fifteenth century.

By the sixteenth century there is considerable documentary evidence available concerning the harpsichord, though it is often confusing and the use of the word virginal for any instrument with jack action makes it difficult to be certain of the specification of the instruments cited. The development of the harpsichord during this period is a subject for study in itself, demanding the ability to transcribe and interpret the original documentary sources, and it is hoped that on completion of this thesis the subject will receive a more detailed examination by the author. Almost certainly the wing-shaped harpsichord was to be found at court, and most probably it was available with more than one register. Certainly more advanced instruments were to be found by the last quarter of the century and it is from this era that the earliest surviving English keyboard instrument comes.

1. GSJ XXVIII

2. E.M.Ripin, Keyboard Instruments. Studies in Keyboard Organology. E.U.P. p14 A Checklist of Fifteenth-century Representations of Stringed Keyboard Instruments by Edmund A. Bowles.

The claviorganum of Lodewijk Theeuwes dated 1579 has been described by a number of writers<sup>1</sup> and further additional material has been made available to me partly from two inspections, and also from unpublished material kindly made available to me by Mr John Barnes after an inspection of the casework which he observed during restoration work in 1966.

Theeuwes was admitted to the Guild of St. Luke in Antwerp in 1558 but was living in London by 1568. Thus he built the instrument in London although he must have received his training in Antwerp. His was not an isolated case, for of the sixteen English virginal makers listed by Boalch before 1700 at least four came from the Low Countries.

The claviorganum appears as a box-shaped base originally containing the organ, though now almost completely empty, and a wing-shaped harpsichord originally with a single manual (now missing), placed on top of it. The harpsichord now has bridges and nuts suggesting 2x8ft and 1x4ft, though this, like the compass which is usually quoted as 49 notes (C-c<sup>3</sup>), has been disputed on occasions. The unusual compass is found on no other harpsichords of the period, either in Italy, from which much evidence of the practice of that country is available,<sup>2</sup> or elsewhere. The presence of 49 notes is confirmed by three rows of wrest pins each containing 49 wrest pins, whilst the compass appears to be confirmed by a balance rail which is still to be seen having balance pins for four complete octaves starting and ending on a c, though there is some doubt concerning the balance pin for the topmost c. This is 0.5" forward of the line of the other natural pins and slightly further to the right than would have been expected from an examination of the spacing of the other pins. Thus the compass of C-c<sup>3</sup> must be treated with some caution. In the case of the specification, the existence of new sections of the 8ft bridge, and a completely new 4ft nut and bridge which have obviously never been strung have caused some writers to suggest that the whole 4ft is a later addition. The existence of three rows of mortises for jacks indicates that there were originally three choirs, and the existence of a 4ft hitch pin rail of oak does make it seem likely that the original specification was as it now appears.

1. References to the Theeuwes claviorganum are to be found in: Boalch, p123. Russell, p 65 et seq and plates 53 and 54 Victoria and Albert Museum, Catalogue of Musical Instruments, Vol I, Keyboard Instruments, HMSO 1968, p 48 et seq, plates 16a, 16b, and 16c. Hubbard, p 138. Hubbard Frank, GSI III, 1950 pp 12 - 15. McGeary Thomas, The Harpsichord Magazine, Vol I, No 1, p7, Early English Harpsichord Building, A Reassessment.

2. see Hubbard pp 26 and 27



The existence of hook-shaped pieces of metal on the 8ft bridge has puzzled many writers, and McGeary's suggestion that they might in some way be connected with an original specification of 3x8ft seems untenable on the grounds that there is now no indication of the way in which a third 8ft choir could have been hitched, neither could the hooks have been made to carry a third set of strings without producing an impossible down pressure on the bridge. Two additional possibilities have been advanced in the past; that the hooks were either an arpichordium stop of the form to be found occasionally in the Flemish muselar, or they could have been used to change the pitch of the whole instrument by sharpening each note. To this the author adds a third possibility that they might have been used to sharpen individual notes so as to give alternative tunings, a practice known as early as 1555.<sup>1</sup> In the absence of any further evidence it is not possible to be more authoritative on this point. This unique instrument is further remarkable in that it possesses the only known example of a means of changing the registration by movable lower jack guides and fixed upper guides. The upper mortises are cut through the soundboard, which extends longitudinally over the main gap and the wrest plank, and the mortises are covered with leather in the style to be found in a near contemporary Flemish virginal of 1584 by Joes Karest.

In summary, the harpsichord part of this claviorganum is a complete amalgam of features, which by the next century were to be recognisable characteristics of the harpsichords built in Italy, the Low Countries, and England. The Italian characteristics are the bridge profiles and the soundboard running over the wrest plank. Flemish features include the soundboard layout with long scale (approximately 13.88"), main gap perpendicular to the spine, the soundboard barring and the case construction with struts running perpendicular from spine to bentside, the profiles of the nuts, and the leather covering of the jack mortises. English characteristics are not so easily discernible, but the use of oak for the majority of the casework is not to be found elsewhere on the continent.

Finally, it is noticeable that the instrument is a claviorganum. Hubbard<sup>2</sup> notes the "phenomenal English interest in claviorgana" and states that of the few sixteenth century instruments which he could trace in England, no less than six were of this type. Surprisingly, however, John Caldwell in his study of English keyboard music<sup>3</sup> has found only one piece which would

1. Nicola Vincentino, L'antica musica ridotta alla moderna prattica. Rome 1555

2. Hubbard, p 138.

3. John Caldwell, English Keyboard Music Before the Nineteenth Century, Oxford, Blackwell 1973.

specifically require either an organ with divided stops, or a clavichord, or a two manual harpsichord, and so, despite Hubbard's interpretation of the documentary sources which he consulted it may well be that the survival of the Theeuwes is merely coincidental.

Surviving English harpsichords from the seventeenth century include two authenticated examples, both single manual instruments, one from Knole in Kent dated 1622, and the other by Charles Haward dated 1683. In between these dates are three tantalising examples, none of which was available when Hubbard wrote in 1966 and which have received scant coverage in the journals since that time. They include a decorated two manual harpsichord bearing the date 1623, which superficially appears to be Flemish, and two instruments which appear to come from the Ruckers' workshops; one from Ham House bearing the date 1634 and the other from Helmingham Hall, Ipswich bearing the date 1646. Comparison of these three harpsichords indicates that despite appearances they are almost certainly the work of English builders. Finally, from the seventeenth century comes an undated harpsichord usually known as the Cassus Jesses from the only decipherable inscription which it bears. This harpsichord cannot be ascribed to an English builder with any degree of certainty, though it bears some affinity of decoration and keyboard style with the eighteen surviving examples of English virginals of the period 1640 - 1680, and the use of oak for bent-side and tail points to an English origin.

Returning to the 1622 Knole harpsichord, there is no lack of description in the various sources<sup>1</sup> and 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 harpsichord now lacks keyboard, sound-board, action, and lid, and therefore reconstruction of its original specification is difficult. Three rows of surviving wrest pins indicate a three choired instrument and though the layout of the wrest plank is unlike that of any other surviving harpsichord it is possible to infer that at least one choir was plucked very close to the nut, and this is possibly the earliest form of the lute stop to be found, though in no sense is it a lute stop of the type to be found in later examples with a separate gap cut through the wrest plank. From the positions which were probably occupied by the nuts it is possible to infer specifications of 2x8ft 1x4ft, or 2x8ft and

1. Descriptions of the instrument are to be found in: Hubbard, p 140. McGearry Thomas, *The Harpsichord Magazine*, Vol I, No 1, p 10. Russell p 65. Hubbard, Frank, *Galpin Society Journal III*, 1950, pp 12 - 15.

and a third choir at a fourth or fifth below unison, or 3x8ft, or even 2x8ft 1x16ft, though these two latter possibilities are hard to credit. Regrettably, though several writers including the author have made extensive examinations of the instrument, no new evidence has come to light to support or refute these suggestions with the exception that the author has reconstructed the string band on the evidence of scribe lines found on the bottom boards of the harpsichord, and it can be shown that the scale was most probably around 12" at  $c^2$  rather than 10" as has usually been quoted. Additionally the positioning of a scribed rose on the bottom boards would indicate that a 4ft bridge could not have been accommodated, and this is supported by the absence of any form of cut out in the liner which could have been used as the end housing for a 4ft hitch pin rail. Thus the most likely specifications are 3x8ft, or 2x8ft and a third choir at an unspecified pitch. The existence of 53 notes suggests a compass of BB(GG) in the bass to  $d^3$  with one split note at C sharp or D sharp, an arrangement to be found almost a century later in the Tisseran harpsichord.

The Iasard harpsichord of 1622 contains elements of Italian practice in the angling of the main gap to the spine, the lightness of construction of the case and its peculiar form of bracing which is based on three sloping struts running from bottom board to liner, a fourth running from lower header to liner and a fifth from an existing strut on the bottom boards to the liner. The scale of 12" is also more in keeping with Italy than Flanders, though the latter school practice is evidenced by the jack guides with upper and lower separate members. The use of oak for the case and the style of the case and stand are typical of English domestic furniture of the period. Finally, the possible existence of a form of lute stop is indicative of the English liking for the effect at an early date.

There is further evidence of the lute stop in the Cassus Jesses harpsichord which has been described by Hubbard<sup>1</sup>, there being a lute gap in the wrest plank and the lower guide is still to be seen. The instrument has one manual, a present compass of AA-f<sup>3</sup> and 2x8ft choirs, though it is not certain that any of these is original. The harpsichord has undergone considerable changes over the years and for this reason it has never been regarded as an important piece of evidence in the history of the development of the harpsichord in England.

Of greater interest is an unsigned double manual harpsichord which is now the property of Michael Thomas who obtained it at auction from the Heneage

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1. Hubbard p 143.

family. Superficially the painted case and decorated soundboard give a feeling that the instrument is Flemish and indeed this was stated in the Sotheby catalogue of 3 June 1971. It now has a compass of 60 notes, FF - f<sup>3</sup> less FF sharp and this fits comfortably into the space available in the case. The instrument is disposed with lute and dogleg 8ft on the upper manual and dogleg 8ft 4ft and second 8ft on the lower manual, the 4ft jacks being in the middle row of three in the main gap. There can be little doubt however that the whole of the action is a modern replacement, and the presence of 63 mortises in the lute slide (which is probably not modern) indicates that many changes have taken place. The date 1623 is painted on the soundboard, and when considering the likelihood of the authenticity of this date, McGeary states that art experts who have examined the style of the case painting are agreed that it is not inconsistent with the first quarter of the seventeenth century. Whilst this may be true, there is equally no reason why a forger who was unscrupulous could not have painted the casework appropriately. Arguing positively against the acceptance of the 1623 date is the width of the harpsichord which at 36.25" is greater than that found in any other instrument from any other country at this date. Additionally, the internal case construction contains diagonal bracing of the type found in a number of English instruments between 1683 and 1720. (This is also the main reason for supposing that the harpsichord was made in England.) This bracing is also further specialised in that between the belly rail and the lower header there is a piece of wood to which is fixed one of the bracers at liner level. This piece of wood has become known as "the shelf", and like the diagonal bracing, it is not to be found in any Flemish harpsichord. It is also germane at this point to note that the casework is pine, a pointer to English construction, for the Tisseran harpsichord of 1710 is also of pine, and though Flemish in concept, it was undoubtedly built in England.

Two possibilities therefore exist. Either the harpsichord is genuinely dated at 1623, in which case it exhibits characteristics of size, and compass which are well ahead of normal practice in the Low Countries or England, or it is a later instrument which for reasons of prestige has been made to look like a Flemish harpsichord, the maker allowing himself licence only in the matter of the internal case construction which he hoped would never be seen.

The value of Flemish harpsichords in England in the seventeenth and eighteenth centuries is hinted at in several documents, and it is probably for this reason that the harpsichord from Ham House bearing the inscription IOANNES . RVCKERS . ME . FECIT . ANTVERPIAE on the nameboard and the date 1634

on the soundboard was built most probably by an Englishman<sup>1</sup>. Though the harpsichord had been accepted as genuine for many years, it was not until 1973 that Grant O'Brien and John Barnes were able to show during a restoration that the harpsichord was in many ways structurally like the 1623 instrument described above, thus demonstrating that it was most probably English and not Flemish. It is known that the harpsichord was sold to the owner of Ham House, the 4th Earl of Dysart, in 1725, and it is just possible that it was built at that time. It seems more likely, however, that it was built a little earlier in imitation of a Ruckers harpsichord with four rows of jacks in the main gap, the existence of a strip of pine at the proximal edge of the wrest plank indicating that at some time the whole plank has been moved forwards to narrow the gap down so that it would accommodate three rows comfortably. This change was probably made around 1725 so that the dealer who sold it could provide the "English" specification of 2x8ft and 1x4ft with a dogleg 8ft available from both manuals and the second 8ft and the 4ft available from the lower manual only. The compass of the harpsichord is now GG-e<sup>3</sup> with a scale of 13.2", this latter being a further departure from Ruckers' practice in which, according to Hubbard, the scale was invariably 14" in the case of the double manual transposing harpsichords known by him as the model IV.

Somewhat similar circumstances surround the single manual harpsichord at Helmingham Hall near Ipswich which is the property of Lord Tollemache, whose family owned Ham House, and who is a descendant of the Dysarts. This harpsichord signed ANDREAS RVCKERS ME FECIT ANTVERPIAE carries the date 1646 on the soundboard, but like the Ham House instrument, it too has the shelf construction and diagonal bracing in the case interior. Grant O'Brien has examined this instrument and it is due to his work that the similarities between the two instruments have been brought to light. Whilst the latter harpsichord does contain pieces of genuine Ruckers' origin there can be little doubt that it is basically the product of an English workshop built in imitation of a Flemish harpsichord.

The three harpsichords described above all exhibit similar features, and if it is accepted that they were built as attempts to deceive their purchasers it does point to the fact that either the two manual English

1. References to this instrument will be found in:  
 Boalch (1st Edn) p 95 (2nd Edn) p 137. Russell, Catalogue of Musical Instruments, Victoria and Albert Museum 1968 pp 41 - 42 and plates 12A-D.  
 Grove, Dictionary of Music and Musicians, London, Macmillan, 4th and 5th edns.  
 The Harpsichord Magazine, October 1973, p 15. Musical Instruments as Works of Art, V and A Museum, London, HMSO 1968, fig 22a - 22c

harpsichords were not available in the late seventeenth century, or if they were available it was still considered preferable to purchase a Flemish harpsichord. The exact dating of the three harpsichords is still a matter for some conjecture, however it does seem that the 1623 instrument cannot be dated correctly if only on the grounds of width and compass, whilst the authentication of the earliest diagonally braced English instrument at 1683, to be described next does suggest that the three harpsichords could have been built at any time from that date onward until the end of the first quarter of the eighteenth century, by which time the diagonally braced case was being replaced by the more Flemish style of bracing.

The single manual harpsichord by Charles Haward dated 1683 is well documented<sup>1</sup>, and is the earliest of a group of five similar instruments surviving from the period between 1683 and 1720. The other instruments include an undated single by Benjamin Slade, one by William Smith, also undated, and two dated harpsichords, by Thomas Barton 1709, and Thomas Hancock 1720. Whilst there are individual differences the similarities of style are marked and include short scales varying from 9.7" for the Hancock to 11.25" for the Barton, light case construction all with diagonal bracing except in the case of the Smith, the use of walnut, either solid or as a veneer for the external case finish, lid strap hinges which are almost identical, two 8ft choirs only and keyboard finishes almost invariably employing ebony as the finish for the naturals and ivory and ebony in combination for the sharps. The compasses vary considerably, the earlier instruments having less than five octaves whilst the Smith extends to the full five octave range and the Barton has a broken octave with two split sharps. One notable variation is the discovery that the Haward originally had a lute stop though at some later date this has been removed.

The styles and features of these five harpsichords are so similar that should another instrument of this type come to light there would be little difficulty in assigning it to the period 1683 - 1720 even if it were unsigned and undated. A number of writers have dwelt on the many Italian features of these harpsichords and have said that English harpsichord building was at this time based on Italian practice. Undoubtedly there are Italian characteristics to be seen, at least two of the harpsichords for example have the typical Italian box slides for the jacks. Yet there are many other

1. References include: Hubbard, GSI III, 1950 pp 12 - 15

Hubbard p 144

Russell p 70

influences to be detected and there is a sufficient uniformity of approach to suggest that by the late seventeenth century the native English builders had developed a style of building which could be called English in its own right.

Two pieces of documentary evidence at the end of the seventeenth century provide additional clues to the development of the harpsichord in England. The first is the well known excerpt from Mace's Musick's Monument, quoted by a number of writers, which indicates that pedals for changing the registration were known by 1676 when Mace wrote. In addition, Hubbard has examined this passage and shows that Mace's harpsichord contained both lute and harp stop. The second document is the section on the harpsichord which appears in the Talbot Manuscript written in the period 1689 - 1704 when Talbot was Regius Professor of Hebrew at Cambridge. Transcribed by Hubbard<sup>1</sup> and by the author,<sup>2</sup> there is some difficulty in deciding exactly what Talbot was examining in his text, and it is quite possible that he drew on a number of instruments. Nonetheless he does describe with dimensions on page 4 a harpsichord with many features of the group of five mentioned above. He also gives one of the few references to stringing materials used, including copper, brass, iron and possibly even silver for use in the lowest note of a harpsichord, (probably GG).

Of the five harpsichords mentioned in the group above, the Smith is perhaps the least typical. It has internal bracing more akin to that of the later English instruments of the middle and late eighteenth century, a full five octave compass of GG- g<sup>3</sup>, ivory naturals and a soundboard which has the grain laid at an angle of 50° to the spine instead of longitudinally as is the case with all others of this group. This latter feature is also to be found in the earliest surviving English double manual harpsichord by Joseph Tisseran, most probably dated 1710.<sup>3</sup> In this case however the grain is laid at 25° to the spine. This harpsichord is an interesting example of the work of a probable Huguenot in England. The lacquered case, internal case construction, soundboard barring and bridge and nut profiles give a general impression of an instrument built in the Low Countries, but there are also elements of the native English practice, and in particular this is the earliest example of a double manual harpsichord with dogleg 8ft on both manuals. A further English feature is the keyboard finish, which has

1. Hubbard, plate XXXIX and p 260.

2. Galpin Society Journal XXI

3. The evidence for dating the harpsichord in 1710 is to be found in Boalch's 2nd edition, p 179, where Mr Alfred Reeves states that during a restoration he was able to observe the inscription "Opus Josephi Tisseran Londini 1710" inside the case under the keys.

ebony naturals and ivory sharps in the style of the above five instruments. There is also an interesting split key at D sharp, giving a halfway measure between the full broken octave with two split sharps and the short octave giving alternative tunings for the lowest accidentals without the necessity of splitting them. The compass is BB(GG) - d<sup>3</sup>. The scale of the harpsichord at 12.75" is a midway point between the short scaled English singles and the longer scaled later English harpsichords of Tabel and his successors.

Preserved with the Tisseran harpsichord are letters between its first owner, Edward Hanford of Woolas Hall, Worcestershire and Thomas Day of London. The importance of this correspondence was first demonstrated by Hubbard though he and Russell have not quoted the letters in full, and both have slightly misinterpreted them. After careful perusal of the correspondence by kind permission of the present owner, I believe that they indicate that Day and Hanford both knew of a double manual harpsichord somewhere near Woolas Hall belonging to a Mrs Stratford and having a compass of BB-d<sup>3</sup> with a broken octave. Whilst in London, Day went the rounds of the dealers and saw a harpsichord with a compass down to FF, and at the same time he saw the Tisseran which was priced at 45 guineas. Hanford felt that this was a little too dear and asked Day to look again, at which point Day saw a double manual harpsichord by Player, in a plain walnut case and also with split sharps giving a broken octave. There is also the suggestion that the Player was voiced with the upper 8ft softer than the lower ("...an Echo" says Day "very soft, and in my opinion a little snaffling"). The lower 8ft was said to have "a more noble sound! Eventually the dealer was persuaded to part with the Tisseran at £40, though there is a tantalising mention of instruments for sale at 80 and 100 guineas, though what they were is not divulged. The importance of the correspondence lies in the mention of compasses down to FF on a double manual harpsichord by an English builder in 1710, and though it is not specifically stated, the inference is that the specification was similar to that of the Tisseran, an indication that the dogleg was being used in England by native builders of the early eighteenth century. It is in fact by no means certain when the dogleg was introduced to England, though this reference indicates that it was most unlikely that it was introduced by Tabel as has been asserted by other writers. It is also by no means clear why the dogleg became such a peculiarly English feature, for without exception it is found in every surviving English double of the eighteenth century, though it is almost non-existent on the continent.



One harpsichord by an English builder of the first quarter of the eighteenth century has survived - a double manual instrument signed by Thomas Hitchcock, but unfortunately undated. It has been well described by others, and is almost certainly in the style of the double manual harpsichord by Player mentioned in the correspondence preserved with the Tisseran.<sup>1</sup> Hitchcock was most probably still bound as an apprentice to Slade until about 1708, and so the instrument is unlikely to be earlier than this date. Like the surviving Hitchcock spinets it has the five octave compass GG-g<sup>3</sup> and a case which is plain walnut in the style of the English singles mentioned above, though there is some additional decoration. The specification includes a dogleg 8ft on both manuals, lute on upper and second 8ft and 4ft on the lower. The scale, quoted by Hubbard as 12.44" and by Russell as 13.00" still does not equal the longer scale adopted by Tabel and his successors, but, like that of the Tisseran, it is a near approach. The soundboard like that of the Smith and the Tisseran is laid with the grain running at an angle (35°) to the spine. The interest of the harpsichord lies in the many transitional features between the simple single manual harpsichords of Haward, Slade, Smith, Barton and Hancock and the almost standard double manual harpsichords of Tabel, Kirkman, and Shudi.

The transition, however, is not entirely smooth, there being a number of essential differences of approach in the Tabel which are not anticipated in the Hitchcock, notably the external and internal treatment of the case finish and structure respectively, and to be able to appreciate these, and the other differences, and particularly their relevance to the harpsichords of Kirkman and Shudi, it is necessary to examine the Tabel and its related instrument by John Wilbrook in some greater detail. At the same time it is desirable to examine the other instruments before Kirkman, and also the documentary evidence which precedes the period in which his instruments were made, and thus the remainder of this section is devoted to these matters.

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1. Information about the instrument is to be found in : Russell, Catalogue of Musical Instruments, Part I, Keyboard Instruments, Victoria and Albert Museum HMSO, 1968, p 51 and plates 20A, 20B. Russell, (2nd Edition) p 74, and plates 63 and 64; Hubbard, p 154; James, Plate XLIV; Hirt, pp 268- 269.

Harpsichord by Herman Tabel, 1721.

The extant harpsichords of Shudi and Kirkman are characterised by a similarity of construction, external decoration, and specification which is quite remarkable. The earliest known harpsichord which is undoubtedly a forerunner of these instruments is the 1721 double manual harpsichord by Herman Tabel. This one instrument has been the subject of much discussion and several previous writers have doubted its authenticity and date. Hubbard<sup>1</sup> stated that it was "of dubious origin", and Russell<sup>2</sup> wrote that "there is no original feature to suggest the work of Tabel in particular". Boalch<sup>3</sup> in his first edition cited the many changes of ownership during its life and went on to say "the general style suggests that it was made a great deal later than its nameboard suggests". In the light of this controversy a close study of the instrument was made and the following account was compiled after a detailed examination had been carried out at the County Museum, Warwick by whom it was acquired on 2 July 1965. The writer is indebted to Miss Jocelyn Morris, BA, FSA, FMA the Curator of the Museum for her help in the examination, much of which has already been published in Ripin's Keyboard Instruments.<sup>4</sup>

The Tabel harpsichord resembles a Kirkman harpsichord in shape, finish and scale.<sup>5</sup> The outer case is of walnut veneer cross banded, but without stringing. The banding is less elaborate than that found on later instruments, in that the longitudinal bands are carried to the outer edges of the case panels without mitreing into the vertical bands between the panels. These vertical bands of veneer are thus the same height as the panels which they surround. The bentside has only one curve and there is a mitre end. The case sides including the spine are of oak and this is the earliest harpsichord to be built in this manner the thickness of the sides varying from approximately 0.7" to 0.8". (The case sides of the Theeuwes and the 1622 Knole instrument are also oak, but not of this thickness and they are not veneered.) The inner carcass construction has not been seen, but the presence of nail heads on the bottom boards indicates a style of bracing similar to that of a Kirkman or Shudi harpsichord. The lid is held by strap hinges of the same pattern of those of the Thomas Hitchcock harpsichord discussed above.

The main internal veneer is sycamore. This is inlaid with a double stringing 0.25" wide which runs the length of the board above the keys, out onto the key surrounds and then downwards at a right angle to disappear behind the lower manual key cheeks. The nameboard bears the inscription

"HERMANUS TABEL : FECIT LONDINI J721" executed in black paint. This style

1. Hubbard, p 158; 2. Russell p 79; 3. Boalch (1st Edition) p 122;

4. Ripin, Keyboard Instruments, Studies in Keyboard Organology, Edinburgh, 1971  
Mould, The Tabel Harpsichord. 5. Ibid, plates 46-52.

of inscription is to be found on the Ruckers harpsichords of the previous century and is much the same as the inscription on the earliest surviving Shudi harpsichord, dated 1729.

The external dimensions of the instrument are 97.25" x 37.125" and the case depth is 11.25". The bottom boards which are of pine run transversely under the keys and action and longitudinally under the soundboard. This is the earliest harpsichord to exhibit this style of bottom board construction which was to become standard practice on almost every succeeding English instrument.

The keyboards of the instrument present a strange and interesting problem. The external finish of the naturals is ebony with reeded fronts, and the sharps are of pine topped with ivory slips. Boalch states that in 1900 Broadwoods (the successors to the firm established by Shudi) restored the instrument and this is borne out by an ink written paper slip which is pasted above the right-hand side of the wrest plank: "Double Harpsichord by Tabel restored by John Broadwood and sons May 1900. Tune semitone below French!" Boalch goes on to say that in this restoration the naturals were refaced and their present excellent condition suggests that the keytops are the result of this restoration. The levers are undoubtedly original. The compass is five octaves FF -  $f^3$  with no bottom FF sharp. The key levers are of pine and in places they are somewhat crudely finished as is the case with many instruments of this period, and their authenticity and the authenticity of the whole instrument is established by an ink inscription in longhand on the top key of the lower manual: "No 43 Herm Tabel Fecit Londini 1721". This inscription seems to have been overlooked by all previous writers describing the harpsichord although it is readily visible on withdrawing the upper manual. The key balance is interesting in that it differs on both manuals. The upper manual has an apparently original balance rail and all the keys, both naturals and sharps are balanced along the same line. In order to compensate for the fact that with this arrangement the touch of the sharps would be heavier than the naturals, the latter all have a transverse weight at the distal end. The keys are prevented from lateral movement by thin pins between them at the distal end, a system occasionally found on English spinets. The lower manual keys have a similar row of balance holes, and matching holes in the keybed show that at one time the keys were balanced at this point. At some later date, however, a new balance rail has been substituted for the original, and new mortises were cut in the keys so that the naturals are balanced 0.5" further towards the distal end of the keys whilst the sharps are a further 1.125" in the same direction. Thus the lower manual is now balanced in the

traditional staggered way. The lower keys are equipped with front pins to prevent lateral movement. It is tempting to surmise that this change was carried out by Broadwoods, but the style of the staggered mortises is so like the other original mortises that they look as if they were all cut at the same time or at least by the same workman. A similar arrangement found in the Wilbrook of 1730 confirms that almost certainly this arrangement is original. (Wilbrook was a pupil of Tabel, and as will be seen his instrument bears many similarities to the Tabel). No theory for this arrangement can be advanced.

The instrument has the following specification:-

Upper Manual: Lute ← 8ft dogleg ←

Lower Manual: 8ft dogleg ← 8ft → 4ft ←

There is no harp stop

(The arrows indicate the direction in which the upper jack slides move in order to bring the registers on.)

The order of the registers from front to rear in the main gap is 8ft dogleg, 8ft, 4ft.

The registers are operated by conventional levers which are gilded and though crudely made they are similar to the levers to be found on the instruments of Kirkman and Shudi. They terminate in curious bobbin shaped knobs of which there are two types- the one, long and thin and the other short and fat. There is one of each type at either side of the front board. The jacks and slides are modern but made in an authentic eighteenth century manner.

The soundboard grain is laid longitudinally and, where the thickness can be measured near the slides, it appears to be 0.125" thick. It is to be hoped that in any subsequent restoration it will be possible to make a full survey of the board and its barring.

Boalch, in his description, states that the 4ft bridge was moved by Broadwoods. That the bridge has been moved is quite obvious since a tell-tale scar and nail holes distal of the present bridge reveal its original position. It seems quite likely that the 8ft bridge was also moved despite the fact that a thin strip of beech glued to the soundboard just distal of the 8ft bridge covers the area that would have been scarred had the bridge been moved. The nuts and bridges are all of the north European style<sup>1</sup> and there is less appreciable taper from bass to treble than is found in later instruments. The present scale of the harpsichord is 13.5" but if it is accepted that 1. ie. having straight sided profile of this form:- 

the 4ft and 8ft bridges have been moved, (there can surely be no other explanation for the scar beside the 4ft bridge and the beech strip by the 8ft), it would appear that the original scale was about 14.25", which is long by comparison with the other instruments of the period, and indeed is long by comparison with the instruments of Tabel's pupils. The Wilbrook has a scale of 13.5", whilst the harpsichords of Kirkman and Shudi seldom exceed 13.5" scale. It may be that the bridges were moved by Broadwoods, but in the absence of firm evidence, it could also be that they were moved by Tabel. It would seem curious that if the instrument had such a long scale originally, those harpsichords built by Tabel's pupils should not be in the same tradition. The question arises as to why the bridges were moved by Tabel, and as a tentative answer it is suggested that he built the instrument with the long scale, but found that it either would not hold or that the wires then available could not be brought to pitch without breaking. He thus reverted to a shorter scale which was satisfactory and covered the marks of the original bridges with beech strips of which the 4ft eventually came unstuck. Had the bridges been moved by Broadwoods, it is very unlikely that they would have placed a beech strip beside one bridge and not the other, and knowing the standard of Broadwood's workmanship it is most unlikely that the 4ft beech strip would have come away since 1900. (It is also unlikely that by 1900 Broadwoods would have wanted to move the bridges for by that time wire would have been strong enough to withstand the pulling to pitch at a scale of 14.25") The present string lengths are given in the table below:-

| Note           | 8ft length | 8ft plucking point | lute plucking point | 4ft length |
|----------------|------------|--------------------|---------------------|------------|
| FF             | 72.5       | 6.625              | 2.5                 | 41.25      |
| F              | 59.0       | 5.625              | 1.75                | 31.0       |
| f              | 39.0       | 4.625              | 1.25                | 18.75      |
| f <sup>1</sup> | 21.0       | 3.625              | 0.875               | 9.75       |
| c <sup>2</sup> | 13.5       | 3.125              | 0.75                | 5.92       |
| f <sup>2</sup> | 10.0       | 2.875              | 0.625               | 4.5        |
| f <sup>3</sup> | 5.0        | 2.25               | 0.5                 | 2.125      |

The harpsichord has no pedals, swell, machine or music desk, the existence of any one of which would point to a date later than 1721. The instrument is raised on a simple trestle stand very like that of the Hitchcock and which could well be original.

The authenticity of the instrument is further supported by comparison of the signature on the key with Tabel's signature on his will at Somerset House, London. The two are so similar as to leave no doubt that Tabel himself signed the instrument. In addition the soundboard of the harpsichord

carries a rose of intertwined initials of a style similar to that of some of the Kirkman roses which bear the letters IK entwined in forward and reverse directions. A similar feature is found in a rose by J.D. Dulcken in 1745. In the Tabel harpsichord the initials are surmounted by a viscount's coronet, and it had long been supposed that the initials were those of the instrument's original titled owner. The true origin of the design is, however, immediately apparent from Tabel's will since the self same cipher appears next to his signature as his seal.

The main conclusions to be drawn from this study of the instrument are:

1. The authenticity and date of the harpsichord have now been established beyond reasonable doubt.
2. The existence at one time of a scaling approaching 14.25" indicates that Tabel himself was probably influenced by the Flemish workshops to the extent that he used it in his own harpsichords.
3. The construction and style of the case work are the forerunners of the English tradition which was to last until the end of the century.
4. The specification, though found elsewhere is the earliest example to be found in an English instrument which can be dated authentically.
5. Tabel made at least 43 instruments unless he cheated by not numbering them consecutively. Since he lived on at least until 1738, it is likely that his total output was substantially more than this.

The unanswered problems still remain: why was the scaling reduced and when, and does this instrument stand as the prototype for those of Kirkman and Shudi? It has been the fashion to decry this latter hypothesis, and to some extent it is true that there is no one feature in the harpsichord which is not to be found elsewhere. Its main claim to being an influence on the later builders is the fact that all the features of the instruments of the mid eighteenth century in England are to be found in this one harpsichord.

Harpsichord by Burkat Shudi, 1729

The connections between Tabel, and Kirkman and Shudi are discussed more fully in Appendix A. Unfortunately the earliest surviving Kirkman harpsichord is dated 1744, and it has not been possible to examine this instrument closely. Photographs which have been seen indicate that it is of the same style as some of the marquetry harpsichords discussed in Part II, and there is no marked similarity in style of casework with the Tabel. The earliest surviving Shudi on the other hand has many similarities. Unfortunately it has not

been possible to see the instrument which is in private ownership, however Dale<sup>1</sup> states "It is in every respect a replica of the only Tabel harpsichord known. The name is in Roman capitals three quarters of an inch long in Ruckers' style. The 'furniture', i.e. the brasswork of the stops, hinges, catches etc., is Tabel's and the keyboards are the same, the naturals being black and the sharps being veneered atop with ivory. The stops are also four, lute and octave, and first and second unison." Certainly the photograph supplied by Dale shows many similarities, especially the keyboards. Unfortunately the scale of the harpsichord is not given. Until recently it would have been supposed that this was the last harpsichord to have black naturals and white topped sharps, however, in 1970, an instrument by John Wilbrook was offered at Christie's having this feature. It was acquired by Dr Mirrey of Redhill to whom I am greatly indebted for permission to make an extensive examination in August 1972.

#### Harpsichord by John Wilbrook, 1730

The harpsichord bears the inscription "JOHANNES WILBROOK LONDINI FECIT J730" in typical Old English script on an insert of boxwood on the board above the keys. It bears many resemblances to the Tabel which is understandable in view of an inscription found under the soundboard by Dr. Mirrey. It can be seen with the aid of a mirror through the rose hole between the two soundbars distal of the hole and reads "Johannes Wilbrook Londini Fecit 1730 Tabel's man!" (The rose was of parchment in the Italian style but most of it had disintegrated and was found in the interior of the carcass).

The external finish of the case is walnut veneer. Panels of a straight grain walnut are surrounded by a stringing of a light fruit wood and cross banded of a more pronounced straight grained walnut. There is a curious transition between the Tabel and the earliest Kirkman cases in that the cross banding of this instrument between the two main panels of the bent side is not mitred and resembles the Tabel whilst at the ends of the panels the banding is mitred as it is on all panels of a Kirkman. Fig 1 shows the various stages in all three instruments from Tabel, through Wilbrook to Kirkman. The internal structure cannot be determined exactly though by inference from the nail heads on the bottom boards and spine there are almost certainly two transverse members on the bottom boards at positions which would be occupied by these members in a Kirkman. Close scrutiny through the rose hole shows that there are also transverse members about 2"x0.75" at the lower edge of the liner as would be the case in a Ruckers though in addition there is a member about 1.25" square running from the belly rail to the liner  
1. Dale, W. Tschudi the Harpsichord Maker. London, Constable 1913, p 33.

as is the case in a Kirkman carcass. Fig 2 shows the construction in so much as it can be seen. The case sides are of oak and vary from 0.76" at the cheek to 0.68" at the tail whilst the spine which is also of oak is between 0.65" and 0.68" thick. It should be noted that the joint at the tail between spine and the mitre end piece is not dovetailed as is the case with Kirkman harpsichords and there is no vertical section of oak at the proximal end of the spine, though a piece of oak has been let into the spine between the windows for the slides in the main gap and the lute gap. (See fig 3 )

The internal decoration of the key surrounds is similar to that of the exterior, having panels of burr walnut surrounded by herring bone stringing and cross banded in straight grain walnut. The surrounds over the soundboard are veneered with straight grain walnut with the grain laid vertically and no stringing. The wrest plank is veneered in plain walnut laid on oak. The lid is solid walnut and the strap hinges are similar to those of the 1709 Thomas Barton, but are finely chased. One slight departure from later practice is that the lid moulding is applied to the outer edge of the woodwork rather than to the underside. There is a curious replacement strip of wood at the spine side of the main lid fold. This is 1.0" wide and has been seen on only one other harpsichord, a Baker Harris of unknown date belonging to Mrs Thompson of Birmingham. It may be a replacement for a badly wormed area and may be indicative that the case was stored for some time on its side. The overall dimensions of the case are 97.25" x 37.25" and the depth is 11.15" which within the limits of accuracy of measurement are identical to the Tabel. Not surprisingly, the specification is also identical with lute and dogleg 8ft on the upper manual, and dogleg 8ft, second 8ft and 4ft on the lower. The directions in which the jacks face could not be determined authentically at examination as the instrument was unstrung and the jacks were not in position. The stops however were seen and the arrangement appeared to be the same as the Tabel with two stops at either side of the front board operating from left to right: Lute, 4ft, 8ft dogleg, 8ft. The stop levers are very similar to those of a Kirkman harpsichord, though the section is a little flatter at 0.4" x 0.15". They appear to have been gilded and the knobs are very similar to those found on the early Kirkman instruments. The pivots for the stop levers have the typical pyramidal tops of the later eighteenth century instruments.

The layout of the instrument appears at first sight to be the same as the Tabel, but careful inspection reveals a surprising fact in that the main gap has a slight angle to the spine. At examination, it was found that the wrest plank was 9.0" wide at the bass end and 8.5" at the treble. This was so surprising that a return visit was made to the Tabel to check on the possibility



that the same taper was present, but this was not found. The Tabel has a main gap which is truly perpendicular to the spine whilst the Wilbrook is definitely angled- a return to Italian influence which could not be an accident. An angled gap requires an angled keybed for both manuals, and levers which vary in length and balance. It is also more troublesome to lay out, and it seems strange that Wilbrook should have designed this layout when conforming to his master in almost every other respect.

The scale of the instrument is 13.5" and the stringing list is:-

| Note           | 8ft length | 8ft plucking point | lute plucking point | 4ft length | plucking point |
|----------------|------------|--------------------|---------------------|------------|----------------|
| FF             | 72.0       | 6.85               | 2.1                 | 42.0       | 4.15           |
| F              | 58.5       | 5.85               | 1.85                | 31.25      | 3.75           |
| f              | 38.75      | 4.6                | 1.1                 | 19.0       | 3.2            |
| f <sup>1</sup> | 20.125     | 3.6                | 0.725               | 9.875      | 2.75           |
| c <sup>2</sup> | 13.5       | 3.1                | 0.6                 | 6.75       | 2.5            |
| f <sup>2</sup> | 10.0       | 2.85               | 0.475               | 5.0        | 2.25           |
| f <sup>3</sup> | 5.25       | 2.25               | 0.4                 | 2.4        | 1.75           |

Comparison with the list for the Tabel will show that the 8ft lengths are longer by about 0.5" in the bass of the latter and understandably the effect of the angled gap in the Wilbrook has been to lengthen the plucking point in the bass of the instrument. The lute plucking point is slightly nearer the nut in the Wilbrook, but it is of such a small order that the tone would not be noticeably altered. In the case of the 4ft the Wilbrook has the slightly longer scale but the difference is never greater than 0.5".

The keyboards have the same compass as the Tabel, FF - f<sup>3</sup> with no bottom FF sharp, and the manuals have many characteristics of the Tabel. The naturals are of ebony with reeded fronts and the sharps are a reversion to earlier English practice, having a sandwich of ivory-ebony-ivory. The upper manual sharps are particularly interesting in that they were originally skunktails, but each sharp has been set up on a wedge of wood so that the top surface is level, not sloping. When seen there were a number of sharps which had come off and they had been replaced by others which were not exact replicas. The key balance arrangements are exactly similar to those of the Tabel though the key lengths of the Wilbrook lower manual are 23.125" at No 1 and 22.75" at No 60 (to account for the angled gap) whereas the Tabel keys are 22.0" throughout. As in the Tabel, the balance pins for the sharps are distal of those for the flats as is normal harpsichord practice. In addition, every key has a second mortise proximal of the present balance pin which makes it appear as if at one time sharps and naturals were all balanced along the same line, probably making the touch of the sharps too heavy. The main difference in the lower

manual of the Wilbrook is that the lateral movement of the keys is prevented by front pins which are not placed under the heads of the keys but for both naturals and sharps run in a line approximately 0.5" distal of the back ends of the sharps. The balance of the upper manual is exactly the same as the Tabel, the sharps and naturals all being balanced on the same line 5.625" from the proximal edge of the naturals at the bass end and 5.75" at the treble, the difference of 0.125" being some small compensation for the difference in balance caused by the presence of the lute jacks and the angled gap. As with the Tabel, lateral movement is prevented by vertical pins between the distal ends of the key levers.

The jacks are all conventional, being pierced for quill and having double damper flags with the exception of the lute jacks which have only one. The upper jack slides appear to have been made by making a comb of walnut with the spaces appropriate to take the jacks and the outer edge glued on afterwards. The lower guide is illustrated at fig 4 and is basically a comb of oak with spaces long enough to take all the jacks sounded from the lower manual. To this is glued a string of light coloured fruit wood and a closing edge of pine. No similar construction has been observed in any other instrument and the choice of oak for the comb is strange in that the working of the wood without splitting or breaking must have called for high standards of craftsmanship which would have been less demanding had beech or a fruit wood been used.

The whole instrument was stripped down when examined and so it was not possible to hear it. It is to be hoped that it will be restored in due course and because of its many similarities to the Tabel it is to be expected that the tone will be much the same. The Tabel has been recorded for the BBC archives by Mr Alan Cuckston.

In passing there are parts of the moulding of this instrument which are mahogany and though they may be later additions, it is most likely that they are original and this is one of the earliest instruments in which this wood is used.

## Francis Coston

Boalch and Russell both report the existence of a harpsichord by Francis Coston. According to Boalch, Coston lived at Brownlow Street, Drury Lane and his ascertained dates are 1700 - 1738. He was paid 5gns in 1728 for repairs to the Duke of Chandos's harpsichords at Cannons.

The harpsichord described by Russell and Boalch has the following features: Two manuals; compass five octaves from FF; case of oak with some satinwood (perhaps harewood according to Russell) inlay, the latter probably being a later addition; Turned stand similar to that of the Hitchcock; No pedals; 2x8ft, 1x4ft, buff; Ivory naturals. They both report that it was shown at the International Inventions exhibition of 1885 and was at one time in the Boddington Collection and is now lost.

The catalogue of the 1885 exhibition<sup>1</sup> which belongs to the Bodleian Library Oxford, has a small insert at the end entitled Brief Description of Spinets, Virginals, Harpsichords, Clavichords and Pianos shown in the Loan Collection of the International Inventions Exhibition 1885 by William Dale, which gives the following entry:

17. Harpsichord by Francis Coston      Early Eighteenth Century  
In veneered walnut case with very large brass strap hinges engraved exactly like the Hitchcock Instrument. Four legged frame or stand with turned legs. No Pedals. Soundboard painted with flowers and parrots. Upon the first jack 1761 which can only be regarded as the date of the jack. Double. 3 stops - octave, 1st and 2nd unison. GG-f<sup>3</sup>, GG# and d#<sup>3</sup> are wanting. Ivory naturals with gilded fronts, ebony sharps inlaid with ivory slips. On jack rail Franciscus Coston, Londini, fecit.  
Lent by the Dowager Lady Heathcote

There are sufficient differences between the two descriptions to make it seem likely that there were two different instruments. It would be unlikely that Dale could have mistaken the case finish, keyboard compass and the specification, whilst equally the catalogue of the Boddington Collection would surely have been correct in such major matters of description. It is reported that an instrument by Coston is now in Edinburgh and it would be most interesting to know if it accords with either description.<sup>2</sup>

In passing it is noteworthy that the Coston at the exhibition had so much in common with the double manual Hitchcock described above which stood alongside it. Case, keyboard finish, and stand were obviously similar, and the hinges are especially noted by Dale. The keyboard compass however is particularly strange and the missing notes must surely have been lost rather than omitted deliberately by the builder. The omission of the harp stop may also indicate that this instrument was older than that in the Boddington.

1. Bodleian Library Oxford, call mark 1771.e.5 International Inventions Exhibition, London 1885, William Clowes and Sons Ltd, London, 1885

2. Information kindly supplied by Dr Peter Williams, Edinburgh.

## Harpsichords by Joseph Mahoon

Between the date of the Wilbrook, (1730), and the earliest surviving Kirkman harpsichord (1744), only two other harpsichords are known to have survived. They are both by Joseph Mahoon who worked in Golden Square, a matter of a hundred yards or so from Kirkman. Whilst there is no evidence that they influenced each other it would seem likely that they must have known of each other and probably saw each other's instruments. The earlier surviving Mahoon harpsichord is a two manual instrument dated 1738, the likely year of Tabel's death and Kirkman's setting up on his own. The other is a small single manual harpsichord dated 1742 which until 1963 was the property of A.S.Beazley Esq, though its present whereabouts are not known.

The significance of the two manual instrument was noted by Hubbard<sup>1</sup> and it is described by him as well as in the catalogue of the Colt Clavier Collection<sup>2</sup> to which the harpsichord now belongs. The writer was privileged to see and play the harpsichord some ten years ago, but at that time data was not being gathered for this thesis, and it has not been possible since that time to make a full examination. The following description therefore relies on the above two references.

The harpsichord has two manuals, 2x8ft, 1x4ft and lute disposed as follows:

Upper manual: Lute with jacks facing left, 8ft dogleg with jacks facing right.

Lower manual: 8ft dogleg, 8ft with jacks facing left, 4ft with jacks facing left.

The order from front to rear of the registers in the main gap is 8ft dogleg, 8ft and 4ft.

This is apparently the same layout as that adopted by Kirkman, but careful inspection shows that whereas in the Kirkman the dogleg jacks pluck the longer of the two 8ft strings, which is the same set as is plucked by the lute jacks; in the Mahoon, the dogleg jacks pluck the shorter 8ft strings. Hubbard's notation, whilst admittedly confusing on occasions does show the difference quite clearly.

← Lute (8ft)  
→ 8ft dogleg (also on lower)  
.....  
← 8ft  
← 4ft

Disposition of 1738 Mahoon

← Lute (8ft)  
← 8ft dogleg (also on lower)  
.....  
→ 8ft  
← 4ft

Standard disposition of a Kirkman

1. Hubbard p158      2. Catalogue of the Colt Clavier Collection  
An illustration of the 1738 Mahoon is to be found on the sleeve of ORYX 1605 which features Colin Tilney playing the instrument and a Kirkman of 1750

By this arrangement the Mahoon appears to produce a harp stop for the lower manual without the need for a separate harp batten as is usually the case. The effect is produced by leaving the lute on the upper manual in the on position whilst playing the second 8ft on the lower, the dogleg being in the off position. By this means the damper felts of the lute damp the second 8ft strings. The arrangement however is not very successful for the dampers can be too powerful and the resulting tone is disappointing. There is a further disadvantage when using the lower 8ft alone, for this requires that the lute must be in the fully withdrawn position so that the damper felts do not in any way affect the clear speech of the 8ft. On returning the lute to the on position there is the usual tendency for the felts to be crushed against the strings rather than riding up and over them. In time this results in a permanent bend of the felts and incorrect damping of the lute.

Superficially the harpsichord resembles the instruments of the mid eighteenth century though it still retains the form of housing for the lock board to be found in a number of the harpsichords from the previous sixty years. This consists of a strip of wood running transversely under the proximal end of the bottom boards and projecting out from under the instrument by one or two inches so as to form a ledge on which the lock board may rest. Similar pieces of wood are fixed at the cheek and spine on the outer edges of the instrument to prevent lateral movement of the lock board when in place. The effect is as if the proximal end of the harpsichord had been encased in a simple frame, and for this reason I have adopted the term "framed end" to denote this feature. A further reminder of the earlier harpsichords is to be seen in the finish of the sharps which are skunktails with a sandwich of ebony-ivory-ebony. The naturals however are similar to Kirkman naturals, being in ivory throughout the 60 note compass of FF - f<sup>3</sup> without FF sharp. The outside casework is of walnut panels surrounded with a stringing of box and ebony laid diagonally and cross-banded with walnut having a striking light figuration. This scheme is echoed in the internal decoration, though over the keyboard appears a divided cross-banded panel which is rarely to be seen though it does occur in a somewhat similar way in one of Falkener's harpsichords of 1773. The harpsichord is signed in the conventional eighteenth century manner on a rectangular boxwood cartouche and is dated 1738 on the upper manual and 1742 on the lower. It is possible that some alteration was carried out in 1742. One of the keys is signed: "Broom Smith 1738!"

This harpsichord has several features which are not to be found on any Kirkman or Shudi instrument. For example, no Kirkman has sharps which are a sandwich of ivory and ebony, neither is the framed end to be found in his instruments. In its disposition also, it is somewhat unique, but in almost every other respect it is a near contemporary of the earlier Kirkman instruments. Mahoon's later surviving harpsichord of 1742 is interesting, if atypical, in that it is only 6' long, has one manual, 2x8ft choirs, a rounded tail and it is the latest known surviving English harpsichord to have blackwood naturals and ivory sharps. In the keyboard finish it harks back to the harpsichords of the previous sixty years. It would be most interesting to know the scale of the instrument and the form of internal case construction. Unfortunately, until the present owner can be traced these details must remain unknown.

### Unknown Maker (Undated)

The final instrument to be considered in this section is an unsigned and undated single manual harpsichord with 2x8ftchoirs. It is now the property of Sir Peter and Lady Orde of Whewell, Andover, Hants and came to them through the intermediacy of Michael Thomas from Blairgowrie Castle, Scotland. It was restored by Hugh Gough in 1953. Its inclusion at this point may seem a little strange for superficially the instrument appears to be of the same style as a Kirkman or Shudi, but it has a short scale of 10.75" and may therefore be of the period covered by the above instruments. Unfortunately the place normally occupied by the nameboard is filled with a plain piece of wood and there are no inscriptions or dates anywhere on the instrument. It is therefore impossible to authenticate or date it.

The harpsichord measures 82.25"x36.625" and the case depth is 9.375". The exterior of the case has panels of walnut veneer surrounded by stringing of box-ebony-box and cross banded with a straight grain mahogany. The bent side has three such panels whilst three similar smaller panels are found on the board over the keys. The key surrounds have a single panel at left and right and the surrounds over the soundboard are treated similarly with the exception that the stringing of the panels is executed in box only. The case sides are of oak, including the spine and are slightly thinner than the sides of a Kirkman, varying from 0.6"-0.65" though the whole manner of building and treatment is very reminiscent of the mid or late eighteenth century. The inner construction could not be seen, but brad heads on the bottom boards indicate a Kirkman-like construction with two main members on the bottom boards parallel to the wrest plank. The boards themselves are laid transversely under the keys and longitudinally under the soundboard. The case sides stand on the bottom boards though there is a traditional moulding which covers the edge of the boards at cheek, bent side and keyboard end. The lid is solid and has the usual three folds and strengtheners on the outer side of the lid between the main fold and the small fold over the action. The hinges are of the same style as a Kirkman and the case is furnished with S hooks to hold the lid when closed. There is a series of curious 0.5" deep kerf cuts spaced at 0.5" intervals on the curved edge of the main fold over the soundboard.

The compass is five octaves FF - f<sup>3</sup> with no FF sharp. The keyboard which is backracked is almost certainly modern though the natural coverings of ivory could be original. The sharps are of walnut or possibly stained cherry.

The wrest plank is veneered in walnut, and carries a single nut which like the bridge has the characteristic straight sided north European profile. This,

would suggest that the instrument is not by Kirkman, for his nuts are almost invariably convex on the side nearest the player. Both bridge and nut taper from 0.75" high at the bass to 0.53" in the treble. From left to right the stops operate harp and one 8ft on the left and the other 8ft on the right. The stop levers appear to be original and are held with pivot pins with the typical pyramidal tops of the mid and late eighteenth century instruments. The knobs are of plain brass with a convex profile facing the player and a supporting concave profile supporting the front of the knob. The lever ends where they screw into the knob have a very new look about them and this may indicate that the stop mechanism with the exception of the pivot pins is modern.

The jacks are held by fixed lower guides and movable upper slides the latter having been made up from an apparently original section in the bass and a new section in the treble. There is one remaining original jack which is of typical Kirkman style and marked  $\frac{I}{I}$  with a stamp. The main gap is perpendicular to the spine.

The soundboard which is laid with the grain running longitudinally is in fine condition and does not have a rose. It is tempting to suppose that it may have come from another instrument, but there is nothing about its relatively unmarked condition to suggest a transplant. Had it come from a Ruckers or other Flemish harpsichord it would almost certainly have carried a rose. Tapping on the board indicates a conventional cut off bar with three or four soundbars.

The stringing list is as follows:-

| Note           | 8ft length (inches) | 8ft plucking point (inches) |
|----------------|---------------------|-----------------------------|
| FF             | 64.25               | 7.3                         |
| F              | 52.0                | 6.0                         |
| f              | 32.75               | 4.75                        |
| f <sup>1</sup> | 16.0                | 3.5                         |
| c <sup>2</sup> | 10.75               | 2.8                         |
| f <sup>2</sup> | 8.1                 | 2.4                         |
| f <sup>3</sup> | 4.3                 | 1.4                         |

The string gauges are not marked on the nut.

There is no provision in the case for a music desk, and the instrument is raised on a trestle stand in mahogany which looks original. It has mouldings on the outer edges of the legs only and none on the stretchers.

There can be no doubt that the builder of the harpsichord was acquainted with the style of instruments such as those built by Kirkman or Shudi. The hinges in particular (assuming they are original) mark the instrument as being at least post-Tabel (i.e. post 1721), and the whole style of the case seems to suggest a date of 1740 or later. (Shudi's first harpsichord is dated



1729, and Kirkman is unlikely to have produced an instrument of his own before 1738.) The enigma remains: why should any builder have produced an instrument with a short scale in 1740, by which time every other builder was producing instruments of 13" plus? The answer can only be one of two alternatives. Either the soundboard was of such quality that it was transplanted from another earlier instrument, or the instrument was built at some point in the period between 1721 (the Tabel which has a case in the same genre) and 1740 (by which time cases had been built of an almost exactly similar style), and the builder copied the layout of an earlier instrument. It seems impossible to produce a completely conclusive answer, and the only conclusions which can be reached are that if the former is true, then the builder was not very discriminating, for the tone of the instrument is not outstanding, and if the latter is the case, it shows that there were those amongst the musical fraternity who preferred the tone of the older instruments whilst preferring the style of the later instruments as pieces of furniture. On the whole, I must incline to the latter viewpoint and place the instrument in the 1740's at the earliest.

patents applied to Musical Instruments in the Period before Kirkman, and other inventions.

In 1694 appeared the first of a series of patents applied to the harpsichord which were attempts to improve the tone, stability or versatility of the instrument. The patent by George Joyce and Peter East is described as:-

"A certaine instrument which being applied to clocks organs, and any other key instruments, as harpsichords, virginalls, or the like, will cause the same to chime or play any manner of tune, air or notes plain or performe a consort, and is alterable to any tune or air in halfe an hour by any person, (the noe master of musick) without changing the instrument."

As is usual with such patents until the middle of the eighteenth century there are no drawings or further details to give a more precise definition. In this case, it seems that some form of barrell mechanism was applied to the instrument and it cannot be said to be a true development of the harpsichord.

At the end of the period, in the year of the Willbrook's manufacture (1730) came two patents which were more properly developments of the instrument, though again their exact nature is shrouded in the circumlocution which surrounds and characterises the legal documentation of the age.

The first dated 22 October and numbered 521 runs as follows:-

"A new invented Harpsichord, upon which (having only two Sets of Strings) may be performed either one or two Unisons and one Octave together, or the Forts and Pianos, or Loud and Soft, and the contrary may be executed as quick as Thought, and also Double Basses, by touching only single Keys, whereby hard Divisions on the Bass Part may be well played in a Double Manner without the Thumb and Finger together, which could not well be executed otherwise; that besides the above-menConed Advantages a great deal of time and Trouble will be saved in Quilling and Tuning the said Harpsichord, and it will keep much longer in Tune than any Harpsichords that have Octave Stops, and consequently will not be so expensive to keep the same in good Order as those Instruments which are made in the Common Way, neither can any double-key'd Harpsichord be so serviceable and useful as the PetiConer's new-invented Harpsichord, although the Expense is vastly greater."

The clue to the invention lies in the first part of the description "having only two Sets of Strings". It must be that if the arrangement were to produce either two unisons or one unison and one octave then a super octave coupler is being described. Similarly in describing the hard divisions in the bass it would normally be necessary to use thumb and little finger to sound an octave, The only way in which to dispense with one or other would be to employ a sub-octave coupler, or more probably to use the super-octave and play the lower

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1. From information kindly supplied during visits to the Patent Office and from the synopses to be found in Patents for Inventions. Abridgement of Specifications relating to musical instruments AD 1694 - 1866. 2nd Edition London, Eyre and Spottiswoode.

note. Such an instrument would have suffered from three disadvantages: First, the coupler arrangement would have required more room within the case either above or below the keyboard and it is more than likely that the touch would have been heavier, whilst the additional complication would be more prone to failure. Secondly, a true coupler would require a blind octave at one or other or both ends of the compass, thus increasing the width of the instrument. It is suspected that this was not provided. Lastly, the tonal satisfaction would be suspect for the volume and voicing of the octave notes would be that of the unison. The last two difficulties are overcome to some extent on the organ. Blind octaves can be provided without undue space problems in most organ chambers, but the last difficulty is seldom overcome with complete satisfaction and the relative unpopularity of the extension organ is well known. These difficulties may well have been the reason why the invention does not seem to have achieved much success. Certainly no example has survived. The inventor was John Harris who is known to have made spinets.

The second invention of 1730 (17 December and numbered 525) is by William Barton, probably a son of Thomas Barton. The patent describes how after four years of study Barton had invented plectra of "Silver, Brass, Steel and other Sorts of Metall". There is evidence that similar experiments had been going on in Italy and elsewhere in the years before 1730 and it is likely that Barton had found nothing new. The experiments were to continue almost until the final decline of the harpsichord. Again, the complete absence of any form of plectra other than quill or leather testifies to the lack of success that these experiments achieved.

Though not patented, there are other examples of experiment in England. The list of instruments at Cannons, the Palace of the Duke of Chandos compiled by John Christopher Pepusch in 1720<sup>1</sup> includes-

15. Harpsichord with gut strings - made by MR. LONGFELLOW, of Pembroke Hall, Cambridge. "This stands at my house in Boswell Court"

(It also contains a reference to a double manual harpsichord by Hermanus Table, indicating the Tabel made a double at least one year before the surviving instrument of 1721.)

Thomas Barton's invention of the upright harpsichord has been mentioned by James<sup>2</sup>. The notice of its debut is recorded by him as appearing in the press in 1726 in which Barton acquainted "all Gentlemen and Ladies, lovers of Art and Harmony, there is lately finished a Harpsichord which stands up-

1. Stow MSS No.66. Huntington Library, San Marino, California

2. James p 38

right in an uniform Case and is a most elegant piece of Furniture contrived to stand in less room than a small Scrutore. To be seen at the Inventor's Mr Thomas Barton etc.."

Further unspecified invention was to be found in the work of Christopher Pinchbeck, a clockmaker born about 1670 in Clerkenwell London, and died 18 November 1732. According to the appendix to Gerber's Historisch-Biographisches Lexicon der Tonkünstler.. J.G.Breitkopf 1790 - 92, he improved the harpsichord in 1724 "durch Zuthun von Flöten, Trompeten und Pauken" (by adding thereto flutes, trumpets and drums). This could be taken to mean the addition of these devices to the instrument itself, in which case it might well mean the type of instrument operated by a barrel mechanism such as a present day fairground organ, or it could mean a claviorganum with the addition of reed stops and percussion of some sort. It could also mean the use of the harpsichord in consort with the instruments named. Again no instrument of Pinchbeck's has survived.

#### The overall development of the English Harpsichord

Though naturally of secondary importance to the musical characteristics of the harpsichord it is relevant at this stage to consider the development of the casework and structure of the instruments. A study of the furniture of the period until 1730 shows a surprising conservatism on the part of the instrument makers. Whilst all that is good and of restrained taste is to be found in the harpsichords and spinets, there is nothing of the excesses of marquetry to which many of the domestic pieces of the seventeenth century were subjected. The obvious dependence of the Theeuwes on Flanders makes it atypical of the native product, but the 1622 harpsichord from Knole, whilst possessing a fine oak arcaded stand shows no suggestion in the main case work of the solid carving of the Stuart period. This must surely have been due to the dependence of its builder on the requirement to keep within a light resonant case so that the tone should be light and full. This was probably dictated by the Italian influence to which the builder was subject in considering the layout and design. It did not however prevent him from using a hardwood for the case rather than a softwood as would have been the case in Italy.

By 1683, the Haward was built in conformity with the then relatively new art of veneering. Walnut was used universally by the builders of domestic furniture and floral inlay patterns are typical of the furniture built for the nobility. Similar patterns to those found above the keyboard of the Haward are to be found on several spinets which are contemporary and the style of the cartouches is echoed in many domestic articles. It is surprising that no harpsichord has survived with an example of seaweed marquetry, a very ornate decoration found on sumptuous pieces from about 1690 onwards. Table 3 gives a chronological list of the events and styles of English furniture until the end of the 18th century and it will be seen that from the accession of William and Mary oriental taste was beginning to make itself felt in the adoption of the anglicised versions of the oriental style of lacquered furniture. The beautiful lacquered cabinets in black red and gilt of the late seventeenth and early eighteenth century made by English builders are to be found throughout this country in the houses of the nobility. It is therefore surprising that no oriental taste or style can be discerned in any of the surviving instruments. (The Tisseran cannot be said to be of the same style and its casework is an interesting combination of lacquered wood owing much to the Flemish school and cross banding which was to become the universal style in England in the eighteenth century.) The lacquered and lavishly decorated cases of the surviving English virginals obviously owe little to the influence of the English domestic furniture makers and derive mostly from their Flemish counterparts though in some respects there is Italian influence to be seen as well, particularly in the decoration often found above and around the keyboard.

It is also surprising that considerable restraint was shown in the treatment of the legs of the stands of English harpsichords. Most of the surviving examples are a simple baluster in which the turning is never excessively developed. No example is known with a twist leg which was common domestically and though the cabriole leg had appeared at least as early as 1710 it was not to be seen on a harpsichord stand until at least thirty years later. Spinets occasionally show a slight extravagance in the use of twist stretchers but all the harpsichords have simple rectangular section stretchers with a quadrant moulding usually on the show edges only.

The harpsichords of the period 1683 - 1720 including the Haward, Smith, Slade, Barton, Hancock and Hitchcock are almost unanimous in their use of walnut as a main case wood either solid for bent sides and the mitre end and lid, and veneered on pine as the cheekpiece. In terms of internal structure, it is unfortunate that no other domestic furniture may be used as a comparison

for no other piece has to carry the considerable strains of the strings in tension. It is therefore not possible to see if the diagonal bracing found in so many of the transitional instruments was a characteristic dictated by the English joiner's practice or whether it was a development from the Italian knee bracing combined with the Flemish lateral bracing. Whatever the reason for its adoption there can be little doubt that it was most successful. Apart from the Hancock, none of the surviving examples with this style of bracing exhibits the case curl up so characteristic of the instruments of Kirkman and his contemporaries.

There is obvious evidence therefore that the English builders were seldom influenced by their counterparts making domestic furniture or at least when they were influenced it was generally after some considerable period of acceptance of a style by the public. It is surprising that at no stage did some rich patron demand an instrument in more contemporary idiom, or for that matter change the instrument after he had acquired it. (This may just be the explanation of the short scaled instrument from Blairgowrie Castle which in scale appears to date from the period 1683-1720, but in case style dates from about 1740 onwards.)

Whilst there is a certain homogeneity about the style of the cases and construction of the Haward, Slade, Smith, Barton and Hancock, they are so individualistic as to make it certain that the cases are the work of individual builders. It has been suggested that the later eighteenth century builders received cases from specialist cabinet makers and then finished them off. There can be little doubt that this practice was not followed before 1730. On the other hand this possibility does exist in the case of the strap hinges of the period. Fig 5 shows the strap hinges of those instruments from which it has been possible to obtain rubbings (These have been reduced by Xerography in the diagram) and it can be seen that there is a remarkable degree of similarity between the various examples from a range of makers. This must almost certainly point to a specialist metal worker as the supplier of the hinges. A casual glance at the illustrations would suggest that the hinges of the Barton, Smith, Tisseran and Wilbrook are the same whilst those of the Hancock were of the same genre. Careful examination however shows considerable variation and it is evident that the hinges were not cut from the same master template. The chasing of the Wilbrook and the added swags at the base of the design are obvious departures from the other examples but between the others there is also divergence of dimension and curvature. The hinges between the lid folds are also illustrated and here there is divergence from the strap hinges.

The hinges of the Barton and Tisseran appear the same whilst the similarities of Hitchcock, Tabel and Smith are noteworthy. These similarities may well indicate a contemporary dating. The spinets of the period have fold hinges which are generally very similar to those of the harpsichords, however the strap hinges whilst of the same style are usually much more delicate and no exact parallel has been observed.

Despite continued vigilance over ten years it has never been possible to see an exactly similar hinge on any domestic piece of the period although the general style of the brasswork is often strikingly similar. In particular the brass strap hinges found on some lacquered cabinets of the period are obviously based on similar concepts. The inference is then that in the case of the instrument hinges, a specialist (or several specialists) made them to order for specific builders. That the same basic design was available for at least thirty years is not surprising in view of the even longer period over which the typical Kirkman and Shudi style hinge was to last. The remarkable similarity of the stop levers, and the pivot pins also points to the workmanship of some central agency. In the case of the pyramidal pivot pins, the style was to last almost until the end of the eighteenth century.

In considering the keyboards of the harpsichords before Kirkman, it would seem that the divergence of styles, finishes, compass and balancing arrangements must point to the work of the individual builders. The use of apprentices as keyboard makers may be traced in the case of some builders. Table 1 shows the main characteristics of the surviving instruments before Kirman including keyboards. There is an obvious similarity of finish in the choice of blackwood naturals for the Haward, Slade, Tisseran, Hancock, Tabel, Shudi and Wilbrook and the style was used at least until 1742 by Mahoon. The latest known example of black naturals is in a spinet of 1747 by Furley Hawkins.<sup>1</sup> The sharps are a mixture of styles, but all incorporate ivory either in the solid or as slips in the vertical or horizontally on black sharps. Nonetheless, the advent of white naturals on the indigenous harpsichords (quite apart from those built in imitation of the Ruckers instruments) is a truly transitional feature, for without exception the instruments surviving from the Kirkman era (excluding spinets) have white naturals and black sharps. On the matter of compass the extension from the 49 note compass of the Theeuwes to the standard 60 notes of the harpsichords of Tabel, Kirkman and Shudi appears to be exponential with the passage of time, the major changes taking place in the latter years of the period. It cannot be said however that there is a strict numerical and chronological relationship, for if placed in ascending order of notes the order

1. Information kindly supplied by Dr John Stabler who in 1974 saw the spinet in a dealer's window in Derbyshire. According to Boalch, Hawkins was apprenticed to Thomas Barton in 1714 and was made free in 1725

comes out as Theeuwes, 1622 Knole instrument, Tisseran, Barton, Cassus Jesses, Haward, Hancock, Tabel, Shudi, Wilbrook, Slade, Smith and Hitchcock. The latter three come last by virtue of the GG-g<sup>3</sup> compass without the omission of any bass accidentals. This must be incorrect, for the Haward precedes the Barton and Slade almost certainly preceded Smith. Thus this cannot be a guide to dating.

The extension of the compass and the change from black to white naturals is nicely illustrated by two primers. The first, The Harpsichord Master Improved dated 1715<sup>1</sup> has on the first page an illustration of the keyboard with black naturals and white sharps and accompanying text explaining that there are thirty black keys "but to some they add more both above and below! The second entitled The Modern Musick-Master or the Universal Musician 1731<sup>2</sup> has a similar illustration but with white naturals and black sharps. The description states that there are "twenty nine white keys (which is the number contained in many Harpsichords except those made here of late; to which they add both above and below, sometimes to the number of thirty seven)." Presumably Peter Prelleur, the author added eight to twenty nine to get another octave, but of course the arithmetic is faulty and 37 naturals gives five octaves and one note. An almost identical passage with the same mistake is to be found on page 100 of Grassineau in his description of the Harpsichord written in 1740.

The manufacture of jacks and slides is another area in which it is possible to employ specialists. Modern makers, particularly since the advent of the plastic jack tend to use the services of others for this essential commodity. The evidence of manufacture by specialists in the period before Kirkman is slim for quite apart from the style and dimensions of the jacks, one of the main guides to manufacture is the method of numbering the jacks. Of those instruments which still have original jacks, those of the Barton, Smith and Hitchcock are marked in ink, and the maker's initials on the Barton establish their authenticity with little doubt. Maker's inscriptions on the Smith jacks would also indicate that Smith himself was responsible for them whilst the employment of apprentices for keyboards by Hitchcock would indicate that he may well have used them to make his jacks also. The remaining instruments of the period which have original jacks with metal stampings include the Haward, Tisseran, Slade, Hancock, Wilbrook and the two Ruckers style instruments. Copies of rubbings taken from the jacks of these harpsichords are at Fig 18 from which it will be seen that there are slight differences in the stampings of all

1. The Harpsichord Master Improved, Printed and Engraved by L. Pippard at the sign of Orpheus next door to Bickerstaff's Coffee House.....London, 1715  
 2. The Modern Musick-Master or the Universal Musician 1731, Peter Prelleur, Facsimile Reprint edited by Alexander Hyatt King in the series "Documenta Musicologica", Barenreiter Limited, London, undated. I am indebted to Dr Peter Williams for pointing out that this work is largely a translation of Jacques Hotteterre-le-Romain.



the surviving examples. This would indicate that they were produced by different people and thus it seems likely that the makers produced their own actions. There is however a remarkable similarity between the box slides of the Barton and the Hancock and they appear to have been made by the same person. It is just possible that Hancock was apprenticed to Barton and that in the 11 years between the two instruments he had turned to making his own instruments.

The musical resources of the harpsichord are dependant on the specification and it is particularly noteworthy that in the period before about 1720, most of the surviving instruments are single manual harpsichords with 2x8ft choirs though the Theeuwes and the Haward indicate that there were more complex antecedents. In addition it is known that the more resourceful Flemish instruments were imported into England. Why then did the native product remain so simple? Why was it that it was not until the early years of the eighteenth century that English makers began to build double manual harpsichords even though apparently they were capable of making Flemish forgeries? The answer must surely lie in the relative conservatism of the English performers. The popularity of the spinet ensured that many people of musical ability were confined to one keyboard and the recent emancipation from the virginals had left the English with no real need of further resources other than the need to accompany consorts in continuo use with something a little more strident than a spinet or virginal. Thus 2x8ft would have produced greater volume but would blend well particularly if the instrument were short scaled and akin to the Italian instruments in tone. Those who required greater resources were able to find them either in the importation of a Flemish instrument (See Appendix 9 of Russell- Correspondence between Gerbier and Windebank 1637 - 8) or by searching amongst the English dealers who may well have marketed the faked Flemish instruments.

The tonal resources of the harpsichord are dependant on the soundboard (including the thickness, barring, bridge material and profile, grain direction, grain structure, material), layout of string band (including wrest plank layout, plucking point, string lengths, scale and heights of nut and bridge), stringing (including material, gauge, tension and the state of decay of the material) and finally to some extent on the case construction and finish. This list is not exhaustive and yet it begins to demonstrate the problem of making a quantitative assessment of the factors affecting tone, (which in itself is a somewhat subjective matter). A full analysis would demand the resources of a well equipped physics laboratory and the time of a number of devoted research workers. Presumably the only real method of approach would be to hold all parameters constant

except one, which would be varied incrementally and the resulting changes in tone noted. By this method it might be possible to arrive at a conclusion concerning the means whereby each parameter affects the tone. Happily modern makers are beginning to arrive at a situation where such an analysis would probably yield small benefit, for by the expedient of copying old instruments as faithfully as possible, changing them only where durability and stability may be improved by the use of new materials, some harpsichords have been built which are very acceptable.

One of the most obvious quantifiable features affecting harpsichord tone is the string band, and in particular the layout, length of strings and plucking point. In order to compare instrumental layouts, it is possible to make scale drawings on tracing paper and by placing one layout on top of another the differences may be noted visually. This method is somewhat tedious and though this was used in the early work on this thesis it was eventually abandoned in favour of a means of plotting layouts on a log/linear graph. In this method, the horizontal axis represents the position of the strings laterally in the instrument whilst the vertical axis represents the logarithm (to base 10) of the appropriate string length. This method has been used for all the harpsichords listed in Table I for which the string lengths were known, as well as the harpsichord known as Jenny's mentioned in the Talbot Manuscript. Appropriate graphs will be found at figures 6 to 17. Each graph includes an inset which gives a graphical representation of the plucking point. Once again the horizontal axis represents lateral string position in the instrument whilst the vertical axis represents the percentage of the full string length occupied by the plucking point. Thus for example an FF string of say 60" length with a plucking point at 6" from the nut would be shown as having a 10% plucking point, whilst a 10" string having 2" plucking point would be represented as 20%. In the case of instruments having lute stops the plucking point percentage for the lute is shown on the same graph as that for the normal plucking point. In all graphs the longer 8ft string is shown. The main graph also includes lines showing the theoretical string lengths for the theoretical Pythagorean layouts based on scales at  $c^2$  of 8", 9", 10", 11", 12", 13" and 14".

The general form of the layout in all cases shows the way in which all instruments are subjected to foreshortening in the bass, and most also have some foreshortening in the treble though the degree of departure from the theoretical layout is generally small in the treble, and is non-existent in all the double manual instruments with the exception of the Tabel, which as

noted above may well have suffered changes at the hands of makers other than Tabel. One of the main values of this method of representing the layout is that it readily shows up departures from normal practice. In this respect the upturn of the treble of the curve of the Cassus Jesses (Fig 6) adds weight to the possibility that it too has been altered in layout since it was first built.

In the case of the curves showing plucking point, it can be seen that all makers start with about 10% at the bass end and increase slowly at first in the lower one and a half to two octaves. Thereafter the curves vary slightly, some increasing almost exponentially to reach between 40% and 60% in the treble whilst others (notably the Smith and Hitchcock have S shaped curves with a falling off at the treble end). In the case of the lute curves for the double manual instruments, the Hitchcock has a more pronounced increase in plucking point at about  $f^2$  which is not to be seen in the generally flatter curves of the Tabel and Wilbrook.

Unfortunately, perhaps the most influential parameters determining tone are the thickness and barring of the soundboard and in most cases it has been impossible to obtain these accurately. A full survey requires that the board should be out of the case and accessible on both sides- a situation which can seldom be achieved. Barring can to some extent be determined by tapping the soundboard or occasionally by the use of mirrors through the rose hole or inspection ports in the bottom boards if these have ever been cut. The diagonally laid boards of the Smith, Tisseran and Hitchcock are noteworthy and are not met with in any other English harpsichords, though the style is encountered occasionally in France and Italy. The effect on tone cannot be measured objectively, though the Tisseran which is in fine playing order has an exceptionally good tone. The Smith on the other hand is very disappointing, but this is probably due to incorrect stringing, demonstrating that harpsichord tone is never dependent on one parameter only.

It is in the field of string gauge, material and tension that the researcher is on the stoniest ground. Much has been written in recent years, the main contributors being Hubbard<sup>1</sup>, Thomas and Rhodes<sup>2</sup>, Kenneth Bakeman<sup>3</sup>, and Abbott and Segerman<sup>4</sup>. Apart from Thomas and Rhodes who have looked at the stringing materials to be used in short scaled instruments, there has

1. Hubbard, See numerous references under Strings on p 368. 2. Galpin Society Journal, Vol XX, March 1967, William R. Thomas and J.J.K. Rhodes, The String Scales of Italian Keyboard Instruments. 3. Galpin Society Journal, Vol XXVII, April 1974, Kenneth Bakeman, Stringing Techniques of Harpsichord Builders. 4. Ibid, Djilda Abbott and Ephraim Segerman, Strings in the 16th and 17th Centuries.

been little written which is of direct consequence when considering the early English harpsichords, and what has been written on the later longer scaled instruments is still incomplete. The whole topic is bedevilled by the interdependence of stringing with pitch, a subject which is also ripe for further research. At the same time researchers are able to examine stringing from the two viewpoints characterised on the one hand by Hubbard's view that "one strings by ear and not by physics" and on the other by a more empirical approach relying on physics and mathematics. It might be thought that the surviving instruments would provide clues, but the near ephemeral nature of wire in an instrument makes it almost impossible to be sure that the material found on an instrument is original. A typical example of this feature was to be found in the restoration of the Barton: The author was the first owner of this instrument after it had been rescued from a house at Purton in Wiltshire where it had remained undisturbed for between 50 and 100 years. When found it still retained many strings, some intact, and others adhering to the wrest pins, though broken. These strings were carefully measured, and after restoration of the casework, the author replaced the strings as nearly as possible in conformity with what appeared to be the original scheme. This entailed using brass for the first 22 notes and iron thereafter (The compass was BB(GG) -  $d^3$ ). On completion the tone was disappointing and somewhat similar to that of the Smith. Subsequently the Barton was acquired by Dr. Mirrey of Redhill and he restrung the harpsichord using copper alloy. There is no doubt that the tone was noticeably improved.

In view of the doubt surrounding the whole question of stringing materials in English harpsichords the writer has started to gather further material on this subject and also on the topic of pitch. Work is currently in hand involving the examination of all documentary sources including those connected with instruments other than the harpsichord, with the intention of obtaining further information on pitch in England. In addition help is being sought from metallurgists who it is hoped will be able to give more positive dating of specimens of wire found on the surviving harpsichords, and at the same time further information on the metals and alloys used in England and the state of wire drawing. It is hoped that in due course it will be possible to publish a short monograph on the topic.

## Influences on the English builders before Kirkman

The scholarship of Hubbard and Russell has been recognised for over a decade. Both treated harpsichord development in terms of national schools of building, from Italy, the Low Countries, France, England and Germany, though neither was able to distinguish a real national school in England until the time of Kirkman. Of their schools, the Italian and Flemish emerged as the most easily recognisable with harpsichords having characteristics which have been used as tags by most writers to label certain features of the harpsichords from France, Germany and England. Whilst I am also guilty of this practice to some extent, it may be relevant at this juncture to point out that as the corpus of knowledge concerning harpsichord development increases, there is a growing awareness of the danger of classifying instruments as simply Italian or French, etc., and at the same time a similar danger of classifying the specific features of harpsichord design in the same way. There can be little doubt that the migration of builders and musicians from one country to another on the continent did cause interchange of ideas and practice, and the development in any one country was not watertight and independent of any other. Nonetheless, there are certain features of design which are still recognised by students of the harpsichord as being found mostly in specific geographical areas. Thus in Italy, harpsichords are found mostly with angled main gaps, short scale giving rise to a deeply incurved bentside, light case construction in softwood and with knees or buttresses internally and a characteristic bridge and nut profile. In Flanders, the most often found characteristics include longer scales than the Italian, thicker cases with an inner construction using bracers from spine to bentside, a near triangular bridge and nut section, and a method of holding the jacks utilising an upper slide and a lower guide. p93

Having thus guardedly made some generalisations, but at the same time having sounded a warning on accepting these generalisations as dogma, it is possible to attempt to see the way in which the English builders before Kirkman were influenced by continental practice.

Until the third quarter of the seventeenth century in England the picture is unclear though it is possible to conclude that even in 1579, the year of the Theeuwes, an instrument was available in England which combined harpsichord and organ, and most probably included 2x8ft and 1x4ft choirs. It was thus an instrument of some resource and included features from Italy such as the bridge profile and nut standing on free soundboard, whilst in many other

respects it was obviously influenced by the early Flemish instruments. It also included the use of indigenous wood in the casework. The 1622 harpsichord from Knole was also endowed with considerable resource, having most probably three choirs, though the question of their pitch remains partially unsolved. This instrument shows a closer affinity with Italy than with Flanders, and foreshadows the later instruments of the seventeenth century, which also have many features from Italy. The existence of a choir plucked close to the nut may mark the beginning of the lute stop in England and there is also evidence that a harp stop may also have been incorporated in this harpsichord.

The remaining single manual harpsichords from this century and from the first twenty years or so of the eighteenth century are remarkably similar in conception, and incorporate features from Italian practice as well as from Flanders. Thin cases with diagonal bracing, short scales and angled main gaps are the recurrent features found in nearly all of them, and these are coupled with the use of English walnut, either solid or veneered on pine, typically English strap hinges and plain restrained case styles which place these harpsichords in a class of their own. There is now such precedent in these instruments that any similar harpsichord coming to light today would immediately be assigned to this period with little fear of contradiction from any scholar.

The problem confronting researchers at this point has been to resolve the apparent regression from the Theeuwes and 1622 Knole instrument back to the relatively simple single manual harpsichords described above. Unfortunately no simple solution can be found and the answer may well lie in the complexity of the two earlier survivors. Their builders may well have been innovatory in their work, and it may be just pure chance which has left these two harpsichords as the sole survivors of a period of close on 100 years during which the harpsichord was undoubtedly in use in England. The fact that they have survived in a distressed state may in itself be an indication that they were not entirely successful in their innovation, though the state of the later survivors does not indicate that in their simplicity they were cared for with greater affection. In view of the small size of the sample of survivors from the period up to 1650, it would, on purely statistical grounds, be unwise to draw conclusions which are sweeping or too general.

The 1683 Haward is the first dated instrument to have a diagonally braced case and it is mainly on this point that the argument rests for a dating

later than that announced on the soundboard of the 1623 unsigned harpsichord by Michael Thomas, which like the Ham House and Helmingham Hall Ruckers, has a diagonally braced case. None of these instruments was recognised as English when Hubbard or Russell wrote, and McGeary is the only writer to have tried to explain their relevance to the English instrument, and he has been bedevilled by the assumption that the dates are genuine, ie. 1623, 1634 and 1646 respectively. If it is accepted that the dates are correct, then it establishes an earliest date for the diagonally braced case in England and also for the shelf construction. Tempting as it is to come to a definitive conclusion on this matter, it must be said that there is no fully corroborative evidence on which to establish the point. McGeary draws on relatively speculative evidence to try and establish 1623 as the date of the unsigned harpsichord whilst I have tried to show that there is no reason why it should not be contemporary at least with the 1683 Haward on the evidence of the internal construction of the Haward. Regardless of the exact date, however, the interesting fact is that all are apparently Flemish to the casual observer. They have all three taken in acknowledged experts and they would almost certainly have deceived musicians of the seventeenth century. These three harpsichords therefore need pose no real problem in assessment of the evolution of the instrument in England, for they represent a deliberate attempt at deception rather than a deliberate attempt at development of the native product. It would seem also that though they proved that the English builder could produce a more complex instrument, they did not have any influence in causing English builders to produce double manual harpsichords before the beginning of the eighteenth century. It was only at this time that English builders, probably Player and other workers, produced instruments of the size and style of the Tisseran. Certainly by 1710 the two manual harpsichord with dogleg and compass down to FF had made its appearance built by native craftsmen and also by immigrant builders such as Tisseran. From then on, the transition to the more complex harpsichords incorporating the lute was relatively speedy. The Hitchcock represents this transition in that it combines the musical resources of a Kirkman with the plain casework characteristic of the early singles such as the Haward, Slade, Smith, Barton and Hancock.

Until comparatively recently it was usual to relate the development of the harpsichords of Shudi and Kirkman to their master Tabel, whilst other researchers decried this thesis on the grounds that the date of the Tabel was not authentic. The authenticity of the Tabel has now been established

beyond all reasonable doubt and its date of 1721 has also been proved. But this does not establish anything more than that the English harpsichord with 2x8ft and 1x4ft with dogleg 8ft playable from both manuals was sufficiently acceptable by 1721 to be a commercial proposition for Tabel to use and market. The evidence from the Tisseran and the Player is that it was already acceptable to the English by 1710. There is thus no really original feature in the Tabel which was not already present in the harpsichords of ten years before, with the one exception of the case style which is not met with elsewhere before. It may well have been however, that the excellence of the Tabel harpsichord formed a bedrock of harpsichord practice on which Shudi and Kirkman founded their styles, and which remained the standard requirement for English musicians for the remainder of the eighteenth century. It is interesting that of all the surviving instruments by builders other than Shudi and Kirkman (see Table 2), there is hardly a single deviation of any consequence from the specifications, case finishes and general approach to building exhibited by Tabel, and his two successors.

There is, therefore, a reasonably consistent line of development from the last quarter of the seventeenth century following the lines of:-  
 1680s: Simple single manual harpsichords were built by native craftsmen having usually 2x8ft and occasionally lute. All were short scaled and lightly built with diagonally braced cases of solid English walnut, or with veneered walnut on pine. The compass slowly increased throughout the period until by about 1710 - 1720 the five octave compass FF-f<sup>3</sup> was standard.

Early 1700s: English makers, probably influenced by Huguenot builders such as Tisseran (though possibly of their own initiative) began to build two manual harpsichords incorporating the dogleg. Cases built by the native builders were plain in the style of the singles of the previous quarter century. The scale of these instruments was around 12.00" - 13.00", and later this began to lengthen to over 13.00" with the instruments of Tabel. These latter had heavier cases of oak, veneered and cross banded, a style which the tastes in domestic furniture made acceptable. Apart from one or two English makers, the cross banded case was adopted almost universally in England.

By 1725: The English specification including the dogleg had gained such favour that it was worthwhile for an English dealer to change the Ham House Ruckers to this specification, incorporating three rows of jacks. (It is at this point that the Ham House Ruckers has relevance



to the development of the English harpsichord. Its previous history though speculative is not particularly significant.)

By 1730: The English style of instrument, owing much to the influence of Tabel and possibly also to Tisseran had been firmly established and the innate conservatism of the English coupled with the good business sense of Kirkman and Shudi ensured that the style did not change for another seventy years until the harpsichord had passed out of fashion in England.

This development is summarised in Table 4, which gives all the major events in the development of the harpsichord in England. In view of this development, it may be useful to summarise the most likely order of the surviving harpsichords, which are listed chronologically below:-

| Probable Date | Maker                                        | Confirmed date where known |
|---------------|----------------------------------------------|----------------------------|
| 1579          | Ludovic Theeuwes                             | 1579                       |
| 1622          | John Iasard?                                 | 1622                       |
| 1630x1680     | Cassus Jesses?                               | nk                         |
| 1683          | Charles Haward                               | 1683                       |
| 1709          | Thomas Barton                                | 1709                       |
| 1710          | Joseph Tisseran                              | 1710                       |
| 1710x1725     | Benjamin Slade                               | nk                         |
| 1715x1730     | William Smith                                | nk                         |
| 1720          | Thomas Hancock                               | 1720                       |
| 1720x1730     | Thomas Hitchcock                             | nk                         |
| 1721          | Herman Tabel                                 | 1721                       |
| 1623x1730     | Unsigned instrument dated 1623 on soundboard |                            |
| 1634x1725     | Johannes Ruckers (Ham House)                 | known to be 1725           |
| 1646x1725     | Andreas Ruckers (Helmingham Hall)            | nk at latest               |
| 1729          | Burkat Shudi                                 | 1729                       |
| 1730          | John Wilbrook                                | 1730                       |
| 1700x1738     | Francis Coston - probably two harpsichords   |                            |
| 1738          | Joseph Mahoon                                | 1738                       |
| 1742          | Joseph Mahoon                                | 1742                       |

(The use of an x to separate two dates is an indication that the harpsichord is probably dated within this period)

## Part II

### The Kirkman Harpsichord

## The Kirkman Harpsichord

There can be no such thing as The Kirkman Harpsichord, and yet every instrument has a characteristic style which at once marks it as the product of the Kirkman workshops. The similarity of case decoration, construction, layout and workmanship makes it possible to distinguish a Kirkman with reasonable ease even if the nameboard and rose are missing. At the other end of the scale faked Kirkman harpsichords may be discerned by anyone who has had the privilege of examining harpsichords which are known to be genuine, and it is now unlikely that any spurious instrument purporting to be a Kirkman could survive the telling uniformity of approach which characterises the instruments from 1744 to 1800.

This uniformity will be examined under a number of headings below, and first is a survey of those characteristics which can be summarised as standard for the whole output from the Kirkman workshops.

### Standard instrument.

From the outset it is helpful to adopt a shorthand coding system to classify instruments according to their number of manuals, specification and additional items which would be found on a variety of English harpsichords. The code adopted consists of an eight digit alphanumeric chain of which the first four are numerical and the second four are characters. The first digit indicates the number of manuals, the second two the number of 8ft choirs and the fourth the presence of a four foot register. Thus a single manual harpsichord with 2x8ft and 1x4ft would appear as 12840000. In the alpha section the possibilities are H indicating a harp stop, L indicating a lute, M is a machine and S a swell. Where the type of swell is known this is indicated in brackets by (L) for lid swell, and (V) for Venetian. Thus the most fully developed two manual harpsichord with harp, lute, machine and venetian swell appears as 2284HLMS(V).

Unfortunately many of the instruments recorded have undergone changes during the years and it is not possible to tell if they are now seen in the state in which they were built. Nonetheless, in the case of Kirkman harpsichords, it is possible with such a large number surviving to detect a range of standard instruments which can be described by the above coding system.

The simplest harpsichord was a single manual instrument having 2x8ft choirs only and described by the code as 12800000. This model was made continuously throughout the period though the latest authentic instrument to have survived is dated 1787 (BN77a)<sup>1</sup>. As with all Kirkman harpsichords,

<sup>1</sup>. BN is used to denote the number of the harpsichord in the list of Kirkman harpsichords given in the second edition of Boalch, page 86.

the proximal row of jacks faces to the left whilst the distal faces right. A more advanced form of this model is found quite often with a harp stop added to one 8ft choir. Several seen by the writer appear to be original, but since the harp batten with its buff leather pads is relatively easy to make, they may be later additions. Nonetheless, it would appear that 1280H000 was a fairly standard model. A further refinement found occasionally is a type of machine. BN42 dated 1769 has 8ft<sub>1</sub> quill and 8ft<sub>2</sub> leather, the latter being held in the permanently on position by means of a leaf spring. It can only be taken off by the operation of a pedal. The owner believes the machine arrangement which effects this change to be original though it has been extensively renovated and the leather register is almost certainly a later addition. Such machines and others found occasionally which operate the harp stop are the exception and cannot be said to be part of this standard simplest instrument.

One instrument only remains with the disposition 12800L00 and doubt has been cast on its authenticity. Unfortunately it has not been possible to examine this instrument (BN5?) which is in the USA, however it is possible that it is by an Irish builder, Ferdinand Weber of Dublin having made similar instruments.

The next standard addition to the above arrangements was the octave to give 12840000 to which all the refinements with the exception of the lute stop could be added. At least six or seven have survived without any refinements, and in the case of others up to about 1770, the refinements could well have been added later. Of the instruments from 1770 onwards, there is ample evidence to suggest that the addition of machine, harp or swell was made at the time of manufacture, presumably to the specification of the purchaser. The type of swell fitted can be either a nag's head (lid swell) or a venetian swell and this aspect is discussed further below. The machine could take a variety of forms to give a range of effects. As an example of the different ways of treating the latter, BN70 and BN82, dated 1781 and 1788 respectively both have a pedal operated machine which when the pedal is in the up position holds on the front 8ft and the 4ft, the second 8ft being left to the operation of a handstop. When the pedal is depressed an arrangement of levers and leaf springs ensures that the 4ft is first removed followed by the front 8ft. As before the second 8ft is unaffected by the pedal. Thus the release of the pedal is akin to a crescendo effect, and can be used to some effect when employed with discretion. There are however, pins secured by thread near the left end of the jack

slides, and these can be used to wedge the slides so as to nullify one or more actions of the pedal. Earlier machine stops were less complicated and generally removed the 4ft only (BN20a and 30b being confirmed examples.)

The use of three rows in the main gap gave rise to the configuration of maintaining the rows as they were in the 12800000 version and adding the 4ft row at the distal edge of the main gap with the jacks facing left. This arrangement was maintained in the double manual instruments, though the latter always included a lute stop with the jacks facing left in the manner described on page 22 and plucking the same strings as the dogleg jacks which are completely standard in every Kirkman double manual instrument, (and for that matter in all other English instruments from 1744 onwards).

The simplest two manual arrangement possible therefore was 22840L00, but in practice this is never found without one or more refinements. As with the single manual harpsichords, the harp stop occurs rarely before 1766 and those which are known are probably later additions. Even after 1766 (in which year at least two instruments were fitted with original harp battens) instruments do occur without the harp, and BN36 of 1767 has never received the device. The machine, however, certainly appears as early as 1757, and is apparently original on BN3 of 1754. Its presence on BN01 of 1744 has not been verified. As with single manual instruments swells of both types appear with no apparent reason for the selection of one or other type. Apart from an atypical swell on BN3, it seems almost certain that the earliest nag's head swells date from 1766, and the earliest surviving venetian swell dates from 1768 (BN38) though it is not known if it was fitted in that year or later.

It is possible therefore to summarise the standard Kirkman harpsichords as three in number:

|                    |   |                                                                                                                            |
|--------------------|---|----------------------------------------------------------------------------------------------------------------------------|
| Model A - 12800000 | } | The classification is merely one of convenience and does not indicate that the instruments were thus described by Kirkman. |
| Model B - 12840000 |   |                                                                                                                            |
| Model C - 22840L00 |   |                                                                                                                            |

to which harp, machine and swell were added as required.

All the above instruments have a standard compass of five octaves FF-  $f^3$  and a number of other distinguishing features which are discussed in the following sections.

## The Size and Layout of a Kirkman Harpsichord

As with all harpsichords, the size and layout of a Kirkman are determined largely by the scale, the compass, the plucking point throughout the compass and the degree of string length foreshortening. Having fixed these parameters, the overall length is usually determined by the length of the longest string, whilst the bentside curve is usually affected by the way in which the builder attempts to cause the curvature of the case to follow the curvature of the 8ft bridge. At an early stage in this study it became apparent that rather surprisingly there appeared to be no difference in the layout of the 8ft string band between singles or doubles, or between harpsichords with and without a 4ft. It was mainly for this reason that the method of measurement outlined in Appendix B was developed, and a summary of the recorded measurements for some nineteen Kirkman harpsichords between 1745 and 1790 is given in table 5. Of these, five are single manual instruments and the other fourteen are doubles. In each case the string length, plucking point, and where appropriate, lute plucking point are given for each of the notes FF, F, f,  $f^1$ ,  $f^2$ , and  $f^3$ . Regrettably, it was not until some way through the study that the length of the 8ft  $c^2$  string was also recorded. Nonetheless, as will be seen, there is sufficient information to make it clear that the scale has remained fairly constant at around 13.56" (the mean of the observed readings) whilst, with the exception of the 8ft and 4ft FF strings, the string band layout remained substantially the same between 1745 and 1790.

In order to approach the matter in a quantitative manner a simple computer programme was written in order to work out the means and standard deviations of all the readings and these are shown in table 5 below the 1790 harpsichord, (Boalch No. 87). The standard deviation is a figure which is often used in statistical evaluation, and gives a measure of the spread of readings about the mean. A simple example will illustrate its use:-

Assume that seven observers take readings of the measurement of a harpsichord string length, which it is known is 60" long, and their results are given below together with the results of seven other observers from a second group

|            | Measurements by<br>Group A | Measurements by<br>Group B |
|------------|----------------------------|----------------------------|
| Observer 1 | 65.0                       | 58.5                       |
| Observer 2 | 59.0                       | 61.5                       |
| Observer 3 | 60.0                       | 60.5                       |
| Observer 4 | 57.0                       | 59.5                       |
| Observer 5 | 55.0                       | 60.0                       |
| Observer 6 | 63.0                       | 59.0                       |
| Observer 7 | 61.0                       | 61.0                       |
|            | <hr/>                      | <hr/>                      |
| Mean       | 60.0                       | 60.0                       |

In both cases the mean of the readings is the same and gives the correct value, 60.0, but it is obvious from an examination of the readings by the two groups that the observers of Group A have obtained readings which diverge much more from the mean than the observers of Group B. The Standard deviation is a figure which indicates the extent of this divergence and is found by the equation:

$$sd = \sqrt{\frac{\sum (x_n - \bar{x})^2}{n}}$$

where  $n$  is the number of terms,  $x_n$  is each reading up to  $n$  readings,  $\bar{x}$  is the mean, and  $sd$  is the standard deviation. The significance of the standard deviation becomes greater when it is found that 68% of all readings are to be found within plus and minus one  $sd$  of the mean, whilst 95% are to be found within two standard deviations from the mean.

In the case of the readings of table 5, it will be seen that the standard deviations for all readings are very small with the possible exception of the lengths of the FF strings. In order to determine whether the sizes of the standard deviations were significant it was necessary to carry out some tests to determine the accuracy of measurement. Unfortunately it was not possible to do this in the context of the original observations which were made by the author over a period of many years. Two tests were devised however, the one in which the author measured a string twenty times over a period of days - the string was in fact 68.25" long according to the mean of the measurements, and the  $sd$  was found to be 0.11"; and the other test involved using some twenty observers to measure the same string, the mean of these results being 68.57 and the  $sd$  0.56. Comparing these figures with the figures of table 5 it would seem that in almost every case, the readings taken by the author are within the limits of experimental accuracy, and it may be assumed that the string band is the same in its layout throughout the period from 1745 - 1790. The one area of discrepancy has already been noted, and it was decided to examine this more closely in table 6 which gives the lengths of the FF string of a number of instruments (singles and doubles) over a number of years, and these lengths are shown with the overall lengths of the instruments. From the table it is seen that the FF string started at around 71.0" in 1745 and then became shorter down to around 68.0" in the early 1760s, becoming longer again on reaching the 1770s and 1780s. Correcting the single manual overall length to coincide with the doubles by adding 5.5", it is seen that this change in string length is accompanied by a similar change in the overall length. Starting in 1745 the length was 96.75 and this dropped to around 92"

before rising once again to about 94". No explanation can be offered for this change which appears to take place gradually and not as might be expected in incremental steps. Table 6a\* gives further dimensions of sixteen of the instruments measured, and in column B will be found the length of the soundboard from the main gap to the tail. These dimensions also show the same characteristic changes as might be expected from the fact that the plucking point of the FF string (see table 6) has hardly varied at all, and the variation which is shown in the table is within the experimental accuracy to be expected. It might have been thought that a similar variation would be found in the width of the instruments, but column N, which shows the distance from right to left of the wrest plank shows that there is hardly any variation at all, though there are two low readings of 34.63 in 1763 and 1765 and these are both single manual instruments. The difference is small however, and just on the limits of the experimental accuracy which might be expected. In view of the caution with which I treat this matter it may be germane at this point to justify the fact that the measurements are in most cases given to two places of decimals. The fact is that most dimensions in the harpsichord (certainly with respect to the casework) are probably better specified in inches and eighths of an inch. Almost certainly this was the way in which they were specified by Kirkman. Since the study was started well before the introduction of metrication in Britain, the readings were generally entered in my workbooks in this way. Subsequently at the suggestion of several friends I changed to recording in inches and tenths of an inch and when eventually it became necessary to compare them, it seemed that the latter system must be the better. Thus it was necessary to convert the older readings to decimal and this of course would have given rise to three places of decimals on converting say  $\frac{1}{8}$ " to 0.125" - an apparently ridiculous degree of accuracy. Thus all readings converted from eighths have been rounded to two places,  $\frac{1}{8}$ " now appearing as 0.13" etc.

Returning to the layout of a Kirkman harpsichord, it will be seen that there are some further variations of a minor nature in table 6a, but basically the instruments through the period are alike in their main dimensions with the exception of the length referred to above, and to some extent the tail angle which is specified by a triangulation based on dimensions C, M and R. (see fig 21). Thus it may be concluded that the apparent difference in 8ft tone often remarked on between an instrument with 4ft, and one without, is not due to a difference in layout or plucking point, but is almost certainly due to the additional loading on the soundboard of a 4ft bridge and hitch pin rail.

\* For a definition of columns B to Y' see appendix B



Table 5

String lengths and plucking points for a number of Kirkman harpsichords in the period 1745-1790. (Measurements relate to the longest string in all cases except f<sup>3</sup> - which is for the shortest string.)

| No.                | Date | Maker  | Manuals | Boalch No | 8ft    | 8ft   | lute  | 4ft    | 4ft   |
|--------------------|------|--------|---------|-----------|--------|-------|-------|--------|-------|
|                    |      |        |         |           | FF     | FF    | FF    | FF     | FF    |
|                    |      |        |         |           | length | pluck | pluck | length | pluck |
| 1                  | 1745 | Jacob  | 2       | 109       | 71.0   | 7.5   | 2.88  | 41.13  | 4.38  |
| 2                  | 1752 | Jacob  | 1       | 2         | 71.0   | 7.5   |       |        |       |
| 3                  | 1754 | Jacob  | 2       | 3         | 70.5   | 7.5   | 2.75  | 40.6   | 4.4   |
| 4                  | 1755 | Jacob  | 2       | 4         | 70.63  | 7.25  | 2.75  | 41.38  | 4.25  |
| 5                  | 1757 | Jacob  | 2       | 7         | 71.0   | 7.5   |       | 41.0   | 4.25  |
| 6                  | 1760 | Jacob  | 2       | 12        | 68.5   | 7.45  | 2.75  | 40.13  | 4.38  |
| 7                  | 1761 | Jacob  | 2       | 15        | 68.5   | 7.5   | 3.0   | 40.0   | 4.5   |
| 8                  | 1763 | Jacob  | 1       | 21a       | 68.0   | 7.5   |       |        |       |
| 9                  | 1765 | Jacob  | 1       | 30a       | 68.25  | 7.38  |       |        |       |
| 10                 | 1766 | Jacob  | 2       | 33        | 68.38  | 7.13  | 2.63  | 39.75  | 4.25  |
| 11                 | 1766 | Jacob  | 2       | 32        | 68.25  | 7.5   | 2.88  | 39.5   | 4.25  |
| 12                 | 1769 | Jacob  | 1       | 42        | 69.5   | 7.5   |       |        |       |
| 13                 | 1772 | Jacob  | 2       | 48        |        | 7.63  | 2.75  | 40.0   | 4.5   |
| 14                 | 1777 | J & A  | 2       | 62        | 69.5   | 7.25  | 2.75  | 40.5   | 4.25  |
| 15                 | 1777 | J & A  | 2       | 63        | 69.0   | 7.0   | 2.5   | 40.5   | 4.25  |
| 16                 | 1785 | J & A  | 2       | 73        | 70.0   | 7.25  | 2.25  | 41.75  | 4.25  |
| 17                 | 1786 | J & A  | 2       | 74        | 70.0   | 7.0   | 2.88  | 42.5   | 4.38  |
| 18                 | 1787 | J & A  | 2       | 79a       | 70.0   | 7.25  | 3.0   | 41.0   | 4.5   |
| 19                 | 1790 | A & Jo | 1       | 87        | 68.75  | 7.25  |       | 42.5   | 4.25  |
| Mean               |      |        |         |           | 69.44  | 7.36  | 2.75  | 40.81  | 4.33  |
| Standard Deviation |      |        |         |           | 1.03   | 0.18  | 0.24  | 0.89   | 0.10  |

For comparison similar measurements for the Tabel and Willbrook are given below:

|    |                |      |  |  |      |      |      |       |      |
|----|----------------|------|--|--|------|------|------|-------|------|
| 20 | Herman Tabel   | 1721 |  |  | 72.5 | 6.63 | 2.25 | 41.25 | 4.13 |
| 21 | John Willbrook | 1730 |  |  | 72.0 | 6.8  | 2.1  | 42.0  | 4.15 |

Table 5 continued

| No.  | 8ft<br>F<br>length | 8ft<br>F<br>pluck | lute<br>F<br>pluck | 4ft<br>F<br>length | 4ft<br>F<br>pluck | 8ft<br>f<br>length | 8ft<br>f<br>pluck | lute<br>f<br>pluck | 4ft<br>f<br>length | 4ft<br>f<br>pluck |
|------|--------------------|-------------------|--------------------|--------------------|-------------------|--------------------|-------------------|--------------------|--------------------|-------------------|
| 1    | 57.38              | 6.13              | 2.00               | 30.5               | 4.0               | 38.63              | 4.75              | 1.25               | 18.88              | 3.50              |
| 2    | 59.5               | 6.0               |                    |                    |                   | 38.5               | 4.75              |                    |                    |                   |
| 3    | 56.5               | 6.13              | 2.00               | 30.38              | 4.0               | 38.5               | 4.75              | 1.25               | 18.5               | 3.25              |
| 4    | 57.5               | 6.13              | 2.0                | 31.0               | 3.63              | 38.5               | 4.75              | 1.33               | 19.25              | 3.13              |
| 5    | 56.5               | 6.13              |                    | 31.25              | 3.75              | 39.25              | 4.88              |                    | 19.0               | 3.38              |
| 6    | 57.75              | 6.0               | 2.13               | 30.00              | 4.00              | 38.38              | 4.75              | 1.50               | 18.88              | 3.38              |
| 7    | 58.00              | 6.13              | 2.25               | 31.00              | 4.00              | 39.00              | 4.88              | 1.75               | 19.00              | 3.50              |
| 8    | 58.0               | 6.25              |                    |                    |                   | 39.0               | 4.88              |                    |                    |                   |
| 9    | 57.5               | 6.0               |                    |                    |                   | 38.75              | 4.88              |                    |                    |                   |
| 10   | 57.75              | 5.9               | 2.13               | 30.25              | 3.8               | 38.75              | 4.7               | 1.4                | 19.13              | 3.25              |
| 11   | 57.75              | 6.0               | 2.25               | 30.0               | 3.88              | 38.5               | 4.75              | 1.5                | 18.75              | 3.5               |
| 12   |                    |                   |                    |                    |                   |                    |                   |                    |                    |                   |
| 13   | 58.5               | 6.13              | 2.0                | 30.0               | 4.0               | 38.25              | 4.88              | 1.25               | 19.0               | 3.50              |
| 14   | 58.0               | 5.88              | 2.0                | 30.5               | 3.88              | 39.25              | 4.75              | 1.6                | 19.0               | 3.25              |
| 15   | 58.0               | 6.0               | 2.0                | 30.5               | 3.88              | 37.0               | 4.63              | 1.5                | 19.0               | 3.25              |
| 16   | 59.0               | 6.0               | 1.88               | 30.25              | 3.75              | 39.25              | 4.38              | 1.5                | 19.0               | 3.63              |
| 17   | 58.0               | 5.88              | 1.88               | 31.5               | 4.0               | 40.5               |                   | 1.63               | 19.5               | 3.38              |
| 18   | 58.0               | 6.0               | 2.0                | 31.5               | 4.0               | 39.0               | 4.38              | 1.5                | 19.5               | 3.5               |
| 19   | 58.5               | 6.0               |                    | 31.0               | 3.75              | 39.0               | 4.5               |                    | 18.5               | 3.13              |
| Mean | 57.99              | 6.04              | 2.04               | 30.64              | 3.89              | 38.78              | 4.72              | 1.46               | 18.99              | 3.37              |
| SD   | 0.63               | 0.10              | 0.11               | 0.51               | 0.12              | 0.66               | 0.16              | 0.15               | 0.29               | 0.15              |
| 20   | 59.0               | 5.63              | 5.75               | 31.0               |                   | 39.0               | 4.25              | 1.25               | 18.75              |                   |
| 21   | 58.5               | 5.85              | 1.85               | 31.25              | 3.75              | 38.75              | 4.6               | 1.1                | 19.0               | 3.25              |

Table 5 continued

| No.  | 8ft<br>f <sup>1</sup><br>length | 8ft<br>f <sup>1</sup><br>pluck | lute<br>f <sup>1</sup><br>pluck | 4ft<br>f <sup>1</sup><br>length | 4ft<br>f <sup>1</sup><br>pluck | 8ft<br>c <sup>2</sup><br>length | 8ft<br>c <sup>2</sup><br>pluck | lute<br>c <sup>2</sup><br>pluck | 4ft<br>c <sup>2</sup><br>length | 4ft<br>c <sup>2</sup><br>pluck |
|------|---------------------------------|--------------------------------|---------------------------------|---------------------------------|--------------------------------|---------------------------------|--------------------------------|---------------------------------|---------------------------------|--------------------------------|
| 1    | 20.63                           | 3.63                           | 1.0                             | 10.5                            | 3.0                            | 13.63                           | 3.25                           | 0.88                            | 6.88                            | 2.5                            |
| 2    | 21.0                            | 3.75                           |                                 |                                 |                                |                                 |                                |                                 |                                 |                                |
| 3    | 20.5                            | 3.68                           | 0.88                            | 10.25                           | 2.75                           | 13.5                            | 3.00                           | 0.75                            | 6.75                            | 2.5                            |
| 4    | 20.5                            | 3.63                           | 0.88                            | 10.25                           | 2.75                           | 13.5                            | 3.0                            | 0.6                             | 6.75                            | 2.45                           |
| 5    | 21.25                           | 3.75                           |                                 | 10.5                            | 3.0                            |                                 |                                |                                 |                                 |                                |
| 6    | 20.38                           | 3.63                           | 1.13                            | 10.25                           | 2.88                           | 13.5                            | 3.25                           | 1.0                             | 6.75                            |                                |
| 7    | 21.0                            | 4.00                           | 1.25                            | 10.5                            | 3.00                           |                                 |                                |                                 |                                 |                                |
| 8    | 21.0                            | 3.75                           |                                 |                                 |                                |                                 |                                |                                 |                                 |                                |
| 9    | 20.88                           | 4.0                            |                                 |                                 |                                |                                 |                                |                                 |                                 |                                |
| 10   | 20.25                           | 3.65                           | 1.0                             | 10.0                            | 2.7                            | 13.38                           | 3.1                            | 0.85                            | 6.5                             | 2.4                            |
| 11   | 20.5                            | 3.75                           | 1.8                             | 10.25                           | 2.88                           | 13.63                           | 3.13                           | 0.9                             | 6.63                            | 2.38                           |
| 12   |                                 |                                |                                 |                                 |                                | 13.75                           | 3.5                            |                                 |                                 |                                |
| 13   | 18.88                           | 3.75                           | 1.13                            | 10.5                            | 3.0                            |                                 |                                |                                 |                                 |                                |
| 14   | 20.75                           | 3.63                           | 1.0                             | 10.5                            | 2.88                           |                                 |                                |                                 |                                 |                                |
| 15   | 20.5                            | 3.75                           | 1.13                            | 9.75                            | 2.75                           |                                 |                                |                                 |                                 |                                |
| 16   | 21.0                            | 3.75                           | 1.25                            | 11.0                            | 2.75                           |                                 |                                |                                 |                                 |                                |
| 17   | 21.0                            |                                | 1.2                             | 10.38                           | 2.88                           |                                 |                                |                                 |                                 |                                |
| 18   | 20.5                            | 3.75                           | 1.13                            | 10.25                           | 2.75                           |                                 |                                |                                 |                                 |                                |
| 19   | 21.0                            | 3.5                            |                                 | 10.0                            | 2.5                            |                                 |                                |                                 |                                 |                                |
| Mean | 20.64                           | 3.72                           | 1.14                            | 10.33                           | 2.83                           | 13.56                           | 3.18                           | 0.83                            | 6.71                            | 2.45                           |
| SD   | 0.51                            | 0.12                           | 0.22                            | 0.28                            | 0.14                           | 0.11                            | 0.16                           | 0.13                            | 0.12                            | 0.05                           |
| 20   | 21.0                            | 3.63                           | 0.88                            | 9.88                            |                                | 13.5                            | 3.13                           | 0.63                            |                                 |                                |
| 21   | 20.13                           | 3.6                            | 0.73                            | 9.88                            | 2.75                           | 13.5                            | 3.1                            | 0.6                             | 6.75                            | 2.5                            |

Table 5 continued

| No.  | 8ft<br>f <sup>2</sup><br>length | 8ft<br>f <sup>2</sup><br>pluck | lute<br>f <sup>2</sup><br>pluck | 4ft<br>f <sup>2</sup><br>length | 4ft<br>f <sup>2</sup><br>pluck | 8ft<br>f <sup>3</sup><br>length | 8ft<br>f <sup>3</sup><br>pluck | lute<br>f <sup>3</sup><br>pluck | 4ft<br>f <sup>3</sup><br>length | 4ft<br>f <sup>3</sup><br>pluck |
|------|---------------------------------|--------------------------------|---------------------------------|---------------------------------|--------------------------------|---------------------------------|--------------------------------|---------------------------------|---------------------------------|--------------------------------|
| 1    | 10.25                           | 2.88                           | 0.75                            | 5.25                            | 2.38                           | 5.13                            | 2.0                            | 0.5                             | 2.63                            | 1.88                           |
| 2    | 10.5                            | 2.88                           |                                 |                                 |                                | 5.25                            | 2.13                           |                                 |                                 |                                |
| 3    | 10.25                           | 2.75                           | 0.63                            | 5.00                            | 2.38                           | 5.20                            | 1.75                           | 0.38                            | 2.50                            | 1.88                           |
| 4    | 10.25                           | 2.75                           | 0.5                             | 5.0                             | 2.13                           | 5.25                            | 2.0                            | 0.38                            | 2.5                             | 1.75                           |
| 5    | 10.5                            | 2.75                           |                                 | 5.25                            | 2.38                           | 5.25                            | 2.0                            |                                 | 2.63                            | 1.88                           |
| 6    | 10.13                           | 2.75                           | 0.75                            | 5.0                             | 2.38                           | 5.13                            | 2.0                            | 0.5                             |                                 |                                |
| 7    | 10.5                            | 3.25                           | 0.88                            | 5.0                             | 2.38                           | 5.0                             | 2.13                           | 0.38                            | 2.5                             | 1.75                           |
| 8    | 10.25                           | 3.0                            |                                 |                                 |                                | 5.13                            | 2.25                           |                                 |                                 |                                |
| 9    | 10.25                           | 3.0                            |                                 |                                 |                                | 5.13                            | 2.5                            |                                 |                                 |                                |
| 10   | 10.2                            | 2.8                            | 0.75                            | 4.88                            | 2.1                            | 5.0                             | 2.0                            | 0.6                             | 2.5                             | 1.8                            |
| 11   | 10.25                           | 2.75                           | 0.75                            | 5.0                             | 2.25                           | 5.13                            | 1.88                           | 0.5                             | 2.5                             | 1.88                           |
| 12   |                                 |                                |                                 |                                 |                                | 5.13                            | 2.13                           |                                 |                                 |                                |
| 13   | 10.25                           | 2.88                           | 0.88                            | 5.25                            | 2.5                            | 5.25                            | 2.25                           | 0.75                            | 2.63                            | 2.0                            |
| 14   | 10.25                           | 2.5                            | 0.88                            | 5.13                            | 2.38                           | 5.0                             | 2.0                            | 0.75                            | 2.5                             | 1.88                           |
| 15   | 10.0                            | 2.75                           | 0.88                            | 5.0                             | 2.38                           | 5.0                             | 2.0                            | 0.75                            | 2.5                             | 2.0                            |
| 16   | 10.38                           | 3.0                            | 0.88                            | 5.13                            | 2.25                           | 5.13                            | 2.5                            | 0.75                            | 2.63                            | 2.0                            |
| 17   | 10.5                            |                                | 1.0                             | 5.0                             | 2.88                           | 5.25                            | 2.13                           | 0.75                            | 2.5                             | 2.0                            |
| 18   | 10.13                           | 2.75                           | 0.75                            | 5.0                             | 2.25                           | 5.13                            | 1.88                           | 0.63                            | 2.5                             | 1.75                           |
| 19   | 10.0                            | 2.5                            |                                 | 4.75                            | 2.13                           | 5.0                             | 1.75                           |                                 | 2.5                             | 1.63                           |
| Mean | 10.27                           | 2.82                           | 0.79                            | 5.04                            | 2.38                           | 5.13                            | 2.07                           | 0.59                            | 2.54                            | 1.86                           |
| SD   | 0.15                            | 0.18                           | 0.12                            | 0.13                            | 0.21                           | 0.09                            | 0.20                           | 0.15                            | 0.06                            | 0.11                           |
| 20   | 10.0                            | 2.88                           | 0.63                            | 4.5                             |                                | 5.0                             | 2.25                           | 0.5                             | 2.13                            |                                |
| 21   | 10.0                            | 2.85                           | 0.48                            | 5.0                             | 2.25                           | 5.25                            | 2.25                           | 0.4                             | 2.4                             | 1.75                           |

Table 6

Relative lengths of the longest FF string and the overall length of Kirkman harpsichords.

| BN               | Date | Manuals | Length<br>of FF              | Plucking<br>Point | Overall<br>length<br>(singles) | Overall<br>length<br>(doubles) | Corrected<br>Overall<br>Length <sup>1</sup> |
|------------------|------|---------|------------------------------|-------------------|--------------------------------|--------------------------------|---------------------------------------------|
| 109 <sup>2</sup> | 1745 | 2       | 71.0                         | 7.5               |                                | 96.75                          | 96.75                                       |
| 2                | 1752 | 1       | 71.0                         | 7.5               | 90.5                           |                                | 96.0                                        |
| 3                | 1754 | 2       | 70.5                         | 7.5               |                                | 95.25                          | 95.25                                       |
| 4                | 1755 | 2       | 70.63                        | 7.25              |                                | 95.5                           | 95.5                                        |
| 5                | 1755 | 1       | 70.0*                        |                   | 89.0*                          |                                | 94.5*                                       |
| 7                | 1757 | 2       | 71.0                         | 7.5               |                                | 95.5                           | 95.5                                        |
| 12               | 1760 | 2       | 68.5                         | 7.45              |                                | 92.25                          | 92.25                                       |
| 15               | 1761 | 2       | 68.5                         | 7.5               |                                | 92.75                          | 92.75                                       |
| 19               | 1762 | 2       | 68.0*                        |                   |                                | 91.25*                         | 91.25*                                      |
| 21a              | 1763 | 1       | 68.0                         | 7.5               | 87.75                          |                                | 93.25                                       |
| ⊙                | 1764 | 2       | 68.0*                        | 7.25*             |                                |                                | not known                                   |
| 30a              | 1765 | 1       | 68.25                        | 7.38              | 87.0                           |                                | 92.5                                        |
| 32               | 1766 | 2       | 68.25                        | 7.5               |                                | 92.6                           | 92.6                                        |
| 33               | 1766 | 2       | 68.38                        | 7.13              |                                | 92.25                          | 92.25                                       |
| 41               | 1769 | 2       | 68.5*                        |                   |                                | 92.0*                          | 92.0*                                       |
| 42               | 1769 | 1       | 69.5                         | 7.5               | 86.0                           |                                | 91.5                                        |
| 48               | 1772 | 2       |                              | 7.63              |                                | 92.5                           | 92.5                                        |
| 59               | 1776 | 2       | 69.0*                        |                   |                                | 92.5*                          | 92.5*                                       |
| 62a              | 1777 | 1       | 67.5*                        |                   | 86.5*                          |                                | 92.0*                                       |
| 62               | 1777 | 2       | 69.5                         | 7.25              |                                | 94.0                           | 94.0                                        |
| 63               | 1777 | 2       | 69.0                         | 7.0               |                                | 94.1                           | 94.1                                        |
| 70               | 1781 | 1       | 68.5                         | 7.5               | 87.75                          |                                | 93.25                                       |
| 73               | 1785 | 2       | 70.0                         | 7.25              |                                | 94.75                          | 94.75                                       |
| 74               | 1786 | 2       | 70.0                         | 7.0               |                                | 94.0                           | 94.0                                        |
| 87               | 1790 | 1       | 68.75                        | 7.25              | 87.75                          |                                | 93.25                                       |
| 93               | 1798 | 2       | 75.4*<br>(75.0) <sup>3</sup> | 7.4*              |                                |                                | 98.7 <sup>3</sup>                           |

1. The corrected overall length for a single manual is obtained by adding 5.5" to the overall length, thus bringing it equivalent to a double.

2. BN109 is the Claviorganum. The dimensions of this instrument may to some extent have been influenced by the dimensions required for the organ.

\*Dimensions kindly supplied by Mr Charles West Wilson.

⊙ Not recorded by Boalch

3. From Bessaraboff.

Table 6a

## Further dimensions of Kirkman harpsichords

| No | Boalch<br>No | Date | Maker | Manuals | B                                          | C    | D    | E    | G    | H    | J    | K    | M     | N     | O     | O'    | P     |
|----|--------------|------|-------|---------|--------------------------------------------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|
| 1  | 109          | 1745 | J     | 2       | 72.0                                       | 4.38 | 9.88 | 7.25 | 6.0  | 5.75 | 5.38 | 4.88 | 10.63 | 35.5  | 11.13 | 11.8  | 37.0  |
| 2  | 2            | 1752 | J     | 1       | 72.0                                       | 4.00 |      |      |      |      |      |      | 10.75 | 34.75 |       |       | 36.75 |
| 3  | 3            | 1754 | J     | 2       | 71.5                                       | 3.8  | 9.75 | 7.5  | 5.5  |      | 5.38 | 4.63 | 10.5  | 35.0  | 11.25 | 11.88 | 36.25 |
| 4  | 4            | 1755 | J     | 2       | 70.8                                       | 2.63 | 9.75 | 7.0  | 5.75 | 5.75 | 5.13 | 5.0  | 10.25 | 35.1  | 11.13 | 11.8  | 36.38 |
| 5  | 7            | 1757 | J     | 2       | 71.25                                      | 2.63 | 9.75 | 7.88 | 5.88 | 5.63 | 5.38 | 4.88 | 10.13 | 35.0  | 11.25 |       |       |
| 6  | 12           | 1760 | J     | 2       | Dimensions not recorded in the same format |      |      |      |      |      |      |      |       |       |       |       |       |
| 7  | 15           | 1761 | J     | 2       | 68.25                                      | 2.0  | 9.75 | 8.0  | 5.88 | 5.63 |      |      | 10.13 | 35.25 | 11.13 | 11.63 | 35.5  |
| 8  | 21a          | 1763 | J     | 1       | 68.0                                       | 2.38 | 9.5  | 7.5  | 5.25 | 5.25 | 5.0  | 4.75 | 10.5  | 34.63 | 6.25  |       |       |
| 9  | 30a          | 1765 | J     | 1       | 68.0                                       | 1.63 | 9.38 |      | 5.5  | 5.0  | 4.5  | 4.88 | 10.38 | 34.63 | 6.25  |       | 35.88 |
| 10 | 33           | 1766 | J     | 2       | 68.25                                      | 2.3  | 9.63 | 7.13 |      |      | 4.75 |      | 10.25 | 35.13 | 11.0  | 11.63 | 36.7  |
| 11 | 32           | 1766 | J     | 2       | 68.5                                       | 2.25 | 9.63 | 7.25 | 5.63 | 5.45 | 5.0  | 4.63 | 10.25 | 35.0  | 11.0  | 11.63 | 36.75 |
| 12 | 42           | 1769 | J     | 1       | Dimensions not recorded in same format     |      |      |      |      |      |      |      |       |       |       |       |       |
| 13 | 48           | 1772 | J     | 2       | 68.63                                      | 2.0  | 9.75 | 8.25 |      |      |      |      | 10.38 | 35.25 | 11.0  |       | 36.75 |
| 14 | 62           | 1777 | J&A   | 2       | 69.5                                       | 3.1  | 9.5  | 8.0  | 5.5  | 5.0  | 4.5  | 4.5  | 10.5  | 35.2  | 11.0  | 11.63 | 36.38 |
| 15 | 63           | 1777 | J&A   | 2       | Dimensions not recorded in same format     |      |      |      |      |      |      |      |       |       |       |       |       |
| 16 | 73           | 1785 | J&A   | 2       | 70.0                                       | 2.63 | 9.63 | 7.75 | 5.5  | 5.0  | 4.75 | 4.5  | 10.38 | 35.5  | 11.0  |       | 37.0  |
| 17 | 74           | 1786 | J&A   | 2       | 70.0                                       | 2.75 | 9.75 | 7.63 | 5.5  | 5.0  | 4.5  | 4.25 | 10.63 | 35.5  | 11.0  | 11.63 | 37.0  |
| 18 | 79a          | 1787 | J&A   | 2       | 70.13                                      | 2.75 | 9.6  |      |      |      |      |      | 10.5  | 35.25 | 11.13 | 11.75 | 36.13 |
| 19 | 87           | 1790 | A&Jo  | 1       | 68.0                                       | 2.63 | 9.75 | 7.0  | 5.38 | 5.25 | 4.75 | 4.75 | 10.75 |       |       |       |       |

Dimension A may be obtained as the overall length from table 6

All dimensions are in inches

Definitions of columns B, C, D, etc will be found at Appendix B

Table 6a continued

| No | Q     | R     | S    | T    | U    | V    | W    | X    | Y    | D'   | V'   | X'   | Y'   |
|----|-------|-------|------|------|------|------|------|------|------|------|------|------|------|
| 1  | 29.5  | 9.75  | 1.38 | 1.63 | 1.63 | 7.38 | 2.75 | 1.5  | 1.88 | 7.2  | 9.63 | 1.88 | 2.5  |
| 2  |       | 10.0  | 1.0  | 1.25 | 1.75 | 7.0  |      |      |      |      |      |      |      |
| 3  | 29.75 | 9.88  | 1.38 | 1.3  | 1.5  | 7.00 | 2.88 | 1.5  | 1.5  | 7.13 | 9.5  | 1.33 | 2.5  |
| 4  | 29.63 | 9.63  | 1.38 | 1.38 | 1.53 | 7.10 | 3.0  | 1.45 | 1.5  | 7.13 | 9.51 | 1.51 | 2.63 |
| 5  | 29.88 | 9.88  | 1.25 | 1.38 | 1.75 | 7.25 | 2.88 | 1.25 | 1.5  | 7.25 | 9.5  | 2.13 | 2.75 |
| 6  |       |       |      |      |      |      |      |      |      |      |      |      |      |
| 7  | 29.38 | 10.0  | 1.5  | 1.38 | 1.5  | 7.13 | 3.5  | 1.5  | 1.63 | 7.25 | 9.5  | 2.25 | 3.38 |
| 8  | 23.63 | 10.25 | 1.25 | 1.0  | 1.75 | 7.25 | 3.0  | 1.38 | 1.13 |      |      | 1.75 |      |
| 9  | 23.75 | 10.25 | 1.2  | 1.0  | 1.75 | 7.2  | 2.5  | 1.3  | 1.13 |      |      | 1.75 |      |
| 10 | 29.13 | 10.0  | 1.45 | 1.25 | 1.63 | 6.88 | 3.0  | 1.5  | 1.38 | 7.13 | 9.38 | 1.25 | 2.63 |
| 11 | 29.38 | 10.0  | 1.63 | 1.0  | 1.55 | 7.0  | 3.0  | 1.7  | 1.13 | 7.13 | 9.38 | 1.2  | 2.75 |
| 12 |       |       |      |      |      |      |      |      |      |      |      |      |      |
| 13 | 29.5  | 10.25 | 1.63 | 1.2  | 1.88 | 7.0  |      | 1.75 | 1.25 | 7.25 | 9.38 | 2.0  | 3.75 |
| 14 | 29.25 | 10.25 | 1.5  | 1.3  | 1.75 | 6.88 | 3.88 | 1.5  | 2.38 | 7.0  | 9.3  | 2.25 | 3.5  |
| 15 |       |       |      |      |      |      |      |      |      |      |      |      |      |
| 16 | 29.63 | 10.13 | 1.38 | 1.13 | 1.75 | 7.0  | 3.5  | 1.38 | 1.38 | 7.25 | 9.38 | 1.5  | 2.5  |
| 17 | 29.75 | 10.25 | 1.38 | 1.13 | 1.75 | 6.63 | 3.38 | 1.5  | 1.25 | 7.13 | 9.5  | 2.25 | 3.5  |
| 18 | 29.5  | 10.25 | 1.25 | 1.2  | 1.63 | 6.88 | 3.38 | 1.5  | 1.25 | 7.0  | 9.5  | 1.38 | 3.13 |
| 19 | 24.25 | 10.5  |      | 1.5  |      | 7.0  |      | 1.0  | 1.0  | 7.25 | 9.5  | 2.0  | 2.5  |

All dimensions are in inches

## The Structure of the Kirkman Harpsichord

Figure 23 gives the main dimensions which contribute to the shape and size of the harpsichord. The outer case members shown here are of solid oak cut on the quarter. (The only members of this figure which are not oak are the belly rail, lower header and the board in front of the wrest plank, and these are all pine.) Because of the thickness and the variation of thickness of eighteenth century saw cut veneers it is difficult to be precise about the dimensions of the outer case members. The maximum thickness observed including veneer is 0.76" and this is usually at the proximal end of spine and cheek. The spine often shows a slight taper towards the tail down to about 0.7" and this can occasionally be observed at the cheek also. The bentside is usually the thinnest member at about 0.63" though thicknesses of 0.6" have been measured on the curved portion. Unfortunately no English documentary evidence exists to show how the bentsides were produced. There can be no doubt that oak of this thickness could not be bent cold as was the case with the thinner sides of the earlier instruments of the period before Kirkman. Some bending process was therefore required which would ensure that the correct curve was imparted and would be retained. Hubbard (p211) describes the apparatus used by Blanchet which consisted of a "lead trough for soaking bentsides with the bending form", and he also mentions Malade's machine for bending wood. Through the courtesy of the present owners of the property originally occupied by Kirkman in what is now Broadwick Street, I was allowed to examine the ground floor and basements and outside area of the houses to see if any trace of similar equipment could be found. Sadly, and not surprisingly there is nothing to suggest the former existence of any special apparatus, but there is no doubt that a lead trough of generous proportions could have been installed and there is room to stack and store bentsides for drying.

Though most curved woodwork in the eighteenth century was cut from the solid, techniques for bending wood in thicknesses considerably greater than 0.63" were known, particularly in the yards of shipwrights. Conversations with present day shipwrights have convinced me that steaming was a technique used in eighteenth century shipbuilding and whilst Hubbard notes that there is no mention of heat in the French processes, there seems no reason why it should not have been used in England other than the obvious additional expense incurred. It may well have been this, and the influence of Tabel, who probably used the same techniques as Blanchet, which would have caused Kirkman to adopt the cold water soaking method, the bentside being clamped



to a former to ensure the right curve being imparted.

The bottom boards not shown in the figure are of half inch thick pine, running transversely under the keyboards and longitudinally from the lower header to the tail. They are of some structural use though instruments will stand in tune when the boards are removed. The case sides stand effectively on the bottom boards, and the outer edges of the latter are concealed on all sides except at the spine by a moulding. Figure 37 shows a section of the case sides, bottom boards and moulding and it can be seen that there is a small softwood insert between the bottom boards and the moulding. This is shown by Hubbard to be rectangular in section, but has usually been observed by the writer as a tapered section as shown, presumably to stop the bottom boards from pushing the moulding out should they expand differentially with the case sides in conditions of humidity. The bottom boards were probably fitted as one of the last actions in the carcass construction. They were glued and nailed in position.

The corners of the main case members are invariably dovetailed, though even the carefully made joints of the eighteenth century cabinet maker occasionally fail, and examples have been seen where the bent side/cheek joint has opened. In instruments from 1766 onwards it is usual to find that the proximal ends of cheek and spine are terminated in a vertical strip of oak about 3" wide. This is fixed to the main case member by a tongued joint. Occasionally movement of this strip can cause unevenness at the upper edge of the case sides and will cause the veneer to split away.

The structure supporting the outer case members can be seen at Figures 24 and 25 whilst the underside of the soundboard is at Figure 26. The structure at bottom board level clearly derives from the Flemish practice, though in England the struts running transversely are dovetailed into the case sides. These struts nonetheless form quadrilaterals with the main case which are inherently weaker than the triangular structures produced by the diagonal bracing of the pre Kirkman English instruments of the period 1683 - c1725.

The struts marked at C in figure 24 running from the transverse strut to the belly rail are unique to English construction and so is the strut marked B. This latter is clearly redundant and in two instruments observed it was loose at one or other end and in another it had come away completely.

The members at liner level are again based on Flemish practice but are given a characteristic concave shaping on the upper edge and mounted vertically rather than with the longer edge against the underside of the

liner as was the case with the Flemish builders. The strut at DD which is waisted in a unique way from square to round section and then back to square is found only in English harpsichords.

These internal members seen only when the bottom boards are removed are an example of good engineering and industrial practice. They are all of pine and the finish is just sufficiently good though not of high standard. Glue runs are often to be seen and almost all joints are nailed as well. Marks of hammer heads are often to be seen in the softwood and the whole gives the appearance of having been assembled with the maximum speed and a hope that it would never again be seen.

The liner is also of pine and this is kerf cut on the curved section and then nailed and glued to the inner edge of the oak bentside. In this respect Kirkman differed from Shudi who always dowelled the liner to the bentside.

The securing of the wrestplank to the main case members is one of the weaker points of construction in that it is tenoned into the case sides and then dowelled through the spine and cheek. These dowels may be seen on the spine unless the latter is veneered and on the cheek, tell tale bubbling of the veneer usually indicates movement of the dowels. Several instruments have been seen in which there is evidence of movement of the wrest plank, particularly in harpsichords with a lute gap where the portion of the plank forward of the lute gap has twisted out due to the turning moment applied by the 4ft strings. It was presumably a desire to reduce this turning moment to a minimum which gave rise to the wrest plank layouts shown in figure 28. In these it will be seen that in the double manual instruments the number of 4ft wrest pins standing on this section of the wrest plank has been reduced from 28 or 29, as is the case in the singles without a lute gap, to 18. In particular there are no pins to be found at the treble end where the wrest plank tenon at the case side is at its smallest. Surprisingly however, Shudi does not seem to have been similarly troubled at least in his earlier models for the instrument (Shudi Number 144) shown in figure 28 has all 4ft pins forward of the lute gap. However by the time the larger instruments have been reached with a  $5\frac{1}{2}$  octave compass a layout similar to Kirkman's was introduced.

There can be little doubt that despite the massive case sides of these instruments and the somewhat complex interior structure, the Kirkman harpsichord is most disappointing in its ability to stand up to the tension of the strings for any long period. Almost every instrument seen has a twist in the structure, evidenced mostly by a tendency for the bentside/cheek

corner to drop and the proximal end of the cheek to rise. This can be seen most clearly by comparing the line of spine and cheek at their upper edges. Perhaps the most sad example of this curl is the single manual of 1776 in the Smithsonian Institution, Washington (BN59).<sup>1</sup> Surprisingly, however once curled, the instruments are capable of considerable tuning stability provided they are not subject to rapid changes of humidity.<sup>2</sup>

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1. See photographs provided by the Institution, negatives numbers 56308, 56308A, 56308B, 55308 - 55312.

2. The 1772 double belonging to the Ashmolean Museum stands in an air conditioned room and is capable of maintaining its tune for periods of up to six weeks. However on being subject to normal ambient conditions it can become unplayable in a matter of hours.

## External Case Finish

All Kirkman harpsichords without exception are veneered. The standard treatment of the case sides is shown in Figure 1 though there are variations. As a rule, the main panels are leaves of walnut or mahogany having a striking curl figure and these are surrounded by a stringing which may take one of a number of forms. Examples are shown at Figure 34. The stringing is surrounded with a straight grain wood of the same species as the centre panel, or occasionally a strikingly different wood is used, in the style which is known as cross banded (denoting that the grain of the veneer is laid across the direction of the strip rather than lengthwise.) There are some very attractive examples employing a light coloured main panel such as satinwood with mahogany cross banding, BN 2 of 1752 being one example, though since satin wood is generally assumed to have been introduced in 1765,<sup>1</sup> it is thought by some that this instrument has been reveneered in later times. There is also a single manual instrument in Toronto (BN 104) which is undated but must be earlier than 1766 since there is no provision in the instrument for a music desk, and this has a case with a similar treatment. (It is just possible that the wood of the main panels in these two examples is birch. This was used to good effect as a decorative wood before the introduction of satinwood which it resembles, although it does not generally have the same figure.)

There seems to be no reason why the bentside of the harpsichord should in some cases have three panels and in others only two. A cursory examination might lead the observer to suppose that it is a function of the length of the instrument, but as will be seen from the above table of instrument lengths the variation is so small as to make this unlikely. Further examination shows that those harpsichords with three panels are neither the longest nor the shortest.

There seems equally to be no reason why the lid should be left plain or cross banded in the style of the case sides. Both styles are found, the plain lids being invariably of mahogany or walnut with a fold over the keys, and a second over the action. These folds are laid with the grain running transversely. All have a main leaf over the soundboard with the grain laid longitudinally except in those instruments with a lid swell in which the grain is laid in the direction of the swell hinge line.

Lids which are cross banded take one of two forms. The simplest (which is not a true cross banding) employs an inlaid stringing in the solid lid with panels echoing those of the case sides. The interior of

1. R.I. Macquoid, The Age of Satinwood, Medici Society, 1938.

these lids is left plain. The more elaborate form found only on those instruments with superior internal decoration employs a fully veneered lid with panels inside and out with identical cross banding to that of the case sides.

With the exception of those which are fully veneered all lids have a strengthening batten at the hinge line over the jack rail. In the case of the earlier instruments this batten is on the upper surface of the lid and the butterfly hinges are fixed to it. The exact date at which it became standard to place this batten on the underside cannot be determined. It does seem however to be influenced by whether a lid swell is included. A single of 1776 (BN 59) without lid swell has the batten on the top surface whilst a double of the same year (BN 60a) has a swell and the batten on the underside. No example has been found in which the batten is on the upper side when a swell is included, but as late as 1781 (BN 70) an instrument without swell has the batten in this position.

All lids up to at least 1788 have three strap hinges holding the main fold to the case. They are always graded in size, the smallest being at the tail. Superficially they appear the same, but there are a number of variations which are shown in figure 35. There are four butterfly hinges at each of the two hinge lines between the other folds and these are almost always of the same pattern.

The similarity of the brass hinges and other fittings on all eighteenth century harpsichords is remarkable, though as with earlier instruments, standard designs are seldom found. Nonetheless, with harpsichord production running at several hundred per year in London alone, it seems likely that this would have provided a worthwhile trade for a specialist metal worker. It is surprising, however, that despite careful vigilance over some ten years, the author has never observed a harpsichord hinge on any piece of eighteenth century domestic furniture.

The lids of Kirkman harpsichords may be secured in the closed position by 3 S hooks, which engage with metal hasps in the lid. These hooks are placed one on the cheek and two on the bent side and are of brass. By the end of the century the external S hooks were being replaced by drop-ring assemblies which connect with hooks

on the internal edge of cheek and bent side in the manner which was employed almost exclusively on English grand pianos well into the nineteenth century.

The key well is closed by a lock board which fits into a hollow recess in front of the lower manual and mates with a rebate on the proximal internal edges of the spine and cheek. At the upper end of this rebate is a quadrant moulding of about 0.3" width and which fits into a similar shaped cut out in the lock board. This prevents the lock board from being drawn out vertically when the board is locked to the lid. The lock board is usually decorated in the same style as the case sides. Unfortunately however many lock boards have been lost and there are many replacements.

#### Internal decoration

Once again there is a marked similarity in the treatment of all Kirkman harpsichords, and with the exception of a handful of instruments which are elaborately marquetryed and which are described below, the general treatment is to line the key well with veneered cross banded panels of the same style as the case exterior. There are exceptions however, and occasionally different woods are employed, but the panelling is always of the same style. One single panel surrounded with stringing and cross banded is placed on the board in front of the wrest plank (the foreboard), and below this comes the name batten, usually veneered with the wood used for the panel and topped with a quarter round moulding veneered at right angles to the length. The batten is inlaid with a boxwood panel which carries

the maker's name written in indian ink in a characteristic style. It is tempting to think that the lettering on these nameboards is the same in all cases. Close inspection, however, reveals that apart from the wording of the inscription which is dealt with elsewhere, there is quite a variety in the treatment, but all within the confines of a style which is based on Old English. Similar nameboards are found on the harpsichords of almost every English maker from about 1730 onwards, and it is suggested that the battens could have been executed by specialist sign-writers who undertook the work for all the makers. On either side of the keys are further similar panels and below them are the key cheeks veneered in the same wood as the panels and usually with a central string running the length of the cheekpiece. The battens between and below the manuals are similarly treated.

The surrounds over the soundboard and wrest plank are usually veneered in a light coloured wood over which is laid two parallel strings of blackwood, or a dark ground is employed with similar double stringing of box or sycamore.

### Stands

Many harpsichords have lost their stands, and it is often difficult to tell if a stand is original. Nonetheless, it is possible to distinguish at least four main types of stands all of which are basically trestles, with varying treatment of the legs as follows:-

- 1 cabriole legs terminating in claw and ball or talon and ball feet
- 2 turned legs
- 3 straight parallel sided legs
- 4 straight sided taper legs

In all these cases the legs are joined by stretchers to form a front and rear leg assembly, and these in turn are joined by longer

stretchers secured by bolts passed through the leg assembly into captive nuts retained in the stretchers. The simplicity of the arrangement is delightful, but the absence of any diagonal member renders all these stands somewhat unsteady, and it is not without precedent when playing abandoned passages on a Kirkman to find the instrument rocking to and fro in an alarming manner.

Of the above classes of stand, the cabriole is almost always associated with the marquetry instruments, though there are exceptions, as for example in the case of BN 36 of 1767 which is a plain case harpsichord but with a stand of unique design having scallop shells on the knees of the cabriole legs.

In part I, the reluctance with which the earlier English builders took up the cabriole leg was noted. The earliest furniture to have this leg is found in the 1680s, and in domestic furniture the cabriole leg is to be found in profusion in the early Georgian period 1714 - 1745. It is therefore surprising to find that the earliest verified cabriole stand is on BN 3 of 1754 though it is believed that there may be a similar stand associated with BN 01 of 1744. Even more surprising is the persistence of Kirkman (and Shudi) in retaining this type of stand long after it had gone out of fashion. Domestically the cabriole leg is hardly to be found after 1770, and yet the latest known stand of this type is found on BN 73 of 1785.

The Trestle stand with turned legs seems to have been confined mainly to the single manual instrument of the years up to the 1760s, the latest verified being on BN 21a of 1763, though later examples have been reported. By far the greater number of Kirkman harpsichords are equipped with the simple parallel sided square legged stand, and this is to be found throughout the period at least to 1796, BN 92 having such a stand. The only verified example of a tapered leg stand is on BN 93 of 1798, though there may be others. This is a particularly attractive stand, having veneer and inlay as well as mouldings at the top of the legs. This particular example is higher than usual, raising the lower manual to 30" from the ground. Mr. Charles Wilson who has examined it closely believes that the instrument may have been built for a conductor, who wished to sit higher than usual, probably in an orchestra pit. The higher playing position would enable him to be seen above the instrument when conducting, though he would still be able to perform. The tapered leg stand was used much by Shudi, (as early as 1770) and it is strange that



the style is not to be found more often in the surviving instruments by Kirkman. One unique stand with drawers is reported by Boalch (BN68b) but its authenticity is doubted. One other reported unique stand with a fretted shelf at stretcher level turns out to have been made by an early twentieth century restorer. (BN51).

### Keyboards

All keyboards are faced with ivory naturals usually having a double score line though some exist with only one score line (BN 33 and BN 59 are two verified examples). The sharps observed are invariably of ebony. The compass is always five octaves FF - f<sup>3</sup>, and as noted above was 60 notes until sometime between 1781 and 1785 when it was extended to 61 notes by the inclusion of the previously missing FF sharp. There is one known exception to this scheme in that BN 49<sup>1</sup> of 1772 has a compass extended upwards to c<sup>4</sup> by the addition of black naturals and white sharps from a<sup>3</sup>. The purpose of this extended compass is not known. It is surprising that the downward extension to CC practised by Shudi from at least as early as 1765 giving 5½ octaves was never taken up by Kirkman or for that matter any other maker. The key levers are always of pine, the workmanship being just sufficiently good to ensure that the keyboard runs well, but certainly not of a craftsmanship equivalent to that used in the jacks, or for that matter in a contemporary French keyboard. The keys are usually numbered in ink, though occasionally stamped, and are prevented from lateral movement by a front pin working in a mortise

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<sup>1</sup> Illustrated and described at Russell plates 71 - 74.

without felt or any other form of bushing. The end on which the jacks rest has a covering of thin felt topped by a surface of buckskin. The key balance is such that the upper keys of a double will just maintain their normal rest position when the jacks are removed, whilst the lower keys are balanced further to the rear causing the keys to fall when the jacks are taken out. The keybed of the upper manual is a solid piece of 0.5" oak with a form of barrel bolt made from thin wire which can be slid outwards from housings on either side of the keybed to engage in small holes in the key cheeks and thus prevent the keyboard from sliding out. A further restraint is provided by the batten between the keyboards which fits into slots between the upper and lower key cheeks, and is secured by a brass turned knob. The lower keybed consists of three rails separated by stretchers to form a frame. The middle rail carries the balance rail, the front carries the front pins whilst the rear rail carries the back touch.

The upper manual of BN 48 of 1772 is shown in figure 29. This is typical of the dimensions of all upper manuals, and shows an overall keyboard width of 32.75 and an octave span of 6.36".

It is interesting to note that performers who have experience of playing contemporary French instruments are usually agreed that the latter are generally more responsive than the Kirkman harpsichords. There is little doubt that the external appearance of the workmanship of the keys of the French instruments is of a high standard, and it is sometimes alleged that this is the reason for the superior touch of these harpsichords. This is in some ways a subjective matter, but it has proved sufficiently intriguing to the writer to encourage a more quantitative study to be undertaken. Permission is currently being sought to examine the keyboards of some French harpsichords, and whilst the statistical sample will obviously be small, it is hoped that it may be possible to demonstrate the measurable differences. One of the first and most obvious factors contributing to the touch is the method of quilling, and in order to eliminate this in the initial study, the tests will be undertaken with the registers in the off position. Comparison will then be made of a number of parameters, in some cases with the jacks in position resting normally on the keys (laden) and in others with the jacks removed from the keys.

The parameters to be measured are given below:

1. Weight of natural and sharp keys when out of the instrument.

2. Moment of inertia of the keys about the balance point, laden and unladen.
3. Moment of inertia about the point of finger contact, laden and unladen.
4. Weight required at the normal point of finger contact to depress key and overcome initial stiction, laden and unladen, coupled and uncoupled in the case of the French instruments.
5. Key dip
6. Octave span
7. Overall length of keys
8. Position of balance point
9. Length of head of key, (sharps and naturals)
10. Height of sharps above naturals.

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## Soundboard Roses

All Kirkman harpsichords have a rose in the soundboard and in this respect they differ from Shudi instruments which do not. The roses found are of four different patterns seen at figure 38. Type A is a forward and reverse intertwining of the initials I K and resembles the cartouche of similar design to be found on the foreboard of some of the earliest marquetry harpsichords, examples being BN 01 of 1744 and the claviorganum of 1745. Single manual harpsichords, BN 02 of 1749 and BN 2 of 1752 have the rose though the cases are plain and this latter harpsichord is the latest verified instrument to have a Type A rose. The derivation of the design from the rose in the surviving harpsichord by Tabel is very evident.<sup>1</sup>

Type B1 rose is by far the commonest, having a figure usually said to be King David playing the harp and flanked by the initials I K. Careful examination of the surviving examples which range from BN 3 of 1754 to BN 79a of 1787 reveals that there were at least two moulds from which these roses were cast. In 1788, the first Type B2 rose is found on a single manual harpsichord, BN 82, and this is very similar to the type B1 except that the figure of the king is slightly larger, and he is flanked by the initials A K. The change in this year is surprising for there are instruments signed by Jacob and Abraham from 1772 onwards until 1789, one year after the first B2 rose. It may well be that in 1788 Jacob gave his notice of intention to retire formally, though he had had little to do with the business for some years. Abraham therefore took the opportunity to have a new rose made, and when the stock of old castings ran out he took the premature measure of placing one in the harpsichord of 1788. The latest verified B2 rose is in the 1790 single (BN 87) signed by Abraham and Joseph. Boalch reports a return to the IK rose in two instruments signed by Abraham and Joseph in 1791 but this has not been verified. The rose in BN 93 of 1798 by Joseph Kirkman is a reversion to type B1.

The type C rose again has the figure of the harping King David, but in this case the figure is smaller than type B and is surrounded by a wreath of wind and string instruments. There are at least two versions of this rose, the earlier verified being particularly fine. This is to be found in the marquetry double of 1772, the rose of which is superficially similar to the rose of BN 59 of 1776. Careful examination reveals that the former is stamped and the latter cast, there being differences of design in the outer garland, and the head of the king, which in the case of the cast example is very indistinct.

1. E.M.Ripin, Keyboard Instruments, The Tabel Harpsichord, C.M.Mould.

## Soundboards

The underside of the soundboard of BN 48 of 1772 is shown at figure 26 whilst the upper surface layout is at figure 22. The soundboard and the bridges are those parts of the harpsichord which contribute most to the tone, and at the same time they are the most resistant to a full quantitative treatment. Whilst the layout of the upper and lower surfaces may be determined by the measurement analysis described in Appendix B it is almost impossible to make a full survey of the thickness of the board without having it out of the harpsichord. Unfortunately, this has not been possible, and the only original dimensions obtained have been those at the treble end of the board where movement has caused the board to expand into the main gap, or in two cases at the rose hole. In these isolated cases the thickness has been found to average 0.13". It must be recognised however that these parts of the board do not contribute greatly to the tone. Hubbard, (p162) states that the English soundboards average  $\frac{1}{8}$ " thick and many were tapered from bass to treble. This has been generally confirmed by the present day restorers with whom I have spoken, and who have been able to see a board out of the harpsichord.

In figure 26 it may be seen how the board is made up of pieces of pine which are butt jointed, glued and taped at the joints on the underside. This tape is much like the tape used today in book binding, and it probably performed the dual function of preventing the fish glue used in the butt joints sticking the whole soundboard to the flat surface on which it was mounted for assembly, and at the same time adding some additional strength to the joint. It should be noted that the tape is cut away under the 8ft and 4ft bridges. This tape is also applied at the ends of the four soundbars and the cut off bar as well as around the underside of the rose. The soundbars AA, and the cutoff bar which are all of clear pine have the profile shown in the lower detailed diagrams of figure 26 and they are all let into the recesses in the liner which are made specially for them. Thus the area enclosed by the cutoff bar is fairly rigid and contributes very little to the tone. One peculiarity not noted by any previous writer is the piece of walnut secured to the underside of the bass end of the 8ft bridge. The purpose of this is not known, though it is to be found in other instruments, and in at least one harpsichord it is reported that the walnut is replaced by lead. The

use of screws to secure this piece of material is exceptional for nails are used in every other instance. They are used to secure the two bridges, the frequency of occurrence being shown in figure 26 and they are to be found in the 4ft hitch pin rail at the lap joint marking the intersection of the straight portion with the curved. The profile of this latter member is seen also in figure 26 and the undercutting may be observed. The rigidity given to the board by the 4ft hitch pin rail is something which almost all builders have sought to avoid and the undercutting is a means of ensuring that the minimum area of soundboard is affected whilst retaining the maximum strength for the stability of the 4ft strings. This aspect of design also receives care and attention at the extreme treble end of the bridges where the belly rail is cut out so that there is at the most 0.5" of this rail in contact with the soundboard.

On the upper surface of the soundboard the quality of the pine used in its manufacture may be seen. In the opening phases of this study, the number of annular rings per inch were counted in the various instruments examined. It soon became obvious however that there were no rigid standards applied in this matter. Whilst the grain of Kirkman soundboards is usually very straight and there is an absence of knots, the lines per inch vary from as many as 30 to as few as 6 or 7. It has not been possible to make a close study of the effect of this on tone. Indeed, whilst the study of tone without scientific analysis can at best be merely subjective, it has been surprising in the course of listening to instruments to find that some of the inferior quality pine used by some other makers can produce the most delightful tone.

The characteristic curl up of the case of Kirkman harpsichords has been noted above, and it is quite certain that a case with any degree of curl will give rise to compression in the soundboard particularly at the treble end. Of the instruments seen, at least 12 have quite serious shakes at the treble end of the board, and this is almost the hall mark of a genuine eighteenth century instrument. These shakes are generally about 3" - 4" from the right hand edge of the inside of the case and run longitudinally with the grain. It may have been an attempt on the part of Kirkman to limit these shakes which caused him to add a half round 0.5" wide moulding running in some instruments from the extreme treble above the proximal edge of the belly rail

down to about middle C, though in some cases the moulding runs the whole width of the instruments and in others to about pitch c. Despite this moulding, examples have been noted in which the whole soundboard has become unglued at the belly rail, and has moved forward under pressure from the move inwards of the bent side. Perhaps the worst example of this curl has been noted in the marquetry double of 1766 at Spetchley Park, (BN 33) in which the whole board has risen so that the 4ft strings contact the board, and a longitudinal shake has appeared in the board at about 2" from the spine. (It is more than likely that this was caused by heavier strings than usual being added by a restorer in 1851. They were removed by the author in 1970, but it was not considered desirable by the owner that the board should be removed for the repair of the shakes.)

The 8ft and 4ft bridges of a Kirkman have much the same profile (see figure 37) though the proximal edge of the 4ft tends to be perpendicular to the board, whilst that of the 8ft lies back at a slight angle to the vertical. The heights of these bridges usually conform to the following pattern with a tolerance of approximately  $\pm .05$ " :-

8ft bridge:      bass height 0.75"      treble height 0.5"

4ft bridge:      bass height 0.4"      treble height 0.25"

This characteristic increase in height from treble to bass is echoed by a similar increase in the 8ft hitch pin rail the height of which is usually slightly lower than the bridge by up to 0.1" throughout. A similar trend is found in the 8ft and 4ft nuts, profiles of which are given at figure 37. The unique profile of the 8ft nut with its convex proximal edge is not to be found in the work of any other eighteenth century maker. In the surveys carried out it was found difficult to make exact measurements of the 8ft and 4ft nut heights when the instrument was strung, nonetheless, the following list is deemed to be accurate within  $\pm 0.1$ "

8ft nut:      bass height 0.75"      treble height 0.52"

4ft nut:      bass height 0.48"      treble height 0.3 "

Double pinning to ensure that the strings make firm contact with the bridge pins is found for the first 25 or 26 notes in the bass.

The bridges and nuts observed have without exception been made of beech.

## Jacks, Upper Slides, and Lower Guides.

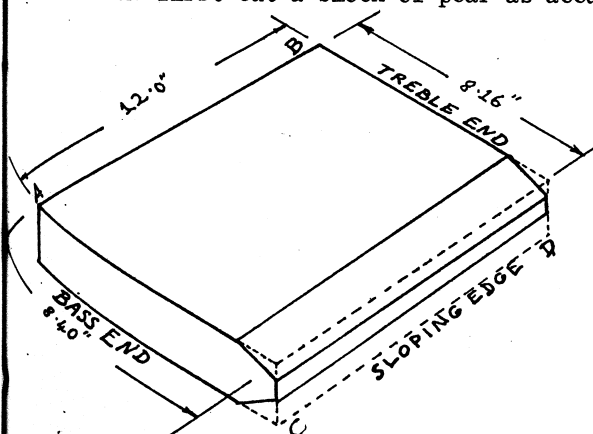
Figures 30, 31, 32 and 33 give details of the jacks, upper slides and lower guides, whilst accompanying figure 30 is a dimension list. There can be no doubt that the standard of workmanship to be found in the action of a Kirkman harpsichord is of the very highest. The consistency with which the jacks in particular are made is nothing short of remarkable, and it is evident that they were produced by a process using jigs and guides which would enable many thousands to be made to exactly the same specification. An hour or two spent with a micrometer and a microscope reveals much of interest and gives clues to the method by which these precision products were made.

The jack bodies seen in figure 30 are of a fine grained pear wood usually with the grain running at a slight angle to the length of the body, presumably to make splitting less likely when cutting the slot for the tongue. As will be seen from the dimension list there is a slight taper on the body in both dimensions of the order of 0.015" - 0.019".

The quality of the jacks gives some insight into their method of manufacture, and I am indebted to Mr John Barnes for his comments on the processes used after making a set of reproduction jacks for BN46 which was restored by the writer several years ago. These comments have been supplemented and in some cases reversed by the writer after carrying out a detailed examination using a Beck "London Model" microscope working at X10, X35 and X45. With the aid of this instrument it has been possible to see the directions of tool marks.

Assuming therefore that the jack maker wished to make a row of jacks for an 8ft register, his actions were probably as follows:-

He first cut a block of pear as accurately as possible to the dimensions

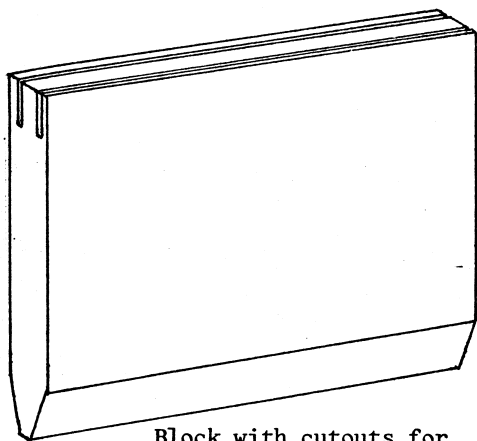


First stage in making jack bodies from tapered block of pearwood.

shown in the diagram, the length of the block being of the order of the combined width of 60 or 61 jacks with an allowance for a saw cut between each jack. The corners at A and B were right angles whilst the difference in height between bass and treble jacks was produced by sloping the bottom edge CD. (A slight slope at this position is to be found on many surviving jacks) Note the different dimensions at bass and treble end in the diagram.

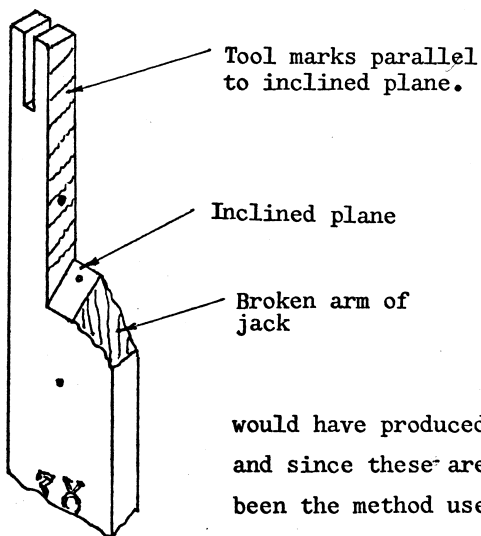


Next the foot was shaped to the required manner, and most probably the slot or slots for the damper were cut. The sides of the slot when examined under the microscope show no indication of the way in which the slot was cut. There are no lateral marks of a saw neither is there any sign of circular marks. The date at which the circular saw was introduced is not clear, but it is likely that a form of circular saw was in use in



Block with cutouts for damper felts.

England by the middle of the eighteenth century and as will be seen below it seems to have been very likely that such equipment was available in the Kirkman workshops. It would have been possible to produce the damper felt slot using a hand saw, but undoubtedly the most efficient way of producing the slot would have been to use a fine toothed circular saw with a jig or fence to ensure accurate positioning. It is tempting to suppose that a similar method was used to cut the slot for the tongue, but here clear tool marks have been found running parallel to the inclined plane at the bottom of the slot. Unfortunately these marks can only be seen when the tongue is removed from the jack body, and preferably when one arm only of the two either side of the slot is removed so that a perpendicular view of the inner arm surface can be obtained. This examination has therefore been restricted to broken jacks and therefore the sample has been small.



There would be three ways in which the slot for the tongue could have been made. First, the two sides of the slot could have been sawn whilst the jacks were still in the block form before being separated as individuals, and then subsequently after separation the bottom of the slot could have been taken out with a chisel. This

would have produced horizontal saw marks in the slot and since these are not found, it is unlikely to have been the method used.

The two other methods would involve cutting the jacks from the block to the required thickness after which the slot could be taken out by a circular milling cutter of the width of the slot, and with a profile which when oriented correctly would match the slope of the bottom of the slot, or finally the slot could have been sawn in a jig with two vertical cuts down to the bottom and the waste wood removed with a sharp chisel of the width of the slot working in a jig to give the correct angle.

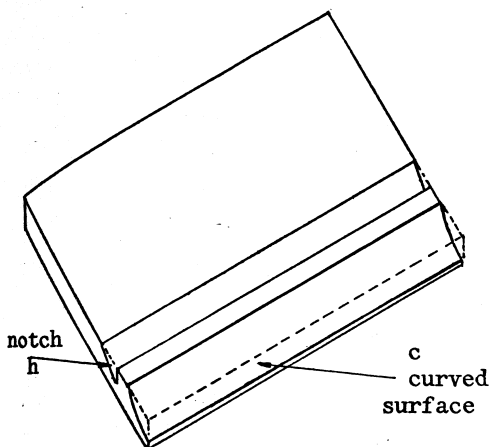
Of these methods, the direction of the tool marks on the inside edges of the arms indicates that the first suggested method was not employed, whilst the extremely flat plane found at the bottom of the slot indicates that a circular milling cutter was not used. Thus it seems that after having cut the damper slot, the next action was to split the block into jacks, plane them to the appropriate thickness using a jig, and then cut the ~~damper~~<sup>tongue</sup> slots by the third suggested method. Thereafter further jigs were used to enable the accurate boring of the holes to receive the wire stay at the top of the arms, the two holes for the hogs bristle spring, and in one arm only the hole for the pivot pin. Finally came the processes of inserting the wire stay, the hogs bristle, and the paper pad at Y. Had the jack maker wished to make bodies for 4ft jacks the only modifications required would have been the deepening of the damper slot by about 0.3", the deepening of the tongue slot by about 0.25" and the placing of the backstay and pivot hole about 0.25" lower.

### Tongues

The usual material for Kirkman tongues is holly, though the ageing of holly can sometimes impart a yellowish tinge which makes the wood appear to be box, and I cannot state unequivocally that box is not to be found. Mr Barnes has advanced a theory connecting box wood tongues in Shudi harpsichords with original leather registers, but unfortunately this was not brought to notice until a number of instruments had been examined. This theory is dealt with below. It can be said however that in my examinations no Kirkman harpsichord has been noticed in which the tongues of any one row are a mixture of box and holly.

The tongues are in themselves a masterpiece of mass production, being the subject of some 12 or 13 operations. As with the bodies the first action was the preparation of a block of holly, planed to the thickness of a tongue s, and of width a, (the height of a 4' tongue). The length of this block was unimportant and probably depended on the maximum length of clear holly

which could be obtained from the billets available. Lateral tool marks on the curved surface marked c indicate that this was cut probably by a moulding plane which was run down the edge against a fence. Similar marks are to be found in the notch h, though surprisingly they are not found on the



block of holly or box from which tongues are to be cut

two inclined planes at the foot of the tongue, and these were probably cut with the grain using an ordinary flat plane. It should be noted in passing that on some tongues only the shallower bevel at angle beta is to be found, and the steeper one at angle alpha is probably a fine adjustment for the throw of the tongue made during the assembly of the jack.

It may well be that before the tongues were separated from the block, the mortise for the quill was cut using a rectangular punch, this method giving greater resistance to splitting than

would be the case if individual tongues were punched. Minute pieces of wood adhering to the front surface of the tongue suggest that the punching was carried out from the notch side, the other side being placed over a clearance hole to receive the punch end. Finally, before separating the tongues, the jack maker would have trimmed off about 0.2" from the curved end if the tongues were destined for 8ft jacks. Saw marks on the edge of the tongue indicate that they were sawn individually from the block by a fine tooth hand saw.

The next process was probably the making of the slot at the back of the tongue to retain the hogs bristle spring. In reality this is two slots and it is the only part of the jack where the use of a circular cutter can be seen. The larger slot at p has obviously been made by offering the work up to a rotating edge cutter the width of the slot for at the top of the slot the profile of the cutter can be seen clearly. Above this the slot narrows and then tapers, and was probably made by a cutter of slightly smaller dimensions. The final operations included the drilling of the pivot hole, again using a jig, the tapering of the ends of the tongue, probably using a chisel, and the glueing of the paper pad at w. The tongues were then assembled to the body using a pivot passed through the hole in the

one arm of the body, through the hole in the tongue and into the uncut wood of the opposite arm. The pivot pin had a point which enable it to be drifted into the wood with ease where it would remain fast for ever. It is in fact almost impossible to remove a tongue from a body without doing damage to one or other component.

#### Upper Slides and Lower Guides

The arrangement of the slides and guides is shown in figures 31 and 32. In the case of the slides, figure 31 shows the way in which the whole slide was marked out with scribe lines, a probable indication that the work of making the slide holes was carried out with the use of chisels and gouges. These scribe lines occasionally give the slide the appearance of having been built up, but in all cases where it has been possible to remove the slide for close inspection it has been found to have been chopped out of the solid pearwood. In the case of the 12800000 models, there seems to be no reason why the two slides and the lower guide should not have been marked out on one piece of pear and then separated later. The inter mortise gap  $d$  remains constant throughout the compass, and no doubt a master template was an essential part of the workshop. In the case of 12840000, or 22840L00, a close examination reveals a slight decrease in the distance  $d$  in the bass end of the second 8ft slide. This reduction has the effect of giving slightly greater clearance between the 4ft strings and the back of the second 8ft jacks, particularly in the off position of the latter, thus allowing for the greater amplitude vibration of the string which without this compensation could cause buzzing of the 4ft on the 8ft jacks. It seems therefore that a second template was necessary for the second 8ft slide, and similarly a third template was necessary for the lute slide. The steps in the making of each mortise hole are probably more open to conjecture than the steps in jack making, however, there seems no doubt from the presence of tool marks observed at "a" that at some point the mortise has been cut slightly undersize with vertical sides, and has then been cleared with a small chisel. The process was probably commenced by drilling out the relief shown as radius  $r$ , though this is not always truly circular, and may have been made with an elliptical gouge. It would seem necessary with such a small hole to have some relief in the hole when making the first chisel cuts, and so it may be that the hole was first drilled and subsequently cleaned up with the gouge. Almost certainly the undercutting of the surface hole was done from the underside, and the final process was one of cleaning up with sharp chisels. As with the jacks, the clean lines

of the mortises from above and below indicate a high degree of craftsmanship. The lower guides shown in figure 33 are simpler than the slides and were obviously scribed and produced on the one piece of wood. As will be seen from figure 32 they are assembled with the bevel on the upper side making it easier for the jacks to be inserted.

### Jack Stampings

Figure 19 shows examples of jack stampings from instruments ranging from the 1745 claviorganum to an instrument of 1787 (BN79a). There are clearly at least two different sets of stamps. The first characterised by the 1745 claviorganum has the following characteristics:

- 1 - horizontal serifs at top and bottom
- 2 - swan like outline with no serifs
- 3 - straight top with upward serif
- 4 - straight sides with a horizontal and vertical serif
- 5 - large hook, small upper half with upward serif
- 6 - no special features
- 7 - straight lines, upward serif
- 8 - two similar radius circles above each other
- 9 - inverted 6
- 0 - complete circle

The second set appears in the 1780s in BN 70, 73, and 79a and is characterised by:

- 1 - horizontal lower serif,  $45^{\circ}$  upper serif
- 2 - similar to first set
- 3 - similar to first set but without upward serif
- 4 - larger than first set and with pronounced curve in sloping member
- 5 - upper and lower halves of figure are better proportioned than first set
- 6 - same as first set
- 7 - same as first set but without upward serif
- 8 - the most distinctive feature of the set. Has straight top with break.
- 9 - inverted 6
- 0 - complete circle

In between these sets there are some variations which do not fit neatly into either. For example the 5 of BN 62 of 1777 looks like neither set, and the 1 of BN33 of 1766 appears larger than any other, though this may just be due to an over zealous strike of the mallet on the stamp.

The use of these stamps may be two fold. In the first place, the earliest appearance of the second set is in 1781, and this may help to date instruments which are at present of uncertain date. Secondly a study of these stampings may help to show whether the jacks of eighteenth century makers were made by the makers or by some specialist suppliers. To this end rubbings of jacks from some other makers have been included at figure 20.

Superficially there appears to be a close resemblance between the rubbings from the first three Shudi harpsichords and the second set of Kirkman. Closer examination reveals differences in the 3, 4, 5 and 6. Had there been complete similarity it could be taken as some evidence that the jacks of these two makers were made by the same person, possibly a common supplier for all makers. The absence of this similarity points to the likelihood that Kirkman and Shudi made their own jacks.

#### Plectra and Voicing

Having completed the jacks and the slides, the final act of the harpsichord builder would be the voicing and tuning of the instrument. There are many indications that experiments in plectrum material were conducted throughout the eighteenth century and before, and yet despite the thirst for a new sound or a more reliable material, no English instrument has survived with plectra of anything other than bird quill or leather. In Kirkman harpsichords which have survived the predominant material is quill, and this is to be found in all instruments though occasionally in conjunction with a contrasting register of leather. From Shudi's workbooks there can be no doubt of the increasing popularity of leather in Shudi harpsichords, and there are examples from the 1770s onwards of instruments being returned to the maker to be fitted with leather in one row. Thus there is no real indication in a surviving instrument incorporating leather of the originality of this plectrum material. Even apparently genuine workmanship by the maker may be genuine workmanship but of a date later than the instrument itself. As noted above, Mr Barnes has noticed that in some Shudi harpsichords with a leather register the jacks at the bass end have tongues of box whilst those at the treble have holly. He has advanced several theories to show that this may be evidence that the register is original, but the arguments are tenuous, and Barnes agrees that he is not satisfied with the premises which he has put forward. In the case of Kirkman, there is even less evidence for original leather registers, and the number of registers found which are patently the work of others may suggest that Kirkman was not willing to fit leather plectra. On the other hand his astute business

sense would surely have allowed him to add to the instrument any device which would increase its saleability. It is therefore unfortunate that this study has not brought to light any evidence for the incorporation of leather plectra in instruments by Kirkman.

In the case of the quilled harpsichords, there is some controversy over the way in which they were voiced. A simple instrument such as the 12800000 model could be quilled in two ways, either making both registers equal in strength and tone or making one softer than the other.

There are immediate advantages to the latter arrangement, for this gives three levels of dynamic rather than two: soft 8ft alone, loud 8ft alone and both together. There is precedent for such an arrangement to be found in the Barton of 1709 which has one row of jacks marked "baok set loud"

With the more complicated instruments such as 22840L00, and the more developed versions incorporating a machine and swell, the arguments become more complex. The musician's argument against the English disposition with a dogleg 8ft has always been that it is inferior to the French system with a manual coupler in that the latter allows a dialogue between the two 8ft stops, whereas the former does not. Again, I must acknowledge my debt to John Barnes who has sown the seeds of the following argument in that the French system without a lute allows no dialogue of lute against the darker toned 8ft. The suggestion is that by voicing the two 8ft registers so that the dogleg is the softer, and by matching the lute to the louder 8ft (ie the 8ft which occupies the middle row of the main gap of a Kirkman) it is now possible to dialogue these latter two stops, and at the same time to regard the louder (middle row) 8ft as the foundation tone of the instrument. The maker's intention in this respect is somewhat borne out by the fact that it is the middle row 8ft which is unaffected by the use of the machine. (It is conceded that it is possible to remove this by hand altogether thus giving nothing on the lower manual when the machine pedal is depressed, but there could be no use in this arrangement, and in fact in other instruments by Longman and Broderip it is sometimes secured by a hook so that this cannot happen inadvertently.) A further argument for the middle 8ft being stronger as part of the maker's intention is evidenced by the direction in which the rows face. The dogleg facing left must have longer quills in order to reach over the 4ft strings, and for this reason it will usually be weaker than the middle row 8ft which because of the position of the 4ft strings must of necessity stand closer to the strings which are to be plucked, thus giving rise to shorter and more strident quilling. In addition, the string

plucked by the middle row 8ft is the shorter of the two, and thus the one which has the slightly more brittle tone. This argument however is a highly subjective one which cannot be pushed too far.

In summary therefore, there seem good grounds for believing that the front 8ft of either a 12800000 instrument or any more comprehensive harpsichord should be voiced softly, whilst the rear 8ft should be louder. In the case of the 22840L00 it should probably be voiced so that it can be played against the lute, which may mean that the lute should be quilled more strongly than is usually the case today.

A note of caution may be in order at this point, for the above arguments are based on the premise that equality between the manuals is a desirable feature of harpsichord design. Whether this was so in the eighteenth century can probably only be answered by musicologists who have studied in depth the repertoire available to the average English performer. There must however be an argument that with equality the instrument became more flexible and resourceful than it would have been with the unbalance of solo and tutti which are clearly available whatever the voicing adopted.

### Stringing

During the study no instrument has been found in which it has been possible to say with certainty that the strings were original. Usually the hand of a restorer has been evident or it has been obvious that the strings have been replaced in some cases probably during the eighteenth century by an amateur who has had little regard for the original scheme of stringing. It is therefore with regret that I am forced back to the conclusions voiced by Hubbard (p 207) on the diameters of English wire as



represented by the gauge numbers. The stringing list below is from Hugh Gough who claims to have discovered original strings on a  $5\frac{1}{2}$  octave Shudi with the following dimensions:-

p156

| Gauge Number | Diameter in inches |
|--------------|--------------------|
| 3            | .009               |
| 4            | .010               |
| 5            | .0115              |
| 6            | .0135              |
| 7            | .0145              |
| 8            | .016               |
| 9            | .018               |
| 10           | .020               |
| 11           | .022               |
| 12           | .0245              |
| 13           | .027               |
| 14           | .0315              |

Whilst I can claim no superior factual knowledge, ~~having~~ ~~strung several Kirkman harpsichords~~, I am bound to say that the lower gauge numbers in the above table do appear to represent diameters which are too thick. In two cases, stringing the treble with wire .001" thinner than in the table has made an improvement in tone and at the same time has decreased the tension. This is however a highly subjective, and non scientific approach. Recent work by Kenneth Bakeman (GSJXXVII p 97) suggests that Gough's gauges are in fact too thin, for oxidation has taken its toll of the diameter readings of the iron wire to the extent of about 9.4%. Bakeman's work is also valuable in that he does give graphical representations of the way in which by <sup>changing</sup> ~~varying~~ the wire diameter throughout the compass the maker was able to control the tension applied to the case. On page 108 he gives the curves for 4ft and 8ft showing tension against compass for a Kirkman of 1755 whilst on the opposite page is a similar set of curves for a Shudi of 1782. Though the curves are similar, they do show some differences particularly in the flatness of the curve (indicating an even tension) in the treble of the 4ft of the Shudi from  $c^1$  to  $c^3$ . Bakeman also indicates that the bottom six notes of the Kirkman were

Table 7

## Nut Markings observed on Kirkman Harpsichords

| Note             | Claviorganum<br>1745 | BN 15<br>1761 | BN 32<br>1766 | BN 70<br>1781 | BN 82<br>1788 | BN 87<br>1790 | Claviorganum<br>4ft strings |
|------------------|----------------------|---------------|---------------|---------------|---------------|---------------|-----------------------------|
| f <sup>3</sup>   | 4                    |               |               | 4             |               |               |                             |
| f <sup>2</sup>   |                      |               |               | 4             |               |               |                             |
| e <sup>2</sup>   |                      |               |               | 5             |               |               |                             |
| c <sup>2</sup>   | 4                    | 4             |               |               |               | - 4           | 4                           |
| b <sup>1</sup>   | 5                    | 5             |               |               |               | 5             | 5                           |
| f <sup>1</sup> # |                      |               |               | 5             |               |               |                             |
| c <sup>1</sup> # |                      |               | 5             |               |               |               |                             |
| c <sup>1</sup>   |                      | 5             | 6             |               | 5             | 5             |                             |
| b                | 5                    |               |               | 6             | 6             | 6             | 6                           |
| a#               | 6                    |               |               |               |               |               |                             |
| g                |                      | 6             |               |               |               |               |                             |
| f#               |                      | 7             | 6             | 6             | 6             | 6             |                             |
| f                |                      |               | 7             | 7             | 7             | 7             |                             |
| e                | 6                    |               |               |               |               |               |                             |
| d#               | 7                    |               |               |               |               |               |                             |
| d                |                      |               |               |               |               |               | 6                           |
| c#               |                      | 7             | 7             | 7             | 7             | 7             |                             |
| c                |                      | 8             | 8             | 8             | 8             | 8             |                             |
| B                | 7                    |               |               |               |               |               |                             |
| A#               | 8                    |               |               |               |               |               |                             |
| A                | 8                    | 8             | 8             | 8             | 8             | 8             |                             |
| G#               |                      |               |               |               |               |               | 7                           |
| G                |                      |               |               |               |               |               | 7                           |
| F#               | 8                    | 8             | 8             | 8             | 8             | 8             |                             |
| F                | 9                    | 9             | 9             | 9             | 9             | 9             |                             |
| E                |                      |               |               |               |               |               | 8                           |
| D#               |                      | 9             |               |               |               |               |                             |
| D                | 9                    | 10            | 9             | 9             | 9             | 9             |                             |
| C#               | 10                   | 10            | 10            | 10            | 10            | 10            |                             |
| C                |                      | 10            |               |               |               |               |                             |
| BB               | 10                   | 11            | 10            | 10            | 10            | 10            |                             |
| AA#              | 11                   | 11            | 11            | 11            | 11            | 11            | 8                           |
| AA               | 11                   | 12            | 11            | 11            | 12            | 11            | 9                           |
| GG#              | 12                   | 12            | 12            | 12            | 12            | 12            | 9                           |
| GG               | 12                   | 13            |               |               |               |               | 10                          |
| FF#              | np                   | np            | np            | np            |               |               | np                          |
| FF               | 13                   | 13            | 13            | 13            |               |               | 11                          |

np means - not present

strung with red copper whilst the next 9 notes were strung with brass, the remainder of the compass being strung with iron. The use of red copper has not been observed in any of the instruments measured during this work, and it would be interesting to know how this information was obtained. The usual stringing arrangement of a Kirkman is given by gauge numbers stamped or written in ink on the 8ft nut, typical examples being given in table 7 for six instruments throughout the period. (There are examples in which no indication of gauge number is given - BN 48 of 1772 is such an instrument).

Table 7 exhibits small changes in the gauges of the stringing in the treble from about B upwards, though these are relatively insignificant. There are a very few minor variations in the bass. Though not shown in table 7, there are instances of the figure 3 appearing on the nut, BN 56a of 1774 has 3 at  $f^3$  on 8ft nut and BN 33 of 1766 has 3 on the 4ft nut at  $c^3\sharp$ . It will be seen that of all the gauges shown in the table, 8 is the only number to appear consistently three times, and it must be that the break to brass is indicated by the middle reading which occurs consistently at A. Similarly in the few cases where the 4ft nut is marked it appears that the break must have occurred at G in gauge 7. There is no similar marking at BB to indicate a break to red copper as shown by Bakeman.

## Swells and Machine Stops

The use of the two types of swell has been referred to in this section, and the general principles are covered well by Ripin.<sup>1</sup> There seems little doubt that the first extant instrument to receive the lid swell was BN3 of 1754 which is described fairly fully in Appendix B. It was known however in Plenius's Lyrichord of 1755.<sup>2</sup> Though Boalch reports a lid swell on BN 17 of 1762, it has not been possible to find this instrument to see if it is an original fitment. It is possible however that this is the earliest of the type which later became common and was known as the nag's head swell. It is certain that by 1766 the lid swell had arrived in the form which it was to take for all subsequent models. BN 32 and BN 33 both have them, and the veneering of the lids makes it unlikely that they are later fittings. The author noticed on examination however that both instruments have machines as well but the standssupplied which are undoubtedly original have only one pedal. It may be that the operation of the machine or the swell was an optional, the pedal being attached to which ever was considered more desirable by the player. The lid swell continues to be found intermittently up until as late as 1796 (BN 92), alternating from 1772 with the venetian swell. Though patented by Shudi in 1769, Kirkman appears to have used this type of swell on a number of instruments up to 1800. Previous writers have wondered how this was possible, however my interpretation of the facts after studying Kirkman and Shudi as individuals is that though apparently rivals, their earlier days in Tabel's workshops had given them some degree of friendship. There are references to Kirkman in the Broadwood books which indicate that they were not above selling each others instruments if it suited. They were obviously both astute business men and there seems no reason why Kirkman should not have paid Shudi a

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<sup>1</sup> E.M. Ripin, *Expressive Devices Applied to the Eighteenth Century Harpsichord, The Organ Year Book I* (1970), pp 64 et seq.

<sup>2</sup> Eric Halfpenny *The Lyrichord* GSI III 1950

royalty for the use of his invention. Kirkman would undoubtedly have preferred to do this and be able to fit the swell to his own instruments when so asked by customers than lose the entire harpsichord sale to Shudi for want of the invention. It may be wondered in this case why the lid swell continued for so long, and the answer is almost certainly that it was less expensive on a Kirkman than the venetian swell, and it was marginally more effective.

The machine has been mentioned in several places above. It appears to have been a fairly standard attachment to two manual instruments from at least 1750 (BN 1 is the earliest verified example) and continued until 1800. The operation is invariably the same, the machine being brought into use by sliding forward a stop found in the left key cheek. This moves forward a square metal bar carrying lugs shown in sketch elevation at Appendix B (sketch 2) and attached to the outside of the spine. Two lugs engage with extensions of the 8ft dogleg and 4ft slides and a third is placed in contact with a lever which in turn engages with an extension of the lute slide. Depression of the machine pedal is transmitted by a wire or cord passing through a hole in the bottom boards and up between the keys of both manuals to a lever on the square bar causing it to rotate and moving the lugs. These slide the 8ft dogleg and 4ft registers into the off position whilst at the same time the lute is brought on. When the pedal is released the dogleg and 4ft return to on whilst the lute is put off. The middle 8ft slide is usually left under the control of the player by the use of the stop on the foreboard, all other stops except the harp being inoperative by the player whilst the machine stop is in the forward position. In some instruments the middle 8ft is held in the on position by a catch. The musical justification for this device has been touched on in the section on quilling and voicing. It is in fact a useful addition for the music of the eighteenth century, though many purists have been quick to point out that the inclusion of the machine or swell are indicative of the decline of the harpsichord, and its fight against the advancing pianoforte.

This seems unlikely in view of the relative infancy and underdevelopment of the piano in 1750 when the machine is first encountered, and it appears to me to be a genuine attempt on the part of Kirkman to exploit to the full the resources of an English two manual instrument. The relative expense of the machine stop would have made purchasers think twice before buying a harpsichord with this device if they had merely wanted something which would be an imitation of the piano. (Costs of harpsichords are considered below in the section on output and production). The swell on the other hand does seem to be more in line with the attempts of the various makers to imitate the gradual change of dynamics available on the piano.

The operation of single manual machines has been discussed above, however there is another type of machine found on a Kirkman though but one example remains and this may be by Merlin. BN 9a of 1758 has been fitted with Merlin's patent downstriking piano action, and this is discussed below. It is also fitted with a simple form of machine which is much the same as that found in the Helmingham Hall Ruckers mentioned in part I. A simple spring loaded rotating bar fixed to the spine terminates in three tapered lugs at the distal end. When the machine pedal is depressed, the bar is rotated by pulling downwards on the proximal end. The distal end carrying the lugs then rises and operates on extensions of the jack slides in the main gap which brings on all the slides 8ft<sub>1</sub> 8ft<sub>2</sub>, and 4ft which are in the main gap. This has been termed by some writers a crescendo pedal for by careful operation, the stops can be brought on individually.<sup>1</sup>

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<sup>1</sup> I am indebted to Mr. Ripin for photographs of his instrument BN 9a and to Grant O'Brien for photographs of the Helmingham Hall instrument.

## Signature

The spelling of the name Kirkman is dealt with in Appendix A. The usual manner in which the authentication of a Kirkman harpsichord appears is in the nameboard plaque, a typical example of which is BN 32 in which the nameboard reads JACOBUS KIRCKMAN LONDINI FECIT 1766. Cursorily this appears to be the standard, but examination of earlier examples reveals a change in the order of the words, thus the earliest extant instrument of 1744 (BN 01) is signed JACOBUS KIRCKMAN FECIT LONDINI J744. A similar word order is found in the Claviorganum of 1745, BN 2 of 1752, BN 4 of 1755, BN 7 of 1757, BN 9a of 1758, the order LONDINI FECIT being found first in BN 12 of 1760. Thereafter this appears to have been the standard with the exception of a nameboard on BN 13 which is reported as having the first name missing, the inscription appearing as KIRCKMAN LONDINI FECIT 1760. It is thus possible to conclude that up to 1758 the word FECIT preceded LONDINI whilst from 1760 onwards the reverse order was used.<sup>1</sup>

The same basic syntax was employed when the boards began to be signed by Jacob and Abraham, the earliest surviving, BN 49 of 1772 being signed JACOBUS ET ABRAHAM KIRCKMAN LONDINI FECERUNT 1772 and this continues without known exception up to at least 1788 when BN 82 is signed in an exactly similar way, the date being changed appropriately. The same order was preserved when in 1789 the nameboards were signed by Abraham and Joseph, an example being BN 87 of 1790 - ABRAHAM ET JOSEPHUS KIRCKMAN LONDINI FECERUNT 1790, and similarly when Joseph alone signed the boards they became as above with the omission of ABRAHAM ET, but with the addition of the address "No 19 Broad Street, Soho".

There are sufficient examples of all the above and the style of the boards is so consistent as to give rise to suspicion in any case where there is a significant deviation from these norms.

<sup>1</sup> Mr Charles West Wilson reports that an hitherto unrecorded double manual Kirkman now in the USA has an inscription "JACOBUS KIRCKMAN FECIT LONDINI 1764. A photograph of the inscription however shows that the 1764 has been crammed in at the right in a most uncharacteristic way, and thus throws doubt on the authenticity of the inscription.

## Stops

The stop levers of Kirkman harpsichords are almost exactly the same throughout the period, being made of iron bar approximately 0.2" x 0.4" which is forged into a crank as at figure 37 terminating in a threaded spigot at the proximal end and a fork at the distal end. The fork engages with a spigot in the jack slide, this being made from a piece of threaded circular bar flattened at the top to fit the fork, whilst at the other end the stop knob is fitted. The pivot pin has a characteristic pyramidal top which is of rectangular plan and can be turned by the type of rectangular tuning hammer which is needed for the iron wrest pins. Almost identical pins are to be found in instruments by other makers, and the stop levers of instruments by Shudi, Kirkman and others are almost interchangeable. The difficulty of metal working without a forge and the appropriate tools and expertise makes it seem more likely that it was in all aspects of the metal parts of harpsichords that the eighteenth century makers called on specialist suppliers. Whilst there is no absolute proof of this, comparison of the style of the metal work rather than the absolute sizes and design makes it seem most probable that a metal worker not resident in the harpsichord shop was responsible. Examination of the Kirkman property suggests that a forge would not have been easy to install in what was essentially domestic housing. The levers are occasionally found gilded especially in the marquetry instruments, but this may be a later addition. The knobs found at the foreboard end of the levers are invariably of brass until the latter years of the century and take the form of a bobbin with a near spherical end facing the player. One instrument 30a of 1765 has stop knobs shaped like acorns. By the 1780s Battersea enamel stop knobs begin to be found, BN 73 of 1785 being an early example. Others are to be found later and the latest surviving harpsichord BN 95 of 1800 is reported to have ivory stop knobs.

The wrest pins of a Kirkman are of iron bar tapered at the bottom end and by about .030 - .080 flattened to rectangular



section at the top. No known examples were drilled in the eighteenth century though many have since been treated in this manner to facilitate replacement of strings. The diameter of the 8ft pins is about 0.22" whilst that of the 4ft is slightly less at .170" - .175". Considerable ovality to the extent of  $\pm .002$ " has been observed in both ranks.

#### Music Desks

It is quite obvious when a Kirkman harpsichord has been built to take a music desk as part of the integral fittings, for a rebate is made in the inside upper edges of the proximal ends of the spine and cheek whilst the foreboard is lowered by 0.75. The recess thus provided enables the desk to be placed over the wrest plank and to be slid forward and out of the instrument if required. The earliest known examples of harpsichords built in this style are BN 32 and 33 and they, like all other subsequent instruments have stands with a folding music support which when erected can be varied in height by a ratchet device. On either side are wooden slides which can be brought forward of the music to support candles for its illumination. The existence of a music desk in a Kirkman harpsichord indicates that it was built in 1766 or later.

## Other Instruments by Kirkman

In the above survey the Claviorganum of 1745 has been mentioned occasionally. This unique instrument, the property of Lord Wemyss, consists of a conventional two manual harpsichord standing on top of an organ contained within a case of the same shape as the harpsichord. This in itself is unique for the organ part of all other extant claviorgana is rectangular. The organ part, described fully by Peter Williams<sup>1</sup> has a specification of

stopped wood Diapason 8ft  
 open wood Diapason 8ft from c<sup>1</sup>  
 stopped wood Flute 4ft  
 open metal Fifteenth 2ft  
 open metal Mixture II (19,22; from c<sup>2</sup>12,15)

and carries at the back of the organ chest the inscription JOHAN SNETZLER FECIT LONDINI 1745. This is the earliest evidence for dating the instrument though an entry in the Wemyss account book gives

16 November 1751

|                                            |         |
|--------------------------------------------|---------|
|                                            | £ s. d. |
| paid John Snetzler Organ Builder in London | 80 0 0  |

22 June 1754

|                                  |       |
|----------------------------------|-------|
| paid John Snetzler Organ Builder | 6 6 0 |
|----------------------------------|-------|

Unfortunately there is no date on the harpsichord part which is signed JACOBUS KIRCKMAN FECIT LONDINI, there being a space where the date would normally be placed. In all other respects the harpsichord is a conventional 22840L00 instrument except that it is finely marquetryed in the key well and on the soundboard surrounds and for this reason it is treated further in the section which follows on marquetryed harpsichords. It is also one of the longest instruments as may be seen from Table 6 though this may be in order to fit with the organ which even so projects slightly at the tail. Vertical stickers under the lower manual keys connect with the organ pallets enabling the organ to be played from the harpsichord keyboard.

Boalch credits Kirkman with 6 surviving spinets ranging in date from 1748 to 1763 with one undated. I am indebted to Dr Huntsman for allowing me to make a close inspection of BN 107a, and to Frank Owen Esq for a short description of the earliest

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<sup>1</sup> Keyboard Instruments Edited by E.M. Ripin, Edinburgh 1971  
 pp 75 et seq

survivor, BN 104a of 1748<sup>1</sup>. This latter spinet is 79" long, 28.5" wide and 9.125" deep. It is in a walnut case with inlay, and raised on a stand which is not original, being of American cherry and thought to have been made in that country in 1690 - 1700. The keyboard has white naturals and the standard harpsichord compass without FF sharp. In 1965 it was reported to be the property of Mr and Mrs E. Robert Kursinski of Pasadena, California, having passed to them from a number of American owners of whom the first was David Brainard, a missionary to the Indians in Connecticut. It is signed JACOBUS KIRKMAN FECIT LONDINI 1748 according to my informant. The absence of the C in Kirkman's name gives cause for some suspicion. This however may be only an error in reporting, the order of the words FECIT LONDINI being consistent with the date 1748.

The later instrument reported by Boalch as being dated 1763 is signed "JACOBUS KIRCKMAN LONDINI FECIT ", there being a smudge where the date would normally be found, though the order of the words in this case would denote a post 1760 instrument.

The spinet has a shorter case of 76.5" length and the case work is in mahogany panels cross banded but without stringing. The lid is solid walnut without banding and appears from the hinge marks and from marks of a previously fitted moulding to have come from another instrument. The compass is the same as that for the previous instrument and the key finish is standard though the keys are crudely finished on the parts not seen, and they are backracked. The stand is a simple trestle with turned legs.

The wrest plank is 1.1" beech with a piece of 0.5" thick pine let in on the underside. The soundboard is good close grained pine but without a rose. The scaling is 13.0" at c<sup>2</sup> and the stringing list is below

| Note           | Length (inches) | Plucking point (inches) |
|----------------|-----------------|-------------------------|
| FF             | 64.75           | 8.25                    |
| F              | 53.9            | 7                       |
| f              | 36.5            | 6                       |
| f <sup>1</sup> | 19.5            | 5                       |
| c <sup>2</sup> | 13              | 4.7                     |
| f <sup>2</sup> | 9.5             | 4.1                     |
| f <sup>3</sup> | 5.25            | 3.0                     |

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1. Illustrated at Wallace Nutting Furniture Treasury, Vol I plate 1578 Macmillan 1948

The jacks are a motley collection, some of them appearing to be genuine Kirkman jacks, but most probably taken from a row of lute jacks in a harpsichord. The others are of indifferent workmanship and without the wire limit stop behind the tongue. The bridge and nut both have the profile of the standard Kirkman bridge, the nut being without the characteristic convex curve of the harpsichord nuts. The nut is stamped with gauge marks in conventional Kirkman style. There is therefore sufficient in the instrument which is suggestive of the Kirkman harpsichord to make it appear that it is genuinely by him, but at the same time there is also much to suggest that it has been changed considerably or at least may have passed through the hands of those who might have sought to produce an instrument bearing Kirkman's name with intent to increase its value. This latter thought is confirmed by a cut out in the back of the foreboard bearing the inscription which can only be seen when it is removed from the instrument. It is filled by a different piece of pine and would have been necessitated had the instrument been made originally with an inlaid cartouche on the nameboard bearing another maker's name.

Whilst there is no entirely conclusive piece of evidence, it seems likely that Kirkman also made upright harpsichords. In the section following concerning the marquetry harpsichords there is quoted an entry in the Privy Purse accounts for the years 1761 and 1762 in which Kirkman is shown as having been paid £73 - 10 - 0 for an upright harpsichord. It is not however certain that the instrument was one of Kirkman's own manufacture, and it could have been by another maker.

Russell has reproduced the correspondence between Hopkinson, Jefferson and Burney which contains the references to Kirkman and the fitting of the Celestine stop to the harpsichord.<sup>1</sup> Whilst this cannot be reckoned as a different kind of instrument in its own right, and it is also clear that Kirkman did not like the stop, there are several points in the correspondence which give an indication of the practice followed by Kirkman in dealing with special commissions.

In outline, the facts of the case are as follows:-

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1. Russell, pp90 and 91, and 177 - 182.

In common with many others in the eighteenth century, Francis Hopkinson of Philadelphia engaged himself in attempting to improve the quilling of the harpsichord by various means. In 1783 he read a paper on the subject before the Philosophical Society of Philadelphia, and in September 1785 Thomas Jefferson wrote to him saying that though he had attempted to use Hopkinson's methods he had not been entirely successful. Three days later Hopkinson replied saying that his original attempts had been superseded by a new arrangement in which the front 8ft was equipped with quills of sole leather rubbed with black lead, the second 8ft had quills of soft Morocco leather whilst the 4ft had wooden quills.

Later, in May 1786, after further exchanges between the two men Jefferson wrote extolling the virtues of Walker's celestine stop:-

"... Walker's celestine stop is indeed a divine thing: a band of a simple silk thread is made to pass over a pulley on the right and another on the left, so that one string of the band is almost in contact with the strings of the harpsichord. It is kept in motion by a treadle as in a flax wheel. A set of hammers is placed just above the band, and one end of each hammer being thrust up by it's corresponding jack, the other is pressed down on the band, between the two unison strings of that note, so as to make it strike them and no others. The band being always in motion, it is as if you drew a fiddle bow over those strings, and produced a tone as different from the ordinary one of the harpsichord, as is that of a violin. To prevent the pressure of the hammer from impeding the motion of the band, a friction wheel is placed transversely in the end of every hammer, precisely in the point of contact. The whole can be shifted out of the way by a touch of the foot, & leaves the harpsichord in it's usual state. It suits slow movements, and as an accompaniment to the voice, can be fixed in any harpsichord, being under a patent, costs 8. guineas....."

Just over a fortnight later, on May 25 Jefferson wrote from Paris to John Paradise of London asking him to get Kirkman to make him a double manual harpsichord with venetian swell and a solid case of mahogany without decoration or veneer and the simplest of stop arrangements. Jefferson was anxious to avoid complication as he said that the instrument was to go to a country and "to a situation where there will be no workman but myself to put it in order." Nonetheless he also asked that when complete the instrument should be fitted with Walker's "celestini apparatus". At the same time he also suggested that from a momentary acquaintance which he had had with Burney, the latter might advise him on the instrument. Obviously Paradise spoke with Burney on the matter for on 19 June 1786 Burney wrote to Paradise saying that he had been

to Kirkman immediately on hearing from Paradise and had ordered a double manual harpsichord as nearly as possible meeting Jefferson's requirements. The letter, though given in full in Russell is relevant here for it contains several interesting comments on Kirkman:-

"....The machine for the Swell resembling a Venetian blind, will be applied; the stops & machinery for moving them & the swell will be perfectly simple and unembarrassing to the Tuner, the Lid of the Case will be of solid mahogany; but the sides cannot if the wood is beautiful: as the knots & irregularities in the grain, by expanding & contracting different ways, will prevent the Instrument from ever remaining long in tune; but Kirkman will answer for securing the sides from all effects of weather & climate, by making them of well-seasoned oak, & veneering them with thick fine, long mahogany, in one Pannel. By this means he has sent Harpds to every part of the Globe where English have any commerce, & never has heard of the wood-work giving way. The Front will be solid, & of the most beautiful wood in his possession. The instrument will be ready to deliver in abt 6 weeks; & the price without Walker's machine, and exclusive of packing-case & Leather cover, will be 66 Guineas. The Cover & packing-case will amount to abt 2gs & 1/2. A desk to put up in the Harpd will not be charged separately, but be reckoned a part of the Instrument."

The letter continues with a report of Kirkman's condemnation of the celestine largely because the resin on the band adhered to the strings and thus destroyed the true tone.

It should be noted how despite the requirements of the commission, Kirkman was not prepared to make the sides of one panel of mahogany, preferring to rely on his usual method with an oak bentside, but veneered in one long panel. This seems to be the only instrument to have been built in the style and if it ever comes to light, it will be readily recognisable. It should also be noted that Kirkman stated that it would be ready in about six weeks, and it may well be that this was the usual time for building an instrument from the date of placement of the order. Burney obviously expected to hold Kirkman to this estimate for on 28 July, almost exactly six weeks later, he went to the workshop to see how Kirkman was getting on and found that though the harpsichord was "on the stocks" it would be near a fortnight before it could be played. Thus even for an eminent customer such as Burney, the likely time of manufacture was to be nearer two months. The exact date of Kirkman's delivery is not known, but in a letter from Burney to Jefferson in January 1787, six months later it appears that the harpsichord had not been completed until the autumn at which time it was taken to Walker for the application of the celestine, Burney having prevailed

on Kirkman to allow this to be done with "tolerable good-humour!" In his letter to Jefferson, Burney describes how he had seen the instrument in every stage of construction, adding that no part had been veneered or inlaid that could possibly be avoided, or which could receive the least damage from the climate. He then goes on to talk of the fitting of the celestine stop, which apparently took some time. Jefferson had asked in a previous letter that if possible Walker should improve upon the treadle arrangement which "diverts the attention & dissipates the delirium both of the player & the hearer!" The obvious solution lay in some form of clockwork, and this Walker attempted to provide. Nonetheless, this proved a delaying measure for the clockwork was supplied by clock maker. In addition Walker had difficulties in perfecting the mechanism of the celestine, however

"At length, after long delay some occasioned by real difficulties and others by having like all his brethren, projected too many pursuits at a time, the machine has recd all the perfections he can give it!"

Burney was glowing in his praise of the harpsichord and though he had small reservations about the celestine he was obviously impressed and felt that it would repay study in the execution to realise the full potential.

Jefferson wrote finally to Burney on 12 February 1787 to thank him for his part in the supervision of the manufacture of the instrument and to say that as he was leaving Paris for a journey of three months he suggested that the harpsichord should not be delivered before 1 April 1787. Unfortunately he does not say the destination of the instrument and it may have gone to Paris or to America. If it were the former it may well have perished in the revolution, if the latter, it may still come to light. Two Kirkman harpsichords remain dated 1786, but neither answers to the description, and there is little doubt that this unique harpsichord will quickly be recognised should it be found.

The remaining special instrument by Kirkman is, like the above, a modification of a standard harpsichord rather than an instrument in its own right and is the subject of the next section entitled "The Changeable Harpsichord!"

## The Changeable Harpsichord

Though the problems of temperament exercised the continental harpsichord builders, and in England the history of organ building is relevant to the subject, the English harpsichord builders seemed relatively untroubled by it. There is no documentary evidence of any experimentation with special keyboards as was the case in Italy and Flanders. There is also no surviving instrument from an English workshop which shows any trace of having been built with the problems of temperament in mind, and the only surviving documentary evidence dates, surprisingly, from the mid eighteenth century. In 1748, Robert Smith, DD, FRS and Master of Trinity College Cambridge published the first edition of his work Harmonics or the Philosophy of Musical Sounds<sup>1</sup>. It obviously sold well for in 1759 a second edition was published to which in 1762 Smith added a postscript. The work is a scholarly if pedantic assessment of temperament, presented in mathematical terms. Section VIII of the main work and the postscript deal with a practical method of changing the speaking notes of a harpsichord so that a player may perform a piece in any key and for that matter using any system of temperament which he chooses to adopt without having to resort to the impractical expediency of using a special keyboard with split keys. The only restriction which Smith's system imposes is that the performer is limited to a single speaking string for each note. He excuses this deficiency by the following apologia which is from page 171 of the second edition:

"15. The famous Ruckers and other musicians of a delicate ear, always valued the tone of a single string for its distinctness and clearness, spirit and duration, and preferred it to that of unisons and octaves. I must confess I have long been of that opinion, even before I thought of this changeable scale of single sounds, which however after some years experience upon my own harpsichord has fully confirmed me in it.

16. Unisons by themselves or with an octave are indeed an addition to the loudness of the tone, but not nearly in proportion to the number of strings. First because the oppression of the belly of the instrument by the force of so many strings hinders the facility and duration of its tremors; and secondly because in tuning unisons or octaves, it is manifest that their tone is never clear, loud and flowing, like that of a single string, except when they are precisely perfect. But as this perfection continues but a very little time, especially after the room is warmed by company, that clear singing tone is soon destroyed.

The compound tone of unisons by themselves, or with an octave, being of itself so indistinct, what beating and jarring must result from their complicated mixtures in playing three or four parts of music? Especially as the imperfections of the unisons and octaves in the course of playing are frequently added to the temperaments of the other consonances, which if they were perfect could not bear those imperfections so well as the

1. Reprint published in 1966 by Da Capo Press, New York, with an introduction by J. Murray Barbour



unisons and octaves do when sounded by themselves (e). This confused noise like that of a dulcimer, is but too plainly perceived when the ear is held over the strings of the harpsichord; and since it results from the multiplicity of strings, it appears that the best way to improve this instrument is to find out methods for increasing the strength and clearness of the tone of single strings.

17. To me, who seldom hear any other than the single strings of my own harpsichord, the tone is as loud as I desire, not only for lessons and cantatas but also concertos accompanied with instruments in a large room..."

Smith goes on to draw an analogy between a person coming into darkness out of strong light, and a person hearing a single string after being subjected to the jarring of the octaves and unisons referred to above.

In referring to the sounds of his own harpsichord, Smith is obviously drawing attention to the harpsichord (or harpsichords) made for him by Kirkman, for on page 186 he states:

"Upon communicating this method of changing the sounds of a harpsichord at pleasure to two of the most ingenious and learned gentlemen in this University, the Reverend Mr. Ludlam and the Reverend Mr. Michel, they encouraged me to put it in practice upon a harpsichord made on purpose by Mr. Kirkman; and they were so kind not only to direct and assist the workmen, but also to improve the usual method of drawing the sliders in the accurate and steady manner above described.....etc"

Similarly, in the postscript of 1762 Smith again refers to an instrument by Kirkman:

"About five years ago Mr. Kirkman made me a changeable harpsichord, which is much admired by the best judges for the delicacy and distinctness of the harmony; owing not only to a more copious scale and a better tuning than usual, but also to single strings...."

This is followed by a repetition of the arguments in favour of a harpsichord with single strings for each note, in much the same way as was given in Section VIII.

Smith describes two means whereby a harpsichord may be made into what he describes as a changeable harpsichord. Both methods are based on the assumption that a performer wishes to play a particular piece which is written in a certain key, (the key being known before the performance commences), and that the performance is to be made in some form of temperament other than meantone temperament, thus prohibiting the immediate performance in keys other than C, F and Bflat and their relative minor keys without some adjustment being made to the instrument.

The first and simplest method is effected by the use of a harpsichord having two unisons for each note, and as with all the methods employed by

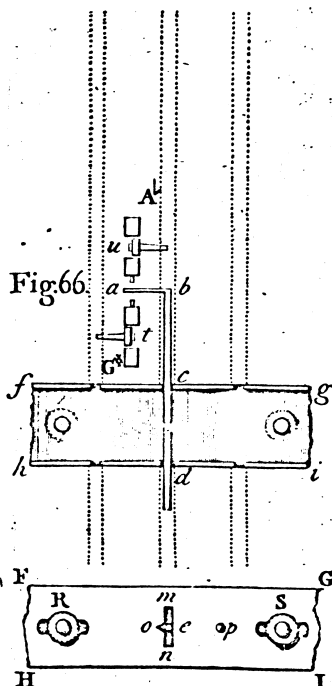
Smith, a four foot rank is of no use in the scheme.

Fig 66 from the second edition of the book is here reproduced, showing the strings of a harpsichord with 2x8ft and the jacks u and t in plan. The upper drawing shows a mechanism which may be used for keeping either jack in the raised position, thus rendering it silent. abcd is a piece of brass of square section bent to a right angle and slightly tapered at a. This is carried in a piece of brass channel fghi which is supported on pillars above the strings and is closed by a cover shown in the lower drawing at FCHI. This latter has a slit mn in which a pointer oe attached to abcd gives an indication of the position of the end of the slider abcd. It is not the purpose of this section to review Smith's various schemes of temperament. Suffice it to say that if the performer wishes to have available two tunings for a note, for example A flat and G sharp, then this may be done by the following

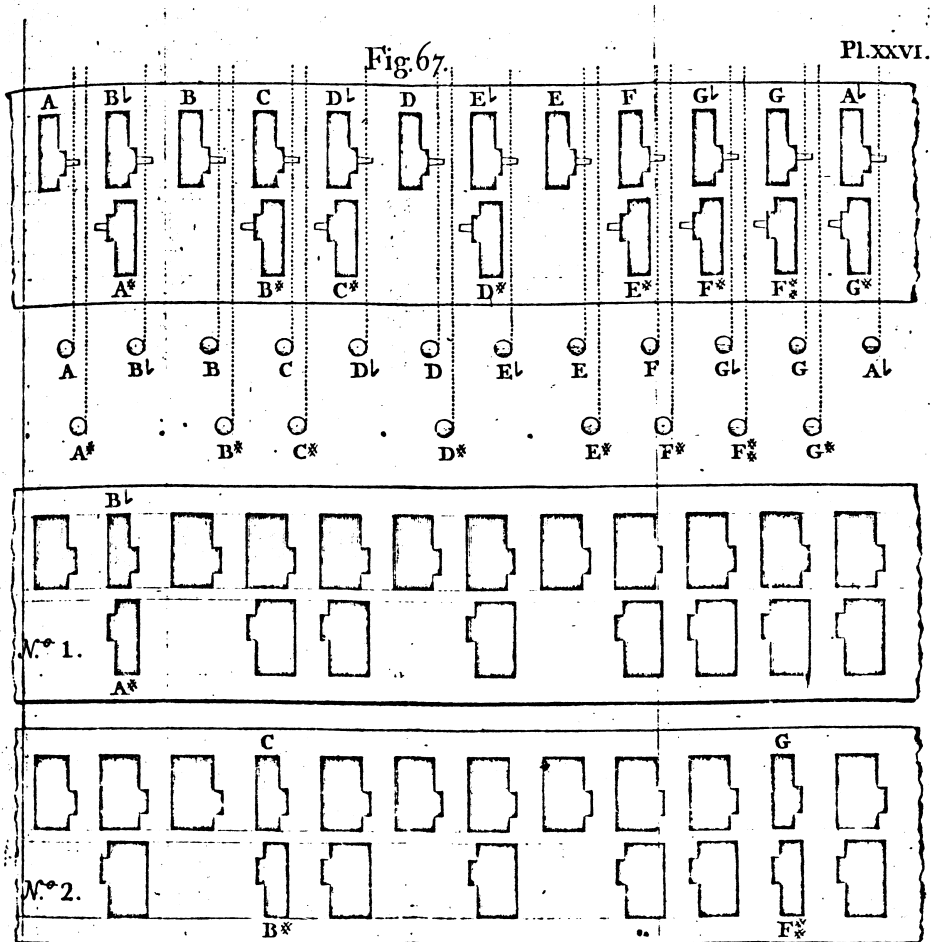
method. First the note is depressed, thus raising the two jacks which from the diagram can be seen to be in the on position. The unwanted jack is then retained in the raised position by drawing the slider under the projection on the edge of the jack adjacent to ab in the diagram. When the key is released, the unwanted jack is held up by the slider and the projection, whilst the required jack returns to the rest position.

The whole scheme sounds quite practical, and Smith goes on to say how he has employed it with some success. It would have been relatively cheap to produce though it must have required some time to operate before playing a piece. There must also have been some discordant noises produced by the performer raising each note in turn and thus playing two notes of nearly the same pitch. (It would have been possible to have placed both registers in the off position before making adjustments, but Smith's directions to the performer to tie together the two right hand stop levers of a double manual instrument suggests that he did not expect this to be done.)

It seems to have been this disadvantage of the preparation of the instrument which lead Smith to produce a more advanced form of changeable

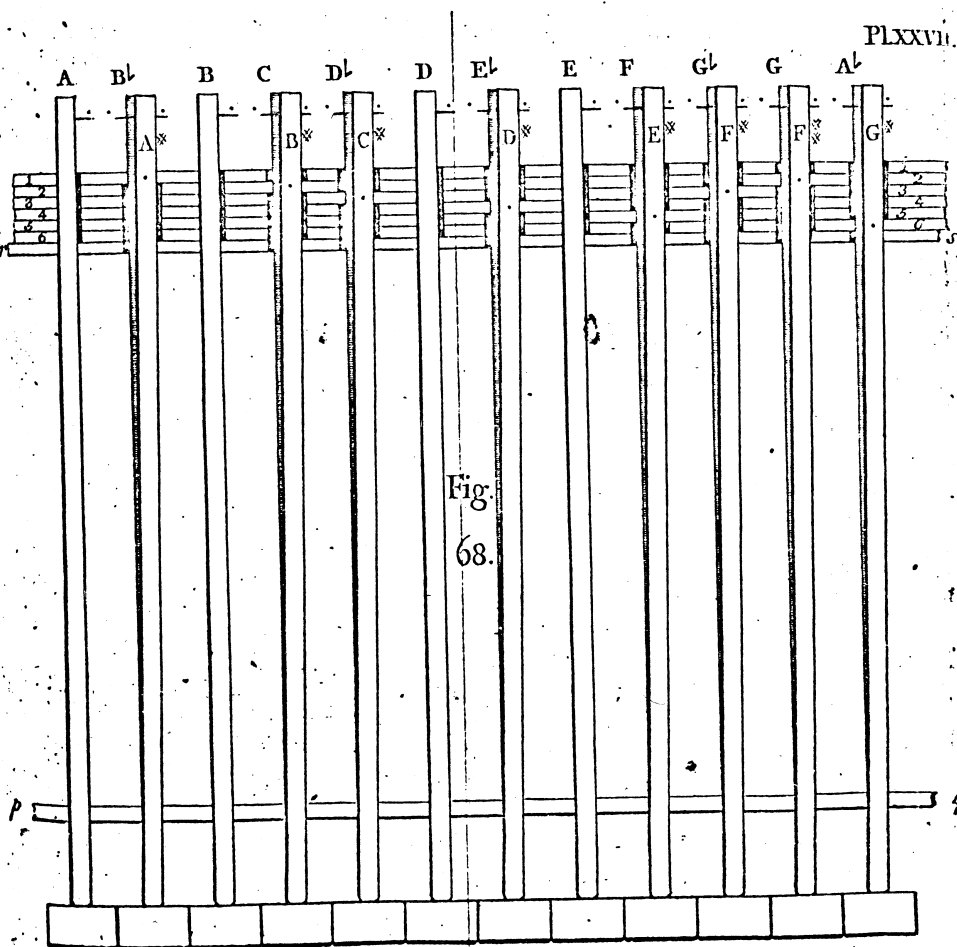


harpsichord, and this is described in paragraph 19 of section VIII of the second edition as well as in the Postscript. Fig 67 is given below, and



this shows in the upper diagram the strings of a harpsichord with two unisons of which the longer string for the notes A, B, D and E has been omitted. In this case a modification has been performed on the upper jack slide so that instead of retaining the original two slides, (one for each 8ft rank), one slide has been substituted carrying both ranks. As will be seen in the upper drawing, it appears that there are two jacks for each note with the exception of each A, B, D and E, and at first sight they appear to be in positions which are fixed relative to each other. The slide in the upper picture however is intended merely as an aid to setting out the more complicated slides shown as No 1 and No 2 in the lower pictures. In these slides it can be seen that normal

sized holes are pierced for B flat and A sharp whilst all others have wider holes though of the same basic shape. Thus if the slides marked 1 and 2 are mounted above each other in the main gap, it will be possible to move the two jacks for A sharp and B flat relative to those in slide No 2 for C and B sharp by holding the latter still and moving the former slide. By increasing the number of slides it will be possible to move all the jacks relative to each other except those for A, B, D and E by an arrangement shown in elevation in Fig 68 below. (Note that the bottom slide holds the fixed jacks, and this slide remains fixed relative to the main gap, whilst the other slides marked 1, 2, 3, 4, 5 and 6 mounted above it may move relative to each other and to the fixed slides.)



As before, the strings plucked by the various jacks are tuned to the required temperament according to the scheme suggested in Fig 67. The means whereby the jacks are moved is shown in fig 69 which represents a form of stop action using what Smith calls draught irons. Stops with various lengths of throw are required for the slides, and in the illustration, three such stops are shown with projections for knobs coming through the foreboard in Fig 70. The making of the mechanism of the stops must have called for some precision, for the spigot for the lowest slide (No 6 of Fig 68) would have had to be fixed to the slide with some slender bracket and then to have passed through the other five slides by means of a slotted hole. Nonetheless Smith alleges that the mechanism fitted to his own instrument worked well, and it seems quite feasible. One refinement called for is the weighting of the jacks for A, B, D and E since the keys operating these jacks had to lift one jack only whereas all others had to lift two.

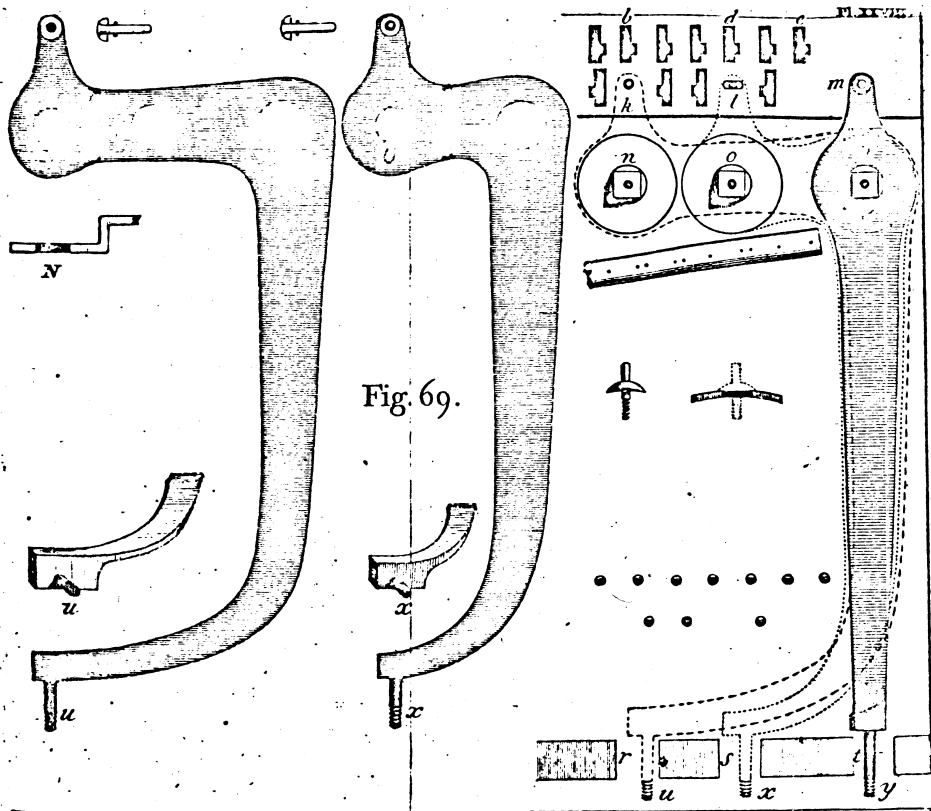


Fig. 69.

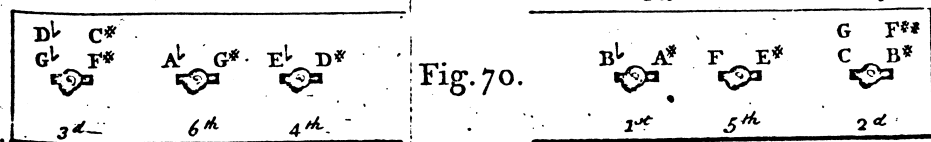


Fig. 70.

In the postscript, Smith carries this scheme further, extending it to the extent that all jacks are retained and giving alternatives for A, B, D and E of  $B\flat$ ,  $C\flat$ ,  $C\sharp$ , and  $F\flat$  respectively. By constructing slides (6 in number as before) and causing each slide to move two sets of jacks, he is able to produce alternative tunings for two notes by the movement of one stop lever. The full arrangement of the foreboard is shown in Fig 3 of Plate XXIX which is given below.

Fig. 1. *The Scale of V<sup>th</sup>* Pl. XXIX.  
 $\flat C$ ,  $B\flat$ ,  $F\flat$ ,  $C\flat$ ,  $G\flat$ ,  $D\flat$ ,  $A\flat$  |  $E\flat$ ,  $B\flat$ ,  $F$ ,  $C$ ,  $G$ ,  $D$ ;  $A$ ,  $E$ ,  $B$ ,  $F\sharp$ ,  $C\sharp$ ,  $G\sharp$  |  $D\sharp$ ,  $A\sharp$ ,  $E\sharp$ ,  $B\sharp$ ,  $F\sharp\sharp$ ,  $C\sharp\sharp$   $\flat C$ .

Fig. 2. *The Foreboard.*

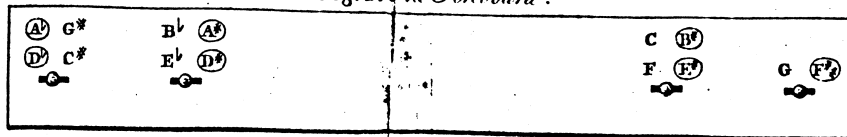


Fig. 3. *A complete Foreboard.*

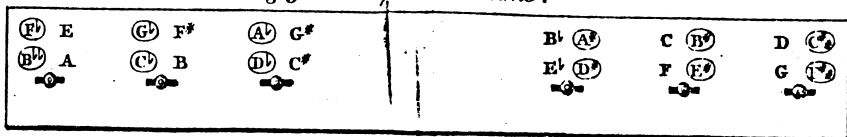


Fig. 4. *A general pattern for the Sliders*

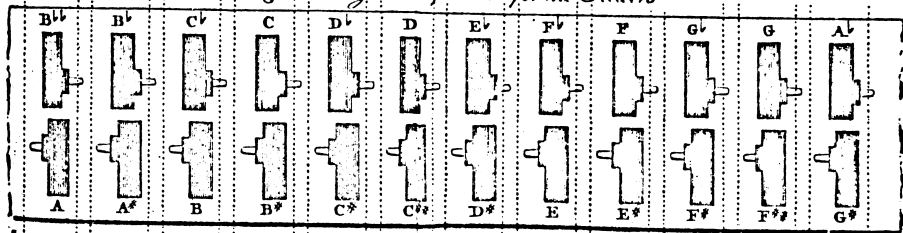
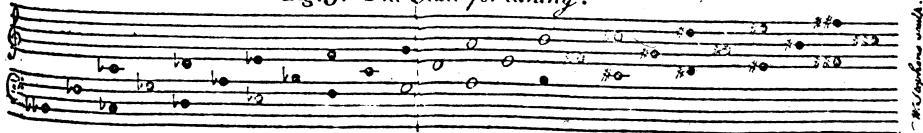


Fig. 5. *The Scale for tuning.*



Lest the performer should find this array of stops too difficult to comprehend, Smith gives a table showing how the stops should be set for a particular key. He refers to the alternative tunings for the notes which are shown in circles in Fig 3 above as "extreme sounds" and then

describes the procedure as follows:

"Fig. 2 or 3 or both. First push all the stops towards the notes of the common scale above-mentioned, and the keys will strike it.

Then look for the key of the proposed piece of music in the first column of this Table, and opposite to it you will see whether any, or which of the extreme sounds must be added to the common scale, in order to adapt it to the piece proposed.

| The Keys                                                                               | Add at first                                  |
|----------------------------------------------------------------------------------------|-----------------------------------------------|
| C, F, B $\flat$ with a major III <sup>d</sup><br>A, D, G with a minor 3 <sup>d</sup> ) | no extreme<br>sounds                          |
| E $\flat$ , A $\flat$ ..... III <sup>d</sup><br>C, F..... 3 <sup>d</sup> )             | A $\flat$ D $\flat$ .                         |
| G, D..... III <sup>d</sup><br>E, B..... 3 <sup>d</sup> )                               | D $\sharp$ A $\sharp$ .                       |
| A, E..... III <sup>d</sup><br>F $\sharp$ , C $\sharp$ ..... 3 <sup>d</sup> )           | D $\sharp$ A $\sharp$ , E $\sharp$ B $\sharp$ |

The rest of the extreme flats and sharps have not yet been used enough to be reducible to any general rule.

The rules in the table are founded in practice and were given me by an ingenious Friend: As they are only general, they are sometimes liable to exceptions; but these may be guarded against either by looking over the piece beforehand, or else occasionally in the course of playing it. For the stops of this harpsichord answer so readily to the touch of the hand, that when a performer has fixed in his mind the order and position of the notes on the foreboard, it is matter of fact that he soon gets a knack of changing, without loss of time, and sound for another which he foresees is coming into play...."

Smith's delight with the invention is obvious in the way in which he writes, and it is sad that no instrument of this nature has survived. It might be expected that if any such harpsichord were left it would be a Kirkman of the period 1748 - 1757, but no instrument is known to the writer with this mechanism or even showing signs of its having been fitted and subsequently removed. There is one curious fact in that Smith suggests that the usual compass for such a changeable harpsichord would be from G to e in alt. This is a short compass for any mid eighteenth century harpsichord, and may be an indication that this compass was still to be found by 1748 when Smith first wrote. It might however merely be the compass of an older instrument on which Smith first experimented before committing his Kirkman for experimentation.

Smith's main reason for writing the entire work was his preoccupation

with the search for a system which would improve on meantone temperament by finding a system in which "as many concords as possible are as harmonious as possible". It was to this end that the changeable harpsichord was designed, and it was because of this that it did not become adopted. The fact is that by the eighteenth century equal temperament had become sufficiently acceptable to the listener to make any refinement such as the changeable harpsichord unnecessary. In addition, despite the way in which Smith pardoned the limitations of a single string harpsichord, there can be no doubt that there was an increasing demand for the larger and more resourceful double manual harpsichord with 2x8ft and 1x4ft. Thus any limitation of a larger instrument to the resources of a spinet was almost certainly doomed from the start.



# Kirkman marquetryed harpsichords.

Throughout the 18th century the treatment of the cases of the harpsichords by the English makers remained consistently the same. With minor exceptions every instrument was cross banded externally and the interior decor was similar. There is, however, a group of harpsichords by Kirkman in which the cases, though of traditional design externally are more finely executed than normal, and the interiors are richly marquetryed.

These harpsichords all have two manuals and a specification of 2x8ft 1x4ft and lute. They are listed below, and subsequently referred to by their number in the list or as the property of their present owner or by their location:

| Serial number | Boalch number | Date    | Present owner and location                                                                   |
|---------------|---------------|---------|----------------------------------------------------------------------------------------------|
| 1             | 01            | 1744    | In private ownership in the USA                                                              |
| 2             | 1             | 1750    | In private ownership in Toronto (Michael Koerner since 1956)                                 |
| 3             | 109           | 1745-51 | Claviorganum - Kirkman/Snetzler - Lord Wemyss, Gosford House, Longniddry, Scotland           |
| 4             | 4             | 1755    | The Russell Collection, Edinburgh                                                            |
| 5             | 6             | 1756    | G.C.Bushby (1946)                                                                            |
| 6             | 7             | 1757    | The Bristol Museum-Georgian House, Bristol (Property of the Trustees of Lady Burdett-Fisher) |
| 7             | 8             | 1758    | New York, P.Tolstoy. (Formerly Sir John J. Smith, Mr Frank Partridge)                        |
| 8             | 12            | 1760    | M.Eckstein (Formerly Professor G.Oldroyd)                                                    |
| 9             | 15            | 1761    | R.V.Cooke Esq, MP, Athelhampton, Dorset.                                                     |
| 10            | 32            | 1766    | Lord St. Oswald, Nostell Priory, Wakefield, Yorks.                                           |
| 11            | 33            | 1766    | Major Robert Berkeley, Spetchley Park, Worcs.                                                |
| 12            | 48            | 1772    | The Ashmolean Museum, Oxford.                                                                |
| 13            | 61            | 1776    | Hon. James Bruce, Balmanno Castle.                                                           |
| 14            | 73            | 1785    | N.L.Wright Esq., York.                                                                       |
| 15            | 82            | 1788    | Edward Croft-Murray Esq., Richmond, Surrey.                                                  |

In addition to this list, there is a harpsichord owned by Mr Kenneth Skeaping which bears a name batten with the words "Jacobus Kirckman Londini Fecit 1761". It has marquetry in the style of the above harpsichords, but it is certainly not a genuine Kirkman, though it is of eighteenth century origin and is discussed on page 116. It is also appropriate here to mention again the harpsichord used as a model for measurement of instruments and which is treated fully at Appendix B. The harpsichord is a double manual instrument dated 1754 (Boalch number 3) and is the property of Mr C.R.Warburg of Hampstead. The external

case has the cross banding and wide stringing of the other marquetryed harpsichords, but the internal key surrounds and the soundboard surrounds are treated conventionally. The position normally occupied by the name batten is plain veneer, and instead of the name appearing in this position, it is inscribed on a scroll which is part of a silver design inlaid in a tortoiseshell or ebony oval cartouche set into the board above the name batten. This design incorporates a trophy of wind and string instruments, above which appears a further scroll with the words O DECUS PHAEBI (Horace, Odes, I. 32. 13), and below the signature IACOBUS KIRCKMAN LONDINI FECIT 1754. The whole design is delicately wrought in silver.

The first nine of the instruments in the main list given above up to and including that of 1761 are of a similar style. The outer casework is cross banded in the manner of the standard instruments of the period, the main difference being the form of the stringing which surrounds the main case panels. Figure 34 shows the detail of the 1754 harpsichord mentioned above which is typical of the group. The stringing varies in width from 0.5" - 0.7" and consists of outer strings of either box or sycamore about 0.05" in width enclosing a central stripe of a dark figured wood such as walnut or elm. This is interrupted at intervals of about 4.5" by light squares of a fruit wood such as cherry or apple, or occasionally box. The only known exception to this style is that of the claviorganum (Number 3 in the list) which has a herringbone stringing of the same width as the wide stringing of the other harpsichords.

The spine of some of these harpsichords is veneered and cross banded. The instruments of 1755, 1761, 1766 (Spetchley Park) as well as that of 1754 belonging to Mr Warburg are known to have this feature whilst those of 1757, 1766 (Nostell Priory), 1785 and the claviorganum are known not to possess it. Probably they were specifically ordered with this decoration so that they could be stood away from a wall in a state room. The scarcity of a veneered spine must therefore indicate a somewhat special instrument.

The decoration surrounding the keyboards, and usually over the soundboard in all the harpsichords up to and including that of 1761 is very similar. The board over the upper manual and above the name batten has a central trophy which in the case of numbers 1, 3 and 4 consists of a cypher of the initials JK forward and reversed and resembling the Type A rose found in the earlier instruments. Numbers 6, 8 and 9 have a trophy of instruments. On either side of the trophy in 6, 8 and 9 are supporting angels blowing trumpets, and as in the other instruments these are flanked by birds with outstretched wings. The birds look inwards towards the trophy. The whole area of the keyboard surrounds including the board between the manuals is liberally decorated

with scrolling foliage. A feature common to all these instruments up to 1761 is an apparent cypher on the left and right key surrounds, consisting of two Cs intertwined, set at 45 degrees to the vertical and apparently surmounted by a crown. Closer examination reveals that the crown is illusory rather than factual, and the two Cs may be an accident due to the inter-twining of two diapered scrolls. The name batten on these instruments is very similar, having the inscription in Indian ink on a box ground in much the same style as the standard instruments by Kirkman. The surround however is more elaborate with semicircular ends and does not come to a point at each end as is the case with all other standard instruments. A cursory look at the decoration of the surrounds of the keyboards of these marquetry harpsichords up to 1761 would lead the examiner to the conclusion that with the exception of the displacement of the IK cypher by the instrument trophy after 1755 there were no further differences. There is however one further major distinction in that numbers 1, 4, and 9 have marquetry in darker woods on a light ground (usually laburnum and walnut on a ground of box or sycamore) whilst numbers 3, 6 and 8 have the reverse. Details of numbers 2, 5 and 7 are not known.

The two harpsichords of 1766 are intrinsically interesting instruments for a number of reasons as will be seen later. Externally they are striking in that they have panels of extremely finely figured burr walnut surrounded by a stringing of outer lines of box enclosing a herringbone of tulip wood. This is surrounded in turn by a cross banding of a light coloured straight grained wood which could be walnut. As with all the other instruments, they are raised on a stand which has cabriole legs terminating in either claw and ball or talon and ball feet.

The internal surrounds of the keyboards are beautifully marquetryed in a variety of woods, but they are different from the preceding group in that the marquetry is contained within panels which in shape and layout are identical with the panels found in the standard harpsichords. The cross banding of these panels on both 1766 harpsichords is of tulip wood, and the stringing of the panels is a narrow band of a centre string of harewood (sycamore stained a greyish green colour) flanked by box. The panels themselves have a central trophy of instruments reminiscent of the trophies of the earlier harpsichords, but in this case the instruments depicted are worked more finely and use a greater range of the more exotic woods used in 18th intarsia work. In the case of the Spetchley Park harpsichord there is a small rectangle of brass inlay representing an ink stand or a piece of paper on which a quill pen is laid. This is the only use of a metal inlay known to the writer on any 18th century instrument. On either side of

the trophy is the usual scrolling foliage, but in both cases this is augmented by the addition of flowers in brightly coloured woods. On the panels at either side is a continuation of the foliage and flowers in the same style. The name batten of the Spetchley Park instrument carries the name on a box inlay, shaped in the standard instrument style, but the Nostell harpsichord carries the signature on a wavy scroll which looks forward to the style of the 1772 instrument now in Oxford.

This latter instrument is uniquely marquetryed in a style which is a mixture of the early harpsichords and those of 1766. It is musically the most comprehensive, having all the fitments of the later 18th century harpsichords, including machine, harp, venetian swell as well as the traditional cabriole stand with two pedals. The external case has the wide stringing of the earlier harpsichords, but the internal keyboard surrounds are marquetryed within panels like those of the 1766 instruments. There is a central trophy mostly in Indian ink, and with elaborate detail in the sheet music which backs the trophy. There is some relatively simple foliage with flowers, though the wood used is mostly laburnum on a sycamore ground, and there is an almost total lack of the rich colours found in the earlier instruments. An interesting feature is the reappearance of the flanking birds, last seen in 1761. In this case however they are calmer and are sitting pensively with their heads turned from the trophy.

The two final harpsichords are both by Abraham and Jacob Kirkman, and it is likely that there are other harpsichords in this style from the last quarter of the eighteenth century. The outer case is indistinguishable from the standard casework, and the keyboard surrounds are again in panels. A relatively simple trophy is flanked by restrained foliage which terminates at either side in a garland. The style has been termed neo-classic by some scholars and Robert Adam's coined term "rinceau" aptly describes the genre. The designs are executed in a variety of woods, and the cross banding of the inner panels is of tulip laid at 45 degrees to the stringing. As with many harpsichords of this period the stop knobs are of white Battersea enamel. A Longman and Broderip at Yale University which is undated but almost certainly contemporary is marquetryed in a very similar style.

It is generally thought that the earlier examples up to 1761 are the work of German craftsmen who were brought to England possibly by Kirkman himself. There can be little doubt that similar marquetry is to be found on German pieces of this time. The later harpsichords however owe much to the influence of the earlier instruments and also to the English cabinet

makers and the architects of the mid and late eighteenth century.

#### Queen Charlotte's Harpsichord

James, on page 130, plate L shows a harpsichord which is quoted as belonging to Mr Arthur Hill, FSA and dated 1761. After careful comparison of the photograph with the surviving harpsichords seen and measured by the writer (Numbers 3, 4, 6, 8, 9, 10, 11, 12, 14, 15) there seems little doubt that this instrument is number 9, from Athelhampton. The caption with James's illustration adds "The three other harpsichords of similar appearance are at Padworth House (1755), Nostell Priory (1766) and Warley Place, Essex (1766). The last of these was made to the order of George III for Queen Charlotte who, being an accomplished musician, wanted an up to date harpsichord in place of her instrument by Jean Ruckers, which is now preserved in the Victoria and Albert Museum!"

This reference to Queen Charlotte's harpsichord has caused some interest amongst scholars particularly in view of the assertion that the instrument at Athelhampton is also Queen Charlotte's. From the outset, one of the problems has been the feeling that there was one only genuine Queen Charlotte instrument, but examination of a number of sources shows that this must be too simplified a view and that there were a number of harpsichords in the royal residences which could qualify as instruments on which the Queen played. Many of these sources have been brought to my notice by Miss Betty Matthews who has spent considerable time in research into the life of the Queen, and I must here acknowledge the great help and encouragement which she has given me in trying to make an objective assessment.

The Royal Family's interest in music was well known in the eighteenth century. The painting entitled "The Music Party" by Philip Mercier (1733) shows the Royal family grouped around a harpsichord much like the Tisseran. Miss Matthews thinks that the building in the background is Kew Palace, and it is quite certain that the background to a similar picture now at Kew has as its background the Queen's Drawing Room. The Official Guide to Kew Palace states: "In one corner....is a fine harpsichord of c1740 made by Burckhardt Tschudi, maker to Frederick, Prince of Wales!" This entry underlines the way in which the Royal patronage was divided, the Prince of Wales giving his to Shudi, who took as his sign (according to Burney) the Prince's feathers, whilst the King supported Kirkman and as will be seen below favoured him with several commissions. There can be little doubt that the instrument at Kew mentioned in the above entry is the Shudi of 1740, number 94 which is still to be seen there today. There were, however, almost certainly other harpsichords at Buckingham House which was acquired about 1763 as a London

pied-a-terre to replace St James Palace. Though it was never lived in as a home it was furnished and Mozart played on the King's harpsichord there in 1764. There were probably more instruments at Richmond (later moved to Upper Lodge, Windsor) possibly at Frogmore, the Queen's house near Windsor, and at Windsor Castle where the family eventually moved. There was also the White House at Kew (now demolished) where the family lived before moving to the present Kew Palace where Queen Charlotte died. There was certainly a harpsichord in the latter residence for Fanny Burney records how in October 1789, when the whole household was waiting to hear of the King's illness the Queen went upstairs to play it. Similarly when the King was confined to his suite of rooms at Windsor Castle in 1811 - 1820 as a result of his illness, he is said to have played several harpsichords which were standing in each of the rooms, as he passed from one to another.

Evidence concerning the disposal of Queen Charlotte's instruments after her death also confirms the ownership of a number of harpsichords. Her main collection was sold in 1819, and on 26 May a harpsichord by Kirkman was sold for £3 to a man named Bullock. Miss Matthews in 1971 discovered the sale catalogue of Gloucester Lodge, the summer home of George III at Weymouth. The following entry relates to the fourth day of sale:

"In No. 29 Anteroom, Lot No 543- A double keyed harpsichord by Kirkman, beautifully inlaid"

It went to an unknown buyer for £9. Another reference to one of the Queen's harpsichords is found in the catalogue of the Music Loan Exhibition 1909, p 173 where a reference is made to a harpsichord ordered by Queen Charlotte for her daughter. (This was probably Princess Augusta, whose playing is mentioned several times by Fanny Burney. She was a favourite of her mother unlike Amelia who was hated by her and adored by her father the King.) There is yet a further reference in 1875 when correspondence was opened up between the keeper of the Privy Purse and the Office of Works concerning "the harpsichord upon which Queen Charlotte played" which in that year was lying in poor repair at Kew Palace. It was suggested that it should be repaired, brought to Queen Victoria's notice and find a home in one of her Palaces. There is no further record of the outcome of this correspondence, and in 1898 there is no mention of it in a discussion of the furniture remaining in the palace in 1898. At this date, Kew had hardly been touched since the end of George III's reign and many of the Queen's possessions were still there. It seems likely in view of the earlier remarks that the harpsichord referred to was the Shudi of 1740, but as will be seen below the reference to Queen Victoria makes it just possible that the instrument was the Spetchley park harpsichord of 1766.

Returning to Queen Charlotte's earlier years, it is known that she had a harpsichord on board the "Royal Charlotte", the yacht which brought her from Mecklenberg-Strelitz in 1761 for her marriage to the King. She played on it during the ten day voyage which was very bad. Everyone was seasick, but the Queen. She also played on a harpsichord before supper at St James's Palace on the night of her wedding.

From the above references, it can be seen that there may be a number of instruments which could claim the title "Queen Charlotte's harpsichord" and any one of these to conform with James's description "made to the order of George III for Queen Charlotte" cannot be dated earlier than 1761. Since it was probably made for presentation as a wedding present, it would have been made just before the wedding on 8 September. James's assertion that the Queen "wanted an up to date harpsichord in place of her instrument by Jean Ruckers" is probably based on the fact that J.C. Bach became her teacher shortly after her arrival, and the choice of a large Kirkman harpsichord may have been his. The choice of the surviving Kirkman harpsichords from among the large marquetry instruments is thus narrowed to:

- No 9, 1761, Athelhampton
- No 10, 1766, Nostell Priory
- No 11, 1766, Spetchley Park
- No 12, 1772, Ashmolean Museum

Anything later can hardly have been ordered as a wedding present.

Of these, it is possible immediately to discount the Nostell harpsichord, since the original bill of sale is still at Nostell duly receipted as follows:

---

|                                                      |                      |                    |
|------------------------------------------------------|----------------------|--------------------|
| Sir Rowland Winn Bart.                               | Dr. to Jacob Kirkman |                    |
| September ye 1st 1767                                |                      |                    |
| An inlaid Double Key'd Harpsichord                   | Cover Veneered       |                    |
| Desk inside with Machine Pedals                      | 85 Guineas           | £89 - 5 - 0        |
| Leather Cover for Do                                 |                      | 1 - 10 - 0         |
| Packing Case for Do                                  |                      | 15 - 0             |
|                                                      |                      | <hr/> £91 - 10 - 0 |
| For the use and Tuning of a Double Key'd Harpsichord |                      |                    |
| from March 10th to June 18th 1767                    |                      | 2 - 14 - 0         |
|                                                      |                      | <hr/> 94 - 4 - 0   |

Recd July the 5th 1768 the Contents in  
full of all Demands for Uncle Jacob Kirkman

£94 - 4 -

Yr Jacob Kirkman

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\* The likelihood of its original ownership by Queen Charlotte is further lessened by an entry in the "Catalogue of the Special Exhibition of Ancient Musical Instruments" at the South Kensington Museum 1872 (1742.d.4) in which this instrument appears as number 12. and in the catalogue entry appears "this harpsichord is given to me which Jacobus Kirkman made by order of King George III, for Queen Charlotte." It goes on to say, speaking of the Ashmolean Instrument - "From

Kirkman's workshop it came into the possession of John Bacon, the famous sculptor in the time of George III."



The reference to Uncle Jacob Kirkman is puzzling. From a comparison of the signature on the bill with the Signatures of Jacob Kirkman in Fig 58 it can be seen that the person who signed the bill was not Kirkman himself and it is suggested that one of Kirkman's many nephews was sent to Nostell to deliver the bill and collect the cash.

It is just possible that the Ashmolean instrument was Queen Charlotte's, but of course its date of 1772 makes it 11 years after her marriage~~!~~. In addition the previous ownership is fairly well known. It first belonged to John Bacon RA, sculptor, whose dates are 1740 - 1799. If the Queen ever owned it, she must have sold it within 27 years of its purchase which would seem unlikely. Subsequent owners include Dr Slat~~ter~~, priest-vicar of Exeter Cathedral, Carl Engel, and Mrs P. Bowman.\*

The field is therefore narrowed to the 1761 Athelhampton harpsichord and that of 1766 at Spetchley Park.

Miss Matthews and the writer have both made research into the Privy Purse accounts in an attempt to find further information. The archives at Windsor have also been examined, and whilst there is nothing to prove or disprove the authenticity of the claim of either instrument it is quite obvious that a large instrument was purchased in the early years of the Queen's stay in England.

Unfortunately the Privy Purse accounts for the years 1761 and 1762 are missing and the first reference to Kirkman is the account for Lady Day Quarter 1764:-

|                                                                                                                |             |
|----------------------------------------------------------------------------------------------------------------|-------------|
| "Feb 11 To Captain Shadwell for a Harpsichord                                                                  | 100 - 0 - 0 |
| Feb 15 To Mr. Kirkman for a double keyed Harpsichord                                                           | 105 - 0 - 0 |
| To Do for an upright harpsichord                                                                               | 73 - 10 - 0 |
| To tuning harpsichords from Sept 12 1761 to<br>March 12 1764 at 24 Guineas per Annum viz<br>2 years and a half | 63 - 0 - 0" |

It is interesting to note that the tuning started only four days after the Queen's arrival in this country, and may be taken as evidence of her interest in the court instruments. The sum for tuning is also a further indication that there were a number of harpsichords to be tuned. Unfortunately the sum charged for tuning an individual instrument is not known in the case of Kirkman. It is known however that Shudi in the 1770s was charging a maximum of 10/6 for visits to the countryside in such places as Thames Ditton<sup>1</sup>. Thus it may be assumed that Kirkman's charges for visits would be about the same, and one year's tuning with a visit each month would cost

1. The Harpsichord Magazine, October 1973, The Broadwood Books, Charles Mould, p 22.

about 6 guineas. Thus 24 guineas per year would indicate at least four harpsichords to be tuned in 1764. There are references to tuning by Kirkman and to sums paid to him right up to 1772 with no breaks. At that date, however, they cease, and this is a further indication that the Ashmolean instrument cannot be a contender for the title of Queen Charlotte's harpsichord, for it was made in that year, and if delivered at court must surely have been recorded in the account and would also have been tuned after this date. There is nothing in the Privy Purse accounts to prove or disprove that the 1761 instrument was the Queen's. Miss Julia Gandy, Assistant Archivist at Windsor has kindly been through the Georgian Archive, and reports that neither this, nor Professor Aspinall's edition of George III's letters gives any further evidence. Returning to the quoted account, it is significant that the bill for tuning goes back to the date of the Queen's arrival in England, and it would therefore seem likely that the bill for the harpsichord could also date back this far. There is however one inconsistency in this for it is known that the Queen disliked keeping her creditors waiting for payment, and it is unlikely that Kirkman with his business sense would have waited for  $2\frac{1}{2}$  years before submitting a bill. It is therefore quite possible that the account refers to a further harpsichord purchased by the King in 1764.

Turning now to the Spetchley Park harpsichord, the writer was privileged to meet its late owner, Captain Robert Berkeley, MFH in July 1968. Captain Berkeley's recollections of the history of it were that it had originally belonged to Marie Antoinette who had given it to Queen Victoria. The Queen had subsequently given it to Captain Berkeley's Aunt, Miss E.A. Willmott of Warley Place, Brentwood, Essex. There is no trace of this gift by Queen Victoria in the Victorian archive, and Captain Berkeley must have been mistaken in his assertion of the part taken by Marie Antoinette for the latter was guillotined in 1793 and could never have met Victoria. Nonetheless, the mention of Victoria as having played some part in the instrument's history does raise the possibility that this was the instrument mentioned above as having been in sad repair at Kew in 1875, and this just makes the instrument a possible contender for the title.

Miss Willmott's ownership of the harpsichord is substantiated by the entry in the Sotheby Catalogue of the sale of her effects on 5 April 1935:-

"Lot 68. An extremely fine Harpsichord by Jacob Kirkman, London, 1766 in finely figured walnut case.....in fair playing condition. (Traditionally said to have been the property of the Princess Amelia, daughter of George III)."

Thus the Sotheby catalogue entry is in direct variance with the quotation from James, the former suggesting ownership of the harpsichord by Princess Amelia, and the latter suggesting ownership by her mother the Queen. There is no authentication for the attribution in the Sotheby Catalogue, and since Princess Amelia was one of fifteen children born to Queen Charlotte, and she was not born until 1783, it would seem unlikely that there can be any foundation for the attribution unless the Princess Amelia were the daughter of George II (seen in the Mercier painting of 1733).

The writer was privileged to restore the Spetchley Park harpsichord in the summer of 1969, and it was possible to examine it in great detail. No especial marks or authentications were found on it, though one interesting feature was the discovery of a row of theatre tickets which had been used as packing to heighten the lower manual balance rail. The tickets were for a benefit performance for Mr. Davidson, Officer of the Theatre on Friday Nov 28, 1851, at the Queen's Theatre, Tottenham Street, Fitzroy Square. They cost the sum of 8d. The date is interesting in that the harpsichord was in 1851 at its nadir, and that someone should choose to restore an instrument in that year must have indicated some event or other reason which necessitated the use of a harpsichord. It had seemed possible that the event might have been the Great Exhibition of 1851, but despite careful scrutiny of the catalogue, no entry for this harpsichord has been found.

Of further interest is the musical potential of the instrument in that with its twin at Nostell the harpsichord possesses the full range of devices which were to become standard on all large harpsichords for the rest of the eighteenth century. Incorporated are a machine stop, harp stop, nags head swell and music desk, and of these, the three latter appeared in these 1766 instruments for the first time. (An embryonic form of nags head had appeared in 1754 but it was obviously not successful and has been veneered over.) It would be likely that Kirkman would have wished to see instruments with these potentialities launched by the Royal Family, and this lends weight to the argument that the Spetchley Park harpsichord did belong to either the Queen or to Princess Amelia, but there can be no positive proof.

The remaining harpsichord which must be considered is the 1761 instrument at Athelhampton. Unfortunately there is no positive proof of its history beyond the early years of this century when Mr Arthur Hill probably acquired it. Research by Miss Matthews has shown that it probably passed from Hill to a Mrs. Cecil Wills and thence to Mr Cooke. There is a gap of about 80 years from the period when Queen Charlotte's possessions were disposed of until its acqui-

sition by Hill. Nonetheless, the style of the instrument, its date, and the obvious indications that an instrument was purchased for the Royal Family at about that time make it very possible that the harpsichord may have been destined for Queen Charlotte.

Thus at the end of considerable research it is not possible to give a firm answer to the question - which of the surviving instruments can be said to have belonged to Queen Charlotte. It can only be said that there are indications that the 1766 Spetchley Park harpsichord belonged at some early stage to a member of the Royal Family, and that the 1761 Athelhampton harpsichord may possibly have belonged to Queen Charlotte.

#### Faked Kirkman Harpsichords

There can be little doubt that occasionally lesser makers than Kirkman did place his name on their own instruments in order to increase their value. One such instrument is listed by Boalch as No 14 though he records his reservations about its authenticity. I was privileged to see the harpsichord when it was in Mr Barnes' workshop for repairs on behalf of its owner Mr Kenneth Skeaping. It is relevant to discuss it here for superficially it does resemble one of the marquetry instruments described above. On looking closely at the intarsia on the foreboard however it is obviously of a different origin. The style is that of the earlier marquetry harpsichords before 1761 with a central trophy of instruments flanked by birds all in dark wood on a light ground. There is one significant difference however in that the ground does not extend to the edges of the foreboard but stops to form a border about 0.5" wide. The nameboard also is in a style not seen on the marquetry harpsichords. It bears the inscription "JACOBUS KIRCKMAN LONDINI FECIT 1761" which is perfectly acceptable, though the lettering itself appears slightly incongruous, and the style of the board on which it is placed does not accord with the rest of the case. One other obvious inconsistency is the soundboard rose which has a geometrical pattern not seen elsewhere, and certainly not of the Kirkman workshop. It is also placed in a position in the soundboard which would be consistent with the harpsichord having been built originally as a 12800000 model and not as a 2284HLMO as it now appears. It may be therefore that it did start life in the former guise and later it was modified, the maker taking the opportunity to incorporate some parts from a marquetry Kirkman which was available. Mr Barnes, who has examined the instrument much more closely than I has rendered a full report to Mr Skeaping on the likely history of this interesting instrument. Further light on faked Kirkman harpsichords is contained in the following section.

Kirkman and Faulkner

According to James<sup>1</sup> Robert Faulkner lived at Salisbury Court, Fleet Street, from 1760 - 1769. Mortimer's London Universal Directory of 1763 gives the following entry:- "Falkener-, Harpsichord maker, Salisbury Court, Fleet Street" and in the same year, the Boston Gazette of 27th June carried the following announcement:-

"Lewis Deblois of Boston advertised for sale a curious Ton'd, double key'd, new harpsichord, just imported in Capt. Millard from London. Is esteem'd the Master Piece of the famous Falconer!"

In the previous year, 1762, Robert Falkener published the first edition of his book on playing the harpsichord. Unfortunately, despite intensive research, no copy of this first edition has been found, and the second edition, published in London in 1774 throws no further light on the identity of the author. It is entitled Instructions for playing the harpsichord, Wherein is fully explained the mystery of thoroughbass.... to which is added exact rules for tuning the harpsichord, with all the different-siz'd wires used in that instrument. Despite its exciting title, the book is disappointing, at least to the research worker, and the aspiring pupil would have been hard pressed to gain any degree of proficiency without the aid of a master to guide him in performance and tuning.

Boalch says that the author of the book was a German who settled in England in the middle of the 18th century. Gerber<sup>2</sup> and Fétis<sup>3</sup> both give his christian name as Rudolph, but probably like Kirkman, he was anxious to appear anglicised and he exchanged Rudolph for Robert on his arrival in England.

The remaining documentary evidence concerning Faulkner comes from a report in James<sup>4</sup> of the action brought by Jacob Kirkman against him in 1772. Writing in 1930, James quoted a parchment then owned by Mr Arthur Hill as follows:-

"Robert Ffalknor...exposed to sale a certain Harpsichord for a large sum of money to wit the Sum of 27l. 6s as and for a Harpsichord made by the said Jacob!"

Jacob claimed £500 damages, being "greatly hurt and injured and damnified in his good Name, fame, and credit!"

1. James, p 43

2. Gerber, Ernst Ludwig. Historisch-biographisches Lexicon der Tonkünstler, Leipzig 1790-1792.

3. Fétis, Franz Joseph. Biographie universelle des musiciens.. Paris, Firmin Didot, 1860-1865.

4. James, p 43

Unfortunately James does not know the outcome of the suit, and research by the writer at the Public Record Office has failed to produce further evidence. The case could have been heard in one of several courts though the Chancery Division is the most likely. It was however common practice to make no record of suits unless the plaintiff was awarded his damages, and it is therefore probable that Faulkner escaped without having to pay the £500 damages. Unfortunately the Hill family have no knowledge of the present whereabouts of the parchment, and there is no further documentary evidence concerning the case. There are however two harpsichords which survive with Faulkner's name on them, though the name is inside the case-work, and the instruments bear Kirkman's name on the name batten and superficially resemble genuine Kirkman harpsichords.

The two instruments by chance are to be found in Scotland. The first and best known is in the Russell Collection at St Cecilia's Hall, Edinburgh, though it is one of the few instruments which did not come from the late Raymond Russell. It was the property of the late General John Reid (1721-1807) and he bequeathed the harpsichord with his other instruments in 1839. The second instrument is also a two manual harpsichord and belongs to the University of Glasgow. Both instruments have been restored by Messrs J.J.K.Rhodes and W.R.Thomas, the former in 1953 and the latter in 1959-1960, and I am greatly indebted to them for their kindness in making available to me the details of the internal structure and the inscriptions found in both harpsichords. Fig 39 is a reproduction of a pencilled inscription found under the soundboard of the Glasgow instrument, whilst Fig 40 shows a similar inscription from the underside of the soundboard of the Edinburgh harpsichord. In the case of the latter the top of the R of Robert is obscured by the liner showing that the inscription was made before the board was glued down. These two inscriptions show that Faulkner had at least some hand in the manufacture of the instruments, though it is conceded that it does not mean that the entire instruments were made by him. There is however further evidence in that the Edinburgh harpsichord carries a nameboard inscription "JACOBUS KIRKMAN LONDINI FECIT " with a space after FECIT for a date. The style of the lettering is consistent with a harpsichord of the period, but the spelling of KIRKMAN without the C is completely unknown on genuine harpsichords by this maker. In addition, with the possible exception of the claviorganum belonging to Lord Wemyss, all Kirkman harpsichords carry a date. The whole question of Kirkman's signature and the spelling of his name

are dealt with in Appendix A. A further unusual feature of the nameboard of the Edinburgh instrument is a longhand pencilled inscription at the back of the board "Jacobus Kirkman" beside which is scratched "XVIII" in Roman figures about  $\frac{1}{2}$ " high. The pencilled inscription has been compared with the Kirkman signature of 1771 (Fig 58 ) and though there is a resemblance it is not conclusive. In view of the decreasing part which Kirkman took in the matter of harpsichord building in the 1770s it would be unlikely that it would be his signature. Comparison of the inscription with the pencilled Falkner inscriptions on the underside of the soundboard shows no greater similarity. If it is accepted in view of the evidence to be presented that the two instruments were made by Robert Faulkner a possible theory to explain the unusual spelling of the name Kirkman on the nameboards runs as follows. From Appendix A, it is known that Kirkman spelled his name without the middle c in legal documents from at least 1755 onwards and presumably those who were close to him or knew him well would write to him with this spelling. Thus Faulkner, in any dealings with Kirkman would have been used to spelling the name as Kirkman. The remarkable similarity of the style of the nameboards of all English 18th century builders suggests that the lettering of the boards was carried out by one or two specialists who probably took orders from all the London makers. A noted maker such as Kirkman would probably have a standing order for a number of such boards at any one time, and the spelling Kirckman would have been well known to the signwriter. It is suggested that when Faulkner wanted a nameboard for the instrument in Edinburgh he went to the signwriter and asked him to produce the nameboard in the usual style and either he, or the signwriter at his dictation pencilled the exact form of the inscription on the reverse of the board, Faulkner using the spelling of Kirkman's name which was most familiar to him from correspondence. Subsequently the signwriter copied this form onto the front of the board, leaving a space as would be usual for the date which Faulkner never supplied.

There is still one further inconsistency in this nameboard in that a true Kirkman harpsichord of the year 1773 would have borne the names of both Jacob and Abraham Kirkman in the form "JACOBUS ET ABRAHAM KIRCKMAN LONDINI FECERUNT 1773".

The nameboard of the Glasgow harpsichord carries the words "JACOBUS KIRCKMAN LONDINI FECIT 1748" in which the maker's name appears in its more usual spelling. Despite the authenticity of the spelling, there is a discrepancy in the word order. It was shown above that all genuine Kirkman

nameboards have the word Londini before Fecit only after 1760. Thus, whilst this may be the exception which proves the rule, and whilst the board looks quite genuine, there is sufficient evidence to give rise to serious doubt.

Both the Edinburgh and Glasgow instruments show many departures from standard Kirkman practice though superficially they show a strong resemblance to the genuine article. In order to enumerate these differences the Edinburgh instrument is described first and subsequently the Glasgow instrument.

The case of the Edinburgh harpsichord is of mahogany, cross banded and with a light fruitwood stringing surrounding the panels. The first obvious departure from Kirkman practice is the addition of a lock for the lid in the cheekpiece. The bentside also shows signs that the liner is dowelled into the oak under the veneer. As noted above this was not Kirkman's practice though it is found on Shudi's harpsichords. These dowels can also be seen clearly on the spine. On opening the lid many small but unusual features present themselves. The light woodstringing is arranged in panels on either side of the name on the nameboard, and the two panels are present also on the board between the rows of keys. This style of stringing is also preserved on the keychecks. The stop arrangement is unique in that there is a central handstop, with two stops at either side which were arranged originally

|                      |              |                        |
|----------------------|--------------|------------------------|
| outer left: lute 8ft | centre: harp | outer right: lower 8ft |
| inner left: 4ft      |              | inner right: upper 8ft |

The following quotation from the Catalogue of the Russell Collection describes the present arrangement:

"The two left-hand stops are now dummies. The machine stop, added at an early date, has a unique system of two pedals

a. both pedals in raised position

lower manual 8'+4'+upper 8'

upper manual 8'

b. left pedal depressed

lower manual 8' only

upper manual takes off 8', brings on lute

c. right pedal depressed, followed by left pedal

lower manual leaves on 4' but takes off both 8'

upper manual takes off 8', brings on lute

Further changes of tone are made possible by removing the iron taper plugs connecting lever with register."

The keyboards are also unique in that the fronts of the keys are ivory arcaded, an arrangement never found in genuine Kirkman harpsichords. The key layout is that colloquially known as "the wide d's". Most 18th century keyboards, regardless of the stichmass are laid out in such a way that the distal ends of the naturals are all of the same width. It is possible, however to lay out a keyboard so that the width of the distal end of each d natural key, between c sharp and d sharp is wider than the corresponding portion of each key for



g and a. On removing the board between the keyboards further differences are apparent: The keys are numbered in ink, in a style which is seldom to be found. The keybed of the upper manual of Kirkman harpsichords is usually of one solid piece of oak, or may be two boards butt jointed longitudinally. The keybed of the upper manual in this case is of pine with a framing of oak at left and right and on the distal edge. In addition, the upper keybed rests on runners which in turn are supported on the keycheeks of the lower manual and are withdrawn with it when the lower manual keybed is removed from the instrument. This keybed therefore runs the entire width of the case, unlike the keybed of a Kirkman harpsichord in which the lower and upper keycheeks are attached to the inner sides of the case and the keybed is effectively the width of the keyboard only. The compass of the harpsichord is the usual five octaves FF -  $f^3$  without FF sharp. This is consistent with an instrument built in 1773, however the absence of a music desk and the inability of the case to accept a desk without considerable modification points to an earlier date of before 1766 in the case of Kirkman harpsichords.

The wrest plank has several departures from Kirkman practice. The 4ft nut is curved inwards in imitation of the 8ft nut. This latter is also different from a Kirkman nut in that it has the same profile as the 4ft rather than the near quadrant section of a Kirkman 8ft nut. In Kirkman instruments the rows of 8ft wrest pins are parallel to the proximal edge of the wrest plank, however in this case, there is an angling of the rows so that the treble end of each row is a little further towards the main gap than the bass end. The top pin ( $f^3$ ) for the 8ft <sub>2</sub> row is in line with the rest of the pins for this row though in a Kirkman harpsichord with wrest pins parallel to the wrest plank edge it is normal to find this last pin for  $f^3$  set forward about half way between the pin row and the 8ft nut. The wrest pins are drilled, but this is often found on instruments which have undergone restoration and is no positive indication of departure from standard practice. Finally, all the 4ft pins are on the distal side of the lute slide. The normal Kirkman practice is described above and in fig 28.

The soundboard is a poor quality knotty pine and carries a rose like the one illustrated in fig 38 which actually comes from the Glasgow instrument. This rose is superficially like those of the type B1 Kirkman roses but a careful examination shows that it is undoubtedly an imitation. By looking across the soundboard against the light it is possible to see that there is a traditional cut off bar in the normal position, but the soundbars which in a Kirkman are normally four in number and parallel to the main gap in this case are two in number and run parallel to the cut off bar. The upper seven 4ft strings are

carried through the 8ft bridge and are hitched at the 8ft hitch pin rail. This is sometimes found in instruments where the 4ft hitch pin rail has given way and may be the result of restoration. Fig 41 shows the layout of the Glasgow harpsichord, and it can be seen that the strings are almost parallel to the spine in the bass. In almost all 18th century harpsichords there is an offset of the strings so that they are further from the spine at the distal end than at the proximal, often by as much as 2" in the bass. The 8ft strings are double pinned to the bridge for the first 24 notes from the bass.

Despite the many small variations, the overall stringing list is not significantly different from that of a Kirkman instrument and a comparison is given in fig 41. The only marked dimensional difference is in the width of the harpsichord which is 39.00" - an unusually wide layout for the eighteenth century.

The Glasgow instrument is very similar to the Edinburgh harpsichord in all the points noted above. It has, however, undergone at least three restorations. At some time past a venetian swell was fitted which necessitated the addition of a strip of mahogany about 1.0" thick all round the upper edge of the case. Mr W.R. Thomas reports that probably around 1890 repairs were carried out by an unknown craftsman who added three turned legs and the present lid which was made up from an old one with a new wide plank. He added a number of jacks and the present jack rails. Mr Thomas also suggests that it was at this time that the present nameboard was added. Further changes involved the repair of a split in the treble end of the lid by the addition of a patch, and in order to compensate for the almost inevitable buckling the top edge of the case was planed so that it was approximately level. The bottom boards were not removed until repairs were undertaken by Mr Thomas in 1959 when the un-Kirkmanlike bracing shown in fig 42 was revealed. It was also possible to see that the soundboard bracing of this instrument was identical with that of the Edinburgh harpsichord. The original stop arrangement was different however, there being no harp, and the stops being disposed:

Left outer: lower 8ft  
Left inner: lute

Right outer: upper 8ft  
Right inner: 4ft

The present harp stop was added in 1960 as was a pedal control which was fitted to meet the requirements of the University. At this time the additional 1" which had been added to the case to accommodate the venetian swell was removed.

In view of the number of departures from standard Kirkman practice which have been noted in these two instruments, it must be concluded that they are not by Kirkman. In addition, the soundboard inscriptions make it a reasonable

assumption that Faulkner was the builder, and that they are dated 1773 and 1770. Since the legal suit against Faulkner was brought by Kirkman in 1771 and no record of Kirkman's success can be found it seems likely that Faulkner won the case and that he continued to place his name on the soundboards of his own instruments but to place Kirkman's name on the name batten. One explanation for this could be that Kirkman, who was at least as good a money maker as a harpsichord maker, had entered into an agreement with Faulkner by about 1770 whereby the latter could place the name Kirckman on his own instruments in exchange for some sort of royalty. If Faulkner could have proved this in court, it might have been difficult for Kirkman to show how he was "defam'd" by Faulkner's action. The practice of placing the names of well known makers on the instruments of lesser builders was well known, and there are many examples of instruments by Culliford bearing the name batten of Longman and Broderip. The advertisement quoted by James<sup>1</sup> "Harpsichords to be sold cheap, among which is a real Kirkman's" may be further evidence that this practice was rife in the 18th century. It would therefore have been possible for Faulkner on conclusion of the suit (if it was ever brought) to continue with his former practice and to use Kirkman's name on his instruments as late as 1773, provided that either Faulkner won the case, or Kirkman withdrew the charges. It is the writer's opinion that the parchment of Mr Hill was the 18th Century equivalent of the present day solicitor's letter which is sent to erring debtors to remind them of their obligations. Such letters often result in a settlement out of court, and there can be little doubt from the evidence presented in Appendix A that Kirkman was well used to applying such pressure and generally with success.

Whatever the explanation of the circumstances it is pleasing to be able to record that the two instruments discussed are in themselves fine examples of eighteenth century harpsichord building and despite the departures from Kirkman's standard models they are tonally very acceptable. They are both in good condition and are both playable.

In conclusion, the writer would like to acknowledge the help of Messrs J.J.K.Rhodes and W.R.Thomas in supplying much of the information on which this report is based and allowing access to the Glasgow instrument whilst it was in their workshops. The help of Mr John Barnes is also gratefully acknowledged in affording much help and advice during an examination of the Edinburgh instrument.

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1. James, p 43

## Production and Prices

Previous writers have tried to assess Kirkman's output on the basis of comparison with Shudi. The latter's harpsichords are numbered and dated, and the following list, compiled from Boalch and from the additional information available from the Broadwood books<sup>1</sup> makes it possible to give a reasonable estimate of the annual production of instruments:

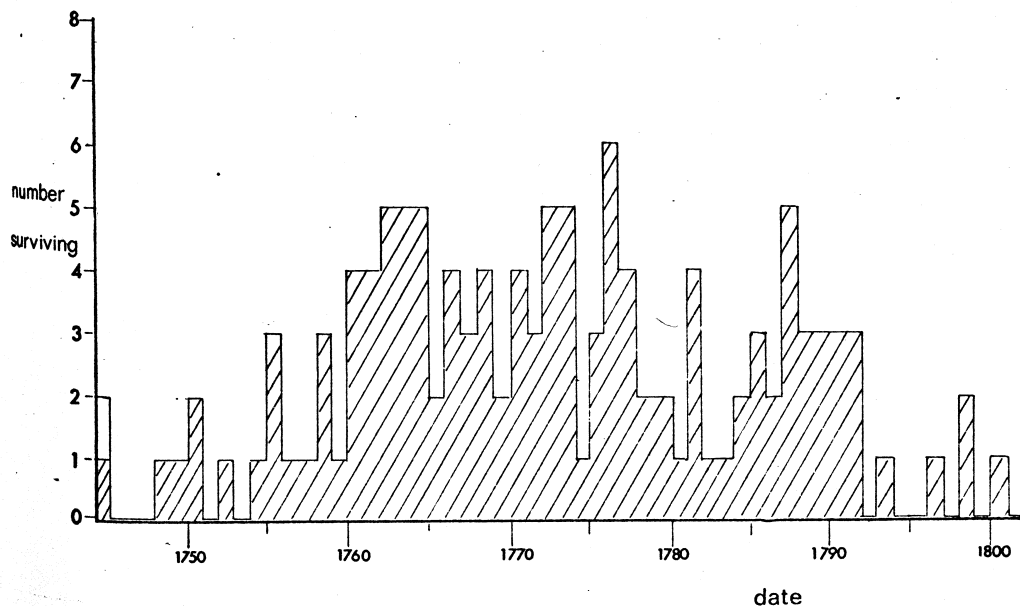
| <u>Date</u> | <u>Number</u> | <u>Production</u> | <u>Date</u> | <u>Number</u> | <u>Production</u> | <u>Date</u> | <u>Number</u> | <u>Production</u> |
|-------------|---------------|-------------------|-------------|---------------|-------------------|-------------|---------------|-------------------|
| 1729        | -             |                   | 1772        | 663           |                   | 1778        | 812           |                   |
| 1740        | 94            | 9 per yr          | 1772        | 668           | 11 in 1772        | 1778        | 825           |                   |
| 1740        | 103           |                   | 1772        | 671           |                   | 1778        | 830           | 36 in 1778        |
| 1742        | 120           | 10 per yr         | 1772        | 672           |                   | 1778        | 831           |                   |
| 1743        | 144           | 12 per yr         | 1773        | 674           |                   | 1778        | 842           |                   |
| 1747        | 190           | 12 per yr         | 1773        | 676           |                   | 1779        | 834           | 20 in 1779        |
| 1749        | 229           | 16 per yr         | 1773        | 678           | 20 per yr         | 1779        | 845           |                   |
| 1751        | 260           | 17 per yr         | 1773        | 679           |                   | 1779        | 849           |                   |
| 1760        | 407           | 16 per yr         | 1773        | 686           |                   | 1779        | 862           |                   |
| 1761        | 423           | 16 per yr         | 1773        | 691           |                   | 1779        | 866           |                   |
| 1761        | 427           |                   | 1774        | 708           |                   | 1780        | 882           | 16 in 1780        |
| 1761        | 428           | 17 per yr         | 1774        | 710           | 26 in 1774        | 1781        | 899           |                   |
| 1765        | 496           |                   | 1774        | 736           |                   | 1781        | 902           | 20 in 1781        |
| 1765        | 499           |                   | 1775        | 750           | 11 in 1775        | 1782        | 919           |                   |
| 1766        | 511           |                   | 1776        | 758           | and 1776          | 1782        | 938           | 36 in 1782        |
| 1766        | 512           | 18 per yr         | 1776        | 762           |                   | 1785        | 1015          | 25 per yr         |
| 1766        | 529           |                   | 1776        | 785           |                   | 1787        | 1070          | 27 per yr         |
| 1767        | 540           |                   | 1777        | 795           | 23 in 1777        | 1789        | 1124          | 27 per yr         |
| 1770        | 625           | 25 per yr         | 1777        | 798           |                   | 1790        | 1137          | 13 in 1789        |
| 1771        | 639           |                   | 1777        | 804           |                   | 1790        | 1145          | 12 per yr         |
| 1772        | 661           | 21 per yr         | 1777        | 807           |                   | 1791        | 1148          |                   |
|             |               |                   | 1777        | 808           |                   | 1793        | 1155          | 4 per yr          |

This list cannot be anything but approximate but the trend from 9 per year to as much as 36 in the 1770s and 1780s is indicative of an increasing demand. A total output of only 1155 of all types of harpsichord in 64 years is by no means vast however, and the tempting thought that harpsichords abounded in all houses in the eighteenth century is obviously incorrect. The majority of instruments were probably destined for London homes and the following quotation from Gardiner, (Music and Friends) shows how the provinces fared:

"Few houses in the country possessed harpsichords and spinets and that as late as 1782 no more than three such instruments existed in the town and neighbourhood of Leicester!"

Boalch's second edition lists 43 Shudi harpsichords which are known with some certainty to have survived and approximately 145 Kirkman harpsichords. Whilst Burney claimed that Kirkman harpsichords were more durable than those of Shudi there is absolutely nothing in the evidence afforded by the surviving harpsichords of both makers to substantiate this claim. Accordingly, since Kirkman did not number his harpsichords the only basis

for an assessment of Kirkman's output is a comparison with that of Shudi. Thus if there are three times as many surviving Kirkman harpsichords as Shudi harpsichords it may be assumed that if the durability of both makes was equal the total outputs were similarly related. This would mean that in the 1770s and 1780s Kirkman on occasions produced over one hundred harpsichords per year. On page 95 when considering the celestine it was noted that it took about three months for Kirkman to make a two manual harpsichord for Jefferson. Admittedly there were specialised requirements in this case and Kirkman thought that it would be ready in six weeks. If three months were the norm then in any one year four harpsichords could occupy the workshop space of Jefferson's instrument and for an output of 100 at least 25 harpsichords would be under construction simultaneously. My examination of the Kirkman property in Broad Street leads me to believe that this was unlikely, there being insufficient space. If however the norm were six weeks, the number under construction at one time is reduced to twelve and this is just possible. It must be emphasised however that there is no proof of the total output figure and this extrapolation of Kirkman's output from Shudi's must remain highly speculative. The histogram given below shows the surviving Kirkman harpsichords plotted against date, and a pattern of gradually increasing output similar to that of Shudi's may be observed with a peak in the 1770s.



Histogram showing the number of Kirkman harpsichords surviving from the years 1744 - 1800

The prices of Kirkman harpsichords have been treated fairly fully by Boalch (p 85) and there is little new to add to his findings with the exception of the two references given in the section on the marquet-ried harpsichords (pp 186 & 187 ) in which in 1764 the Privy Purse account shows £105 being paid to Kirkman for a double manual harpsichord, whilst in 1766 he received £89-5-0 for a double. The former was probably one of the highly decorated instruments whilst the latter was also a superior harpsichord. Later, in 1786 the harpsichord made for Jefferson which was a special commission cost only 66 guineas, but there was to be less work in the veneering than normal and it may have been at a reduced figure to please Burney. Apart from these references, I have found nothing more than the statements quoted by Boalch which suggest that the usual prices ranged from 50 guineas for a single to 90 guineas for a double.

## The Development of Shudi Harpsichords

It has been the intention to give a full review of the Kirkman harpsichord, but at the same time to treat it in the context of the general development of English harpsichords throughout the period. It is therefore necessary to examine at least the main developments in the instruments by Shudi and later Broadwood.

Superficially, Shudi's harpsichords look almost exactly like those of Kirkman, but there are a number of differences. In external casework there is little difference, Shudi harpsichords being cross banded and veneered in a style almost indistinguishable from that of Kirkman. There are no lid swells found and the strap hinges of Shudi instruments are usually much smaller, being only an inch or two in length. An examination of the lengths from those harpsichords which have been measured does not show the same variation with time as is found in Kirkman, doubles of five octave span being usually 97.5" whilst singles are about 92". One of Shudi's significant contributions was the extension of the compass to  $5\frac{1}{2}$  octaves the earliest verified date being 1749 (No 229) though this may not be accurate. Certainly by 1765 this compass is found though it was not standard and the five octave FF-f<sup>3</sup> model continued to be made at the same time as the CC - f<sup>3</sup> model, the former lacking FF sharp at least until 1766 though by 1772 it was being added, (vide No 671). The scale of all the instruments is constant at around 13.5" and in the five octave models, the FF string is also constant at around 73" though there are variations of up to an inch. The layout of the string band is much the same as that adopted by Kirkman at least until 1766. Thereafter by 1772 the plucking point for the unisons and the lute was beginning to be moved back and by 1790 there was a further move which gave the instruments a darker and less incisive tone. My measurements for BN 32 Kirkman of 1766, Shudi No 529 of the same year and Shudi and Broadwood No 1154 of 1790 are shown in Table No 8 and graphs illustrating the layout and the changes are at figures 36, 43-47 inclusive. From these it can be seen that there is a significant change in the Shudi and Broadwood of 1790. Not shown are the results of examination of Nos 671 and 902 of 1772 and 1781 respectively which show an intermediate stage in this development. Before drawing full conclusions however further measurements are desirable. The case construction, soundboard barring and bridge and nut profiles are much the same for both makers, exceptions in these respects being the omission of a soundboard rose by Shudi, the dowelling of the liner to the

bentside, and the use of an 8ftnut of the same profile as the 4ft rather than with the characteristic curved proximal edge found in Kirkman's 8ft nuts. (See fig 37)

The stop arrangement on the foreboard differs between Kirkman and Shudi, the former's harpsichords being equipped as follows:-

Harp to 8ft: Lute : 4ft :

: 8ft<sub>1</sub> : 8ft<sub>2</sub> :

whilst Shudi arranged the stops:

Lute : 4ft: Harp to 8ft :

: 8ft<sub>1</sub> : 8ft<sub>2</sub> :

There is considerable evidence from the Broadwood books and from the surviving instruments that Shudi, and certainly Broadwood employed leather as a plectrum material, and in this there is some departure from what appears to have been Kirkman's practice. In the fitting of the machine stop, the use of venetian swells and the supply of music desks both makers seem to have adopted the same practice.

Finally, there is no evidence that Shudi produced any marquetry-harpsichords of the style made by Kirkman up to 1766. There are however Shudi harpsichords having the same style treatment as the later neo-classic instruments by Kirkman. There is also a further departure from Kirkman in that at least by the 1780s Shudi was producing single manual harpsichords incorporating a lute stop.



patents applied to Musical Instruments in the Period 1730 - 1800, and other Inventions.

Almost without exception, patents applied to musical instruments in the period 1730 - 1800 are concerned either with changing the tone of the harpsichord or improving its stability. Nearly all are mentioned by Boalch under the respective inventors, but for the sake of completing this survey they are mentioned briefly below with such new material as has been gathered.<sup>1</sup>

The first patent to follow Barton's patent of 1730 is numbered 586, dated 30 December 1741 and is by Roger Plenius. It describes in outline a complicated system of pulleys and levers which is designed to keep the harpsichord in tune. As with all these inventions, there is little real description, and the reader is left with but a hazy idea of the inventor's intentions. Plenius also refers to his instrument called the lyrichord which was a gut strung instrument similar to the geige werk used to imitate the violin.<sup>2</sup> Other inventions noted in the patent include the first use of regulating screws in English jacks, ivory and tortoiseshell as plectrum materials, the making of keys with four laths joined together so as to improve rigidity, and hitching of the four foot strings by attaching them to metal pins which probably were fixed to a hitch pin rail below the board and not touching it, the pins projecting upwards through holes in the soundboard so that the hitching of the strings could cause no pressure on the board, neither could the hitch pin rail cause loading on it.<sup>3</sup>

On 10 July 1745, Plenius took out a second patent (number 613) which describes a Welch Harp stop. In essence this appears to be much like the conventional harp stop used by most makers in which pads of leather are pressed against the strings near to the Unconventionally however, the pads are carried at the ends of vertical rods (called matadors by Plenius) which project through the wrest plank, and are operated by some linkage which is in turn activated by a pedal mechanism. The patent goes on to describe other innovations such as a jig to enable quills to be cut to uniform length throughout, and the bushing of keys. Plenius's method consists of fitting leather washers let into the underside of the key lever on the balance rail, and providing at the top what he calls a frame lined on either side of the balance pin with silk twist. The arrangement sounds remarkably like the method employed by most modern key makers. The

1. From information gathered at the Patent Office during visits in 1971 and from the reference quoted on page 82

2. Eric Halfpenny describes the lyrichord in GSJ Vol 3 1950 pp 46-7

3. A similar arrangement has been used recently by John Feldberg

early Dolmetsch instruments employed almost exactly this arrangement except that the balance washer was of felt. A method of bushing the mortises under the front ends of the keys is also described, and this is almost exactly the same as present-day practice. Plenius shows a means of making jacks more stable by closing the tops so that the tongues do not stick to the sides of the jack. (Kirkman was certainly using the method described on page 79 by this date, for the clavichord of 1745 has the standard jacks). Plenius's damper felts were also glued in place, demonstrating that even in the eighteenth century the traditional dampers were not altogether satisfactory. In addition there is a mention of pieces of vellum glued to the back of the jacks to prevent the tongues flying back too far. (Kirkman's wire jack closure accomplished this also). Finally, Plenius describes a method of double pinning to obviate the down pressure on the bridge and soundboard. This appears on the surface to be a description of the method of double pinning known in England for at least 100 years before Plenius, although earlier instruments do usually exhibit some down pressure, the bridge being slightly higher than the 8' hitch pin rail.

In 1769, Shudi took out patent No 947 for the Venetian Swell. It has been discussed on page 159 and it is only necessary here to record that the patent itself is for a period of 14 years. Whilst bearing 18 December 1769 at the top, it is dated elsewhere 12 April 1770 and does contain the words "Now the said Burkat Shudi doth hereby declare that the said piece of mechanism or machinery invented by him, the said Burkat Shudi doth consist of...." indicating that Shudi did consider himself to be the inventor.

By 28 December 1770, Thomas Haxby of York had patented his form of machine stop described in the following terms:

"A new single harpsichord containing all the stops of a double one, which by the use of one pedal only, produces every increase, diminution, & variation of tone that a double one is capable of performing. ... A single harpsichord of two unisons, octave, lute and harp, which by the use of one pedal only (which said pedal has a connection with several sliding tumblers, springs &c) produces ten variations of stops, also an increase and diminution of tone (either gradually or instantaneously) from the softest stop to the full harpsichord, or from the full harpsichord to the softest stop."

Boalch on page 68 quotes an advertisement of 1771 from the St James Chronicle or British Evening Post and Lloyds Evening Post and British Chronicle in which the above wording appears followed by the words "To which is added a swell in the lid", thus indicating that Haxby's

instruments contained all the possible devices of the period. A single manual harpsichord of 1777 in the Castle Museum, York has a machine with a unique linkage which must almost certainly be of the style described in the patent. The instrument is 128H000 and differs from the instrument of the patent in not having a lute stop. There are three handstops in the upper side of the left keycheek which in order from the player control 4ft 8ft<sub>1</sub> and harp to 8ft<sub>2</sub>. One stop in the conventional place on the right of the foreboard controls 8ft<sub>2</sub>. The operation is as follows :- Regardless of the machine and the three stops on the left, 8ft<sub>2</sub> is entirely under the control of the right hand stop lever. With the pedal raised 8ft<sub>1</sub> and the 4ft are held in the on position by springs, and the harp is held off. On the left of the case interior above the wrest plank there is a square section bar which is rotated by operation of the pedal. This bar has drop arms which project downwards to lie opposite the ends of the slides for 8ft<sub>1</sub>, 4ft and harp. By movement of the stops in the key cheek, a lug at the end of each slide is made to stand up so that it engages with the appropriate drop arm on the rotating bar. Thus when all lugs on the slides are in the vertical position, rotation of the bar by depression of the pedal causes 8ft<sub>1</sub> and the 4' to be put off whilst the harp slide is put on. The pedal is attached to the bar by a gut string which passes over pulleys.

In 1771 on 2 May, Richard Wakefield took out patent number 989 covering almost the same ground as Plenius's first patent of 1741. He notes the use of ivory or metal plectra, and a device for "tuning and keeping in tune harpsichords, spinnets and fortepianos". This latter appears from the scant description to be some sort of fine adjustment screw.

Kirkman's involvement with Adam Walker's Celestina has been described above on page 94. It is covered by patent No 1020 of 29 August 1772. Likewise the fitting of Merlin's downstriking piano action to Kirkman harpsichord of 1758 (BN9a) has also been described above. It is the subject of patent No 1081 dated 12 September 1774.<sup>1</sup> Also in 1774 on 28 December Samuel Gillespy of Brownlow Street took out patent No 1092 for "My new constructed principle of putting on the quills to strike the strings of a harpsichord with a peddle & swell, which raises the top, brings on the tone and swells, a new celestial stop at the same time preserving the instrument compleat". This confused piece of writing is made even more perplexing by the explanation in the text of the patent. Even after repeated reading and conjecture nothing is certain. It does seem however that the celestial stop was some sort of striking mechanism which acted in a

1. For full description see The Antique Collector June 1973, Charles Mould; Merlin, the Ingenious Mechanician.

similar way to the piano action of Merlin. The clue to this is given at the end of the patent where Gillespy describes two methods of ensuring that the jacks for a 2x8ft instrument are made to sound the two strings which are close together rather than those either side of the normal position. This requires a retuning as does Merlin's arrangement and a consequent rearrangement of the jacks by crossing them under the upper slide. The celestial stop itself is described as being "composed of wood, metal or wire, screwed at both ends with heads of tanned (sic) leather, buff leather, cloth and wood to complete the said heads".

By 1777, Robert Stodart had taken out patent No 1172 on 21 November for his combined harpsichord and piano. It is not described as such in the wording of the patent, but a drawing with the patent makes it clear that the instrument has a conventional harpsichord jack action (two rows being shown) and an upstriking piano action, the striking line being just in front of the proximal row of jacks. A description on the drawing indicates that on pressing a pedal on the left of the instrument the harpsichord action is brought on whilst the piano is rendered inoperative. Releasing the pedal has the opposite effect. According to the legend with the drawing a pedal on the right "makes the swell upon the octave". Since it appears that the octave can be used with either the harpsichord or piano, it suggests that the instrument has two strings per note, one at 8ft and one at 4ft pitch, and that the 4ft strings are either plucked by the second row of harpsichord jacks, or struck by the piano hammers depending on the position of the left pedal. The octave appears from the drawing to be a second set of strings on the same level as the strings. This would have to be the case if the hammer for each note were to strike 8ft and 4ft simultaneously. Unfortunately the arrangement of the bridges to achieve this is not shown.

A period of nine years elapses until the next patent by John Geib of the Old Bailey was taken out on 9 November 1786. Numbered 1571, it is very similar to Stodart's patent given above. Though it relates mostly to improvements in the piano action, a second drawing notes en passant how the improvement may be "upon the pianoforte and harpsichord". The illustration shows what appears to be hammer action striking 4ft strings, and one row of jacks plucking 8ft strings. There is however no text to support this which is probably a misrepresentation by the engraver.

Though not an invention connected specifically with the harpsichord, it is interesting to note a patent number 1583 dated 15 January 1787 by Wardhaugh Thompson of Clipstone Street, St. Marylebone for what is effectively a monochord contained in a box with an accurately marked slider moved by a rack and pinion to serve as a master tuning device. Musicologists would undoubtedly learn more about temperament and pitch if one of these inventions comes to light.

The following year on 15 August, Charles Clagget Music Master of Long Acre took out a complex patent No 1664 describing at least 10 inventions, most of them relating to tuning of instruments and most probably generally aimed at those who possessed pianos. The application to the harpsichord is also mentioned, however no doubt to cater for the large but diminishing number of people who still played the instrument. The first and possibly most complex invention was a belated attempt once more to solve the problems of temperament by adding two further bridges to the instrument for each string. These bridges placed at the appropriate point over the string could be made to descend from above by means of a pedal thus changing the pitch of the note. Clagget calls the instrument a telio-chordon, and claims that it divides the octave into 39 parts, by which means "the temperature of all thirds and fifths can be highly improved, and what is called the 'wolfe' is entirely done away with".

The remaining inventions cover a wide and diverting range. One suggested improvement is a keyboard in which the keys are all "of one length and breadth, and on the same level rounded at top like the outside stick of a fan, and 1/6in distant from one another throughout the range, and made of distinguishing colours as usual". The object was to provide one form of fingering in any key. Luckily, the "improvement" did not seem to catch on. Clagget also suggests later that the keys should be covered with plates of glass or enamel. The only invention which seems to have come to us in modern times is a suggested tuning key of which the "cross part is 6in and the socket part 2 in long". If this was a new invention, one wonders what an eighteenth century key usually looked like.

Yet a further combined instrument is the subject of Geib's second patent No 1866 dated 18 April 1792. "A new musical instrument, the end and intention of which is to play the pianoforte, clavichord or spinnett with two sets of keys, to which either of these three instruments may be joined together, and played agreeable to the annexed plans". The drawings show combinations of square piano and clavichord, square piano and harpsichord in a somewhat sketchy manner, the instruments each being playable from separate keyboards mounted in relation to each other as the two keyboards of a

double manual harpsichord. The cases of each instrument stand on top of each other. In some cases there appears to be no connection between the two instruments whereas in others there appears some form of pull down connecting the two. Perhaps the most interesting thing is the representation of a rectangular instrument of roughly the same shape and size as the square piano, but containing jack action placed at the distal edge of the case. Cursorily this might appear to be a virginal, but in effect it is probably some form of artists licence to enable the harpsichord to be placed in conjunction with the square piano.

Perhaps the most bizarre invention of the century is that of William Rolfe and Samuel Davis, dated 31 January 1797, number 2160. This relates to the harpsichord, Grand Pianoforte and square pianoforte, and is a suggestion that for the normal wooden soundboard should be substituted a soundboard of "vellum, parchment, silk, wool, hemp, flax, cotton, thread or pasteboard, oiled, papered or otherwise rendered strong". Not surprisingly no surviving example is known, at least not insofar as the harpsichord is concerned.

From 1800 onwards, the harpsichord is occasionally mentioned in patents, but it is obviously inserted as an afterthought, and all the patents affecting keyboard instruments are obviously aimed at the pianoforte. It is noticeable that the harpsichord is still referred to in Trotter's patent No3404 of 1811, and even later in Hauck's patent of 3 March 1813, but in this it is mentioned as "..... if required to old keyed instruments, such as square pianos, grand pianos, harpsichords, &c."

#### Summary of Development 1730 - 1800

With the possible exception of the machine, swell, extension of compass to  $5\frac{1}{2}$  octaves and the development of leather plectra, it is true to say that there was no major change in the concept of the English harpsichord in the seventy years from 1730. The Tabel harpsichord of 1721 is essentially the Kirkman harpsichord of 1800. In view of the apprenticeship of Kirkman and Shudi to this one man, it is not surprising that their products are so similiar. What is perhaps surprising is the adherence of the other members of the harpsichord building fraternity to these norms. The slight departures of the instruments by Mahoon have been noted, though they may be considered as the products of the English

builders who followed in the style of Hitchcock and were at the same time influenced by Tabel, Kirkman and Shudi. All other surviving harpsichords of the period are so similar to the works of these latter that they could almost have been built by them. Despite the similarity of the surviving products sufficient has been traced in the above sections to show that there was no lack of experiment in the fields of stability of tuning, plectrum development and expressive devices. The makers of the period were obviously acutely aware of the unsatisfactory nature of an instrument which required the attention of a tuner at least once a month, and needed regulation at even more frequent intervals. As today, not every owner could be expected to be able to tune his own instrument, and the cost of tuning could well exceed £5 per annum - more than the annual cost of a good domestic or cook. Nonetheless, despite many suggestions and several patents, nothing has survived to suggest a satisfactory solution.

Most writers have pointed out that the continued experiments to find new changes in the tone produced were attempts to combat the rise of the pianoforte. I find this difficult to sustain as an argument. William Barton's patent of 1730 is the first of a number of patent's suggesting the use of new quill material, and at this stage the piano was barely ten years old and by no means developed to the stage where it constituted a threat to the harpsichord. It seems unlikely therefore that he was doing anything more than experimenting with the idea of improving the basic instrument. Similarly the earliest harpsichords to receive the machine stop were probably made in the 1740s, and this device could not in any sense be a means of helping the harpsichord to emulate the piano. It was an improvement which gave an added capability to the performer of harpsichord music on the harpsichord rather than the performance of piano music on the harpsichord. The addition of the swell in the 1750s may have been the first conscious effort at giving the harpsichord an expressive range equivalent to the piano, but in no sense could it provide the nuances obtainable with the finger on the piano keyboard.

Perhaps the most significant developments in the eighteenth century were the many attempts to produce instruments combining jack and hammer action. At least three of the patents are devoted to this concept, and the instruments by Merlin and Stodart are surviving examples. There can

be little doubt that the increasing string tension of the piano could not enable these instruments to be manufactured with the full potential of the simple piano and at the same time provide the delicacy of the harpsichord. In addition, the complications of the combined instrument rendered them expensive, and it was probably preferable to purchase two separate instruments.

On a lower level, there was development within many facets of established harpsichord practice. In this section, Kirkman harpsichords have been treated fully and in several areas, change rather than development may be discerned. Similarly Shudi and Broadwood harpsichords changed over the years, the changes in plucking point position in later years being more significant than anything attempted by Kirkman. And yet, it is the overall permanence of the concept of the English harpsichord which is the outstanding factor. In no surviving example is there any suggestion of the importation of any continental influence. No English harpsichord is known with a shove coupler, peau de buffle, or genouillere, or in the case of a two manual instrument is an arrangement other than a dogleg to be found. There is but one example of a 16ft stop and this is in the combined instrument by Merlin mentioned above. It is as though in the second quarter of the eighteenth century a curtain had been drawn between England and the continent forbidding all interchange of ideas. It is almost as if the English builders were atoning for the wantonness with which they had adopted the many aspects of continental building in the seventeenth and early eighteenth century.

Hubbard has suggested that in the large harpsichords of Kirkman and Shudi the art of harpsichord building had reached its zenith. It may be that the English themselves, with the confidence with which the Georgians faced the world, also felt that their instruments were without parallel, and that there was no room for improvement. It is a feeling that there may still be some truth in this view which has given the writer a love of the English harpsichord which has caused this study to be pursued over many years, and with much enjoyment.



## Appendices

## Appendix A. The Life and Family of Jacob Kirkman

The date at which Jacob Kirkman came to England is not known with certainty. It is known that in his early years he worked for Hermann Tabel, and for this reason it is necessary to look in detail at Tabel.

James Shudi Broadwood,<sup>1</sup> writing over 100 years after Tabel's death states that Tabel learnt harpsichord making from the successors to the Ruckers in Amsterdam. Jan Couchet was a grandson of Hans Ruckers the elder, and it is likely therefore that Tabel learnt his trade in the shops of the Couchet family. The date at which he left them is uncertain; however the last recorded Couchet instrument is dated 1680<sup>2</sup> and this is the latest verified date of any member of the family.<sup>2</sup> It would therefore seem probable that Tabel left their employ by that date, and Boalch says that he probably settled in England around 1700.<sup>3</sup> Almost certainly Tabel must have come from the Low Countries, for in his will he mentions two daughters, Gerthrud and Catherine as well as his brother, Barnard, all resident at Amsterdam. The name Tabel is probably of German origin, and the family like many others may have emigrated to the Low Countries from Germany. That he was resident in London by 1716 is established by an entry in the rate books of the Parish of St. Martin in the Fields where he is shown as "Harmann Tabell" of Oxindon Street.<sup>4</sup> Oxenden Street as it is now, can still be seen today, running southwards from Coventry Street, and parallel to the Haymarket. It stands on a close of land marked on a map of 1585 as Scavengers Close. It first appears in the rate books of 1675, and so by 1716, the street was only 40 years old, and Strype<sup>5</sup> in 1720 described it as "a good open, well built and inhabited street.... with a Chapel of Ease called the Tabernacle" on the west side. Tabel was thus working in a good area of London, though the houses on Horwood's map<sup>6</sup> do not appear large.

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1. James Shudi Broadwood, Some Notes made by J.S. Broadwood 1838 with Observations and Elucidations by H.F. Broadwood 1862

2. Boalch, p17 et seq

3. Boalch, p121

4. Rate Books of the Parish of St. Martin in the Fields, Westminster Public Library, F 3597, p17. The entry reads "Harmann Tabell Rents 16-0 First Rate 0 - 8 - 0 Second Rate 0 - 8 - 0"

5. Survey of London, Vol XX, p 101.

6. Horwood, Plan of Westminster, Southwark and parts adjoining 1792-1799. Publication No 106 of the London Topographical Society.

From Burney<sup>1</sup> and J.S.Broadwood<sup>2</sup> it is known that Burkat Shudi (or Tschudi) went to work for Tabel, though the date of his apprenticeship is not known. The only certain dates are 1718<sup>3</sup> when Shudi arrived in England, and 1729, the date of his first recorded harpsichord, which must have been made after he left Tabel. Presupposing that Shudi served the usual seven years requisite apprenticeship and that he left Tabel by 1729, this places his entry into Tabel's service in 1722 at the latest.

Despite the advertisement in the Evening Post, Tabel did not give up in 1723, for the following advertisement appeared in the St James's Evening Post No 2774 of 22-24 February 1733:-

"Whereas it has been reported, that Mr. TABEL the famous Musical Instrument Maker, was dead, and that he hath learn'd his Art to one of his Men, to make that fine Tone in Harpsichords, all which is false and foundless, he lives still at his House in Swallow - Street, over against Haddon-Court, near Golden Square."

According to Boalch, Tabel moved to Swallow Street in 1724, but the rate book of that year does not record his name, and the first mention of him in the rate book is in 1729, though there are several books missing or incomplete in the years between 1724 and 1729. In 1700 there were three Huguenot churches in the Parish of St. James, Piccadilly and this may have been one of the reasons for Tabel's move to Swallow Street. (Tabel's Huguenot origins have not been proved, though Boalch and the author have carefully examined the Rolls of the Huguenot Society.)

Swallow Street has mostly disappeared in the building of the present Regent Street though the southern end still remains. The street first appears in the rate books of 1671, when building was begun in Swallow Close, which takes its name from a 16th Century tenant, Thomas Swallow. Ogilby and Morgan's map of 1681-82 shows that its course had been extended northwards into the area of Mulghay Close (see fig 48 ) or Dog Field, at whose northern boundary it joined the western extremity of Beak Street. When building continued further northwards it became known as Great Swallow Street, and eventually became an important thoroughfare connecting Oxford Street and Piccadilly. Strype, writing again in 1720 says of it "Very long, coming out of Pickadilly, and runneth

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1. Rees, Cyclopedia, vol 31, Schudi Burkat.

2. J.S.Broadwood, Some notes made by J.S.Broadwood , p4

3. Boalch, p105

Northward to Tyburn Road, against Neb's Pound, but of no Account for Buildings or Inhabitants." Stables and coach houses abounded, and a little north of Beak Street "this street endeth, and falleth into a lane that leadeth to the high Road." It would appear therefore that perhaps Tabel's fortunes suffered a reverse on moving to Swallow Street, for the contemporary descriptions make it appear to be of lesser merit than Oxenden Street.

It is difficult to trace the exact house in which Tabel lived in Swallow Street, but a conjecture can be made by comparing the rate book entries with Horwood's map of 1799. This latter (see figs 48 and 49) gives details of every building with the house numbers then in use. The rate books<sup>1</sup> are written in the order in which the collector of rates called at the houses. The list below is that for 1729, and summarises the numbers of houses in each walk except in the case of those few houses on either side of Tabel, where the full entry is given:-

|                        |                     |                                    |
|------------------------|---------------------|------------------------------------|
| Part of Swallow Street | 14 houses           | Walk 1                             |
| Lester Street          | 8 houses            | Walk 2 (presumably south side)     |
| North                  | 7 houses            | Walk 3 (presumably north side)     |
| Cross the Way          | 4 houses            | Walk 4 (presumably south side)     |
| North                  | no entry            | Walk 5 (probably not yet built)    |
| Swallow Street         | 13 houses           | Walk 6 (west side Nos 32-44)       |
| Beak Street            | 9 houses            | Walk 7 (north side 1-9 inclusive)  |
| South                  | 4 houses            | Walk 8 (south side of Beak Street) |
| A court                | 3 houses            | Walk 9 (probably Chapel Court)     |
| Swallow Street         |                     | s d                                |
|                        | Jn Enstone          | 15 6                               |
| come at midsummer      | Jn Ruby             | 11 6                               |
| she pleads poverty     | Widow Joyce Gilbert | 11 6                               |
|                        | Mr.Till             | 11 6                               |
|                        | Mr.Table            | 11 6                               |
|                        | Wm.More             | 11 6                               |

Here follow a further 34 houses, making a total of 40 houses for walk 10 presumably starting on the west side of Swallow Street. The collector then continued to Warwick Street.

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1. Rate Books of the Parish of St. James's Piccadilly, Westminster Public Libraries, Buckingham Palace Rd., London, S.W.1.

The probable route taken by the rate collector is shown in fig 49 and if this supposition is correct, it places Tabel's house as number 46, on the west side of the street. This house fits well the description of the property given in Tabel's will<sup>1</sup>, in which he leaves two houses in Swallow Street, as well as the three "back houses". In the figure it can be seen that there is an unnumbered house across the entrance to the stable yard from No 46, and in addition there are some back houses behind both properties. It is likely that these back houses were either workshops or stables. The only possible flaw in this argument is the circuitous route taken from Beak Street to Chapel Court. It seems necessary however if the collector was expected to find three houses between Beak Street and his return to Swallow Court.

Returning to the advertisement of 1733, it would seem that Tabel was the victim of rumour, but the rate books indicate that something must have happened in the years that he was at Swallow Street to cause this state of affairs. The rate books have entries in pencil on the blotter which is found opposite each page, and which was necessary for blotting the ink of the page, and also for absorbing the rainwater which fell on the page in wet weather, and in some cases has caused some smudging of the entries. In the 1729 book quoted above there are entries shown against Jn. Ruby and Widow Joyce Gilbert. In 1731, against the space occupied in previous years by Tabel appears the entry "Emp" (presumably "empty"). Similarly in 1733 both Widow Gilbert and Tabel are shown as "Run away", whilst in 1738, the year of his death, Widow Gilbert and Tabel are shown as "Poor".

It is interesting to note what in these days would be called "name-dropping" on the part of Tabel in both advertisements quoted. In the first he claims to be near Piccadilly, and in the second, near Golden Square. Both were fashionable areas in the early eighteenth century, and it was usual for trades people in the surrounding areas to claim an affinity with them.

References to Tabel's instruments (other than the surviving harpsichord treated in Part II.) are quoted by James<sup>2</sup> and Boalch<sup>3</sup> as follows:-  
In 1777 Lady Howe "bought a second hand harpsichord by Table"; the source of the quotation is not given.

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1. A part of Tabel's will obtained from the Probate Registry is at fig 59

2. James, Early Keyboard Instruments, p41

3. Boalch, p121

Baker<sup>1</sup> states that there was in 1720 a harpsichord by Hermanus Tabel at Cannons, the residence of the Duke of Chandos.

Christie's sale room catalogue gives the following:-

"15 March 1793. Item 54. An excellent fine toned harpsichord by Tabel! (Vendor Richard Brickendon; buyer and price not given.)

"11 June 1793. Item 76. A fine toned harpsichord with 4 stops by Tabel! (Vendor Mrs. Bacon; buyer Rixon, price 5 gns.)

This latter is a very poor price for a harpsichord, even allowing for the fact that the harpsichord was going out of fashion and that the instrument was at least 55 years old.

Tabel died in 1738, and his will is still available in the original at Somerset House. It is written in a firm clear hand, and sealed with a seal which is obviously the pattern from which the rose of his surviving harpsichord is taken. In the will he leaves everything to his beloved wife Susanna Virgoe and the issue of her body by him. He also adds that if he should die without issue (as apparently was the case), then the Estate is to be divided between his two daughters, Gerthrud and Catherine, both resident at Amsterdam. From this it is concluded that Tabel was married at least twice, and that most probably his first marriage occurred before he came to England. Tabel bequeathed £10 to William Virgoe of Lambeth, Surrey, and though nothing can be proved, it might well be that the Virgoes were an English family, or possibly Huguenots living in Lambeth.

It is known from Burney<sup>2</sup> and from the following advertisement in the Daily Gazetteer of 8th May 1739 that Jacob Kirkman was Tabel's foreman:-

"Whereas Mr. Hermann Tabel late of Swallow Street, the famous Harpsichord maker, dead, hath left several fine Harpsichords to be disposed of by Mr. Kirckmann his late Foreman; this is to acquaint the Curious that the said Harpsichords, which are the finest he ever made, are to be seen at the said Mr. Kirckmann's, the corner of Pulteney Court in Cambridge Street, over against Silver Street, near Golden Square."

Tabel obviously thought well of Kirkman for he left him five pounds, (and the same sum to Henry Grutzman, for they were both witnesses of the will). From Burney<sup>3</sup> it is also known that Kirkman married Tabel's widow, Susanna Virgoe, but the dates of Tabel's death, and Kirkman's marriage are complicated by an apparent contradiction in dates in two administrations which are attached to Tabel's will. The first of these, dated 27th January

1. Baker (C.H.C & M.I.) The Life and Circumstances of James Brydges, First Duke of Chandos, Oxford, Clarendon Press, 1949.

2. and 3, Rees, Cyclopædia, Articles on Kirkman, Facteur.

1738 shows that Susanna Virgoe, relict and residuary legatee of Tabel was granted the administration of the goods of Hermanus Tabel, since no executor was named by Tabel in his will. Here arises the first problem, for this administration which must have been granted after Tabel's death is dated apparently before he wrote his will on 28 July 1738. I am indebted for an explanation to Donald Boalch, who has pointed out that in old style dating, the year ended not on 31 December but on 25 March. On this assumption, Tabel died between the dates which we would now describe as 28 July 1738 and 27 January 1739. The second administration is dated 13 October 1740, and grants the estate of "Susanna Kirkman, otherwise Tabel, otherwise Virgoe (late wife of Jacob Kirkman) ..... now deceased" to "Gerthrud Meichman otherwise Tabel (wife of John Christian Meichman)". From these two administrations it may be safely concluded that Tabel left no children by Susanna Virgoe, and that she married Kirkman and subsequently died between 27 January 1739 and 13 October 1740.

The circumstances of Kirkman's whirlwind courtship of Susanna Tabel are recorded by Burney in his article on Kirkman in Rees's Cyclopaedia :-

"KIRCKMAN, Jacob. An excellent harpsichord maker who came to England about the year 1740 and worked with the celebrated Tabel as his foreman and finisher till the time of his death. Soon after which, by a curious kind of courtship, Kirckman married his master's widow, by which prudent measure he became possessed of all Tabel's seasoned wood, tools and stock-in-trade. Kirckman himself used to relate the singular manner in which he gained the widow, which was not by a regular siege but by storm. He told her one fine morning at breakfast that he was determined to be married that day before twelve o'clock. Mrs. Tabel, in great surprise, asked him to whom he was going to be married, and why so soon? The finisher told her that he had not yet determined whom he should marry, and that if she would have him he would give her the preference. The lady wondered at his precipitancy, hesitated full half an hour, but he, continuing to swear that the business must be done before twelve o'clock that day, at length she surrendered: and as this abridged courtship preceded the marriage act, and the nuptials could be performed at the Fleet or May Fair without loss of time or hindrance to business, the canonical hour was saved, and two fond hearts were in one united in the most summary way possible just one month after the decease of Tabel!"

The address given in the 1739 advertisement shows that Kirkman must have taken his new wife away from Swallow Street, and this is confirmed by the 1739 rate book entry in which Tabel's former house is shown as empty.

Tabel's one surviving harpsichord is treated fully in Part I and is dated 1721, two years before the following advertisement appeared in the Evening Post of 30th May 1723 and again verified his address: "Mr. Tabel, the famous Harpsichord maker has 3 Harpsichords to dispose of, which are and will be the last of his making, since he intends to leave off Business. At his House in Oxenden Street over against the Black Horse in Piccadilly. N.B. He has also some fine Airs-wood for furnishing the insides to dispose of." Unfortunately the Black Horse cannot be traced in Oxenden Street, but the mention of Piccadilly and the position of the entry in the rate book suggest that it must have been at the north end. It is puzzling in that Oxenden Street does not connect with Piccadilly but Coventry Street, which was certainly called by that name in 1723. It is not unknown for this type of description to cause confusion as will be seen when discussing Kirkman's property.

It is interesting to note that at the time of writing, Tabel had three instruments to dispose of. This would surely have been exceptional for a maker whose instruments were highly prized as is suggested by James (footnote 3, p41). Dale, (p 64) points out that Shudi's instruments were sold as they were made, and it might be concluded that Tabel's reputation was not as famous as his advertisement would have led the reader to believe. It could on the other hand point to a large output of instruments, but the number 43 on the surviving instrument of 1721 means either an output of about 2 a year if Tabel came to London in 1700, or at the most an output of 8 a year if the known date of 1716 is the date of his arrival. In either case the output is not large. It is known (see below) that Shudi and Kirkman were successively at work with Tabel and so the business must have included at least two workmen, and an output of 8 a year would be reasonable for a workshop of this size. If Tabel's work was highly prized, it would have been strange for him to have three harpsichords in stock, and it is concluded that the Flemish style instruments were not yet greatly in demand. This premise supports an occasionally expressed theory that the reason for the scarcity of pre-1740 harpsichords is that they were not greatly in demand and were therefore not made in large numbers.



The wording "the corner of Pulteney Court in Cambridge Street, over against Silver Street, near Golden Square" gives rise to some speculation. A more modern wording would now run "the corner of Silver Place and Lexington Street opposite Beak Street", but despite careful searches in the rate books it is not possible to find any trace of Kirkman at this address. It is possible that Kirkman had lodgings there, or perhaps a small workshop. Regrettably nothing remains of the eighteenth century property in this area, and it seems that this period of Kirkman's life will remain obscure. Fortunately, it must have been a short period, for by the end of 1739, Kirkman is found in the rate books at No 17 Great Pulteney Street and his business was conducted from this address until 1750. Great Pulteney Street was laid out in the early eighteenth century during the general development of the Pulteney estate. The street was never a particularly fashionable one, neither did it cater for any particular industry or trade. Despite this, it did attract certain notable people in music and the arts. Those of note are shown in fig 51 which is redrawn from the Survey of London. It can be seen that Shudi established himself not far from Kirkman in 1743 in the block 32-35 Great Pulteney Street, and it may have been the proximity of his rival that caused Kirkman to move to Broad Street in 1750. In addition, Samuel Blumer who was Shudi's foreman had set up in his own right somewhere in the street by 1753, and most probably by 1745. Despite this, Kirkman's nephew Abraham, whom he eventually took into partnership, came to No 40 in 1759. Both No 17 and No 40 are still standing, though it is not certain that the present structures are those which were built in the eighteenth century. In most respects they seem original, and the front elevation shown in fig 52 is almost certainly the elevation seen by Abraham Kirkman when he lived there. Fig 53 shows a photograph of the house in 1969.

Dr. Burney had a long association with Kirkman, and he writes at some length and with obvious affection of him in the article entitled KIRCKMAN as well as that entitled FACTEUR in Rees's Cyclopaedia. The paragraph about his marriage finishes with the following:-

"Kirkman lived long enough to stock the whole kingdom with his instruments, and to amass great wealth. He had no children, but as many nephews hovering over him as a Roman pontiff. Theodorus, the father of

Isocrates, was a flute maker, who acquired wealth sufficient by his employment, not only to educate his children in a liberal manner, but also to bear one of the heaviest public burthens to which an Athenian citizen was liable; that of furnishing a choir or chorus for his tribe, or ward, at festivals and religious ceremonies. Each tribe furnished their distinct chorus, which consisted of a band of vocal and instrumental performers and dancers, who were to be hired, maintained and dressed, during the whole time of the festival, an expense considerable in itself, but much increased by emulation among the richer citizens, and the disgrace consequent to an inferior exhibition. The fluctuations of trade and public favour have rendered the business of boring flutes far less profitable at present than it was in the time of Theodorus. But our harpsichord-maker, Kirckman, who was known to be worth 90,000 l. twenty years before he died, doubled the profits of his instruments by becoming a pawnbroker and a usurer; obliging young heirs with money as kindly and as with as much liberality as a Hebrew.

At a time when ruin stared harpsichord makers in the face, by the rage with which musical ladies were sieged for the guitar, in preference to other instruments, Kirckman hit upon an ingenious expedient, which saved himself from bankruptcy, and restored the harpsichord to its former favour. (see Guitar) He did not live to see his excellent double harpsichords of sixty or seventy guineas price sold at auctions for twelve or fourteen pounds, and the original owners turn them out of their houses as useless lumber. But such are the vicissitudes of this world, that our descendants will, perhaps know as little about the pianoforte, as we do now of the lute or lyre. Kirckman is supposed to have died in 1778 worth near 200,000 l."

The ruse by which Kirkman converted the ladies back to the harpsichord is related in the article on the GUITAR: Briefly, he bought up a number of guitars and presented them to the ballad singers in the streets. The ladies of fashion were thus shamed into giving up the guitar lest they be associated with those of lower rank in society. Burney records the slightly tedious story of Theodorus once more in his article FACTEUR. He ends with the words:-

"But then we have a harpsichord maker in our own country (old Kirckman) who died worth 100,000 l. and who was as able to maintain a choir as Theodorus or any dean and chapter of a cathedral."

Burney's description of Kirkman is wrong in several demonstrable ways. In the first place he says Kirkman came to England in 1740, but this is obviously incorrect. Secondly he says that Kirkman died in 1778, but it is known with certainty that he died in 1792.<sup>1</sup> In addition, he seems very uncertain about Kirkman's wealth, though he realised that it was considerable. Nonetheless, these lapses are pardonable when it is realised that Burney was writing in the early years of the nineteenth century, some considerable time after the events.

<sup>1</sup>. Parish Registers of the church of St. Alphege, Greenwich.

Burney probably thought highly of Kirkman, for his daughter Fanny records how it was through Kirkman that her father met Fulke Greville. The description is lengthy and treated with some relish by P.A. Scholes.<sup>1</sup> Greville was the son of the Hon. Algernon Greville and grandson of Fulke Greville, 5th Lord Brooke. Fanny describes him as possessed of every advantage of birth, fortune and figure, and "the finest gentleman about town". In the same context she describes Kirkman as "the first harpsichord maker". In the summer of 1746, whilst at Kirkman's shop, Greville asked him if he knew of a musician who could give him instruction, remarking that he required someone who was competent as a musician, but also cultivated and a fit companion for a gentleman. Greville complained that all these attributes were rarely found in a musician. Kirkman arranged to fix a meeting between Greville, and a young musician who would fit the requirement, but agreed that the musician would not be told the real reason for the meeting, and would be led to believe that he was to be present only to demonstrate Kirkman's instruments. Accordingly the unsuspecting, twenty year old Burney was invited to Kirkman's shop when Greville was next present, and the instruments were demonstrated. Greville was disdainful of Burney at their first meeting, and though he was genuinely impressed by his musicianship, it was not until a second meeting a week later, at which Burney performed on a new double manual harpsichord that the two men became friends. On this occasion, Burney's natural charm asserted itself, and Greville invited Burney to his house at Wilbury, and desired him to become his own personal tutor. Unfortunately Burney was not able to accept the second offer, because he was under contract to Arne; but the opportunities afforded to Burney through Kirkman's intermediacy must have made the two firm friends. Later in life, Burney was to live a few yards from Kirkman when the latter was in Broad Street and Burney was at No 50 Poland Street, from 1760 - 1770.

Kirkman and Burney probably remained friends throughout their lives. When Burney's General History of Music was published in 1789 three members of the Kirkman family were among the 857 subscribers.<sup>2</sup>

1. P.A. Scholes, The Great Dr Burney, OUP 1958, Vol. I, p37

2. P.A. Scholes, The Great Dr Burney, Vol. I, p295

It is not certain how Kirkman was allowed or enabled to trade as a master harpsichord maker in his own right. Though he obviously served an apprenticeship with Tabel, there are no records of the apprenticeship in the rolls of the Freemen of the Joiners' Company. It was not in fact necessary to be a Freeman of the Company most nearly connected with the manufacturer's trade, and several Harpsichord builders traded as Freemen of the Haberdasher's Company; however, there is no known record of Kirkman's belonging to a Company. It has been suggested by the Librarian of the Guildhall Library, Mr Dawe, that since the time of the fire in 1666, the shortage of skilled craftsmen in England had been alleviated by a steady flow of Continental workmen who had been enabled by the City Authorities to practice on their own without the formal apprenticeship and Company membership required of the native craftsmen. It may have been under this cover that Kirkman worked. Naturalization was granted to Kirkman on 25th April 1755.

In 1750, Kirkman moved to new premises in Broad Street (now called Broadwick Street). Although the Rate Book for 1750 is missing, the date of arrival in Broad Street is given in the Survey of London,<sup>1</sup> and Kirkman is shown as having occupied what is now number 54.

The whole area of Great Pulteney Street, Swallow Street, Golden Square and Broad Street is in the Parish of St. James', Piccadilly, and it was in Kirkman's day on the decline from a good-class, late seventeenth century - early eighteenth century residential area to an area of trades people. Golden Square was undoubtedly still the most attractive feature, but from housing one duchess, six peers, one bishop, six Army Officers, and a number of other titled residents in 1707, it had declined to having only one titled person in 1740. Most titled people had begun to move to the newer and more attractive houses in the Burlington Estate. By the middle of the eighteenth century Golden Square had attracted a large group of Foreign diplomatic envoys, and by the end of the century, it catered also for foreign artists. The harpsichord maker Joseph Mahoon lived at No 38 from

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1. Survey of London, Vol. XXXII, p215

1742 to 1763, whilst at No 1 lived William, Matthew and Edward Stoddard from 1794-1861. Other people of interest who lived in Golden Square include Rice Jones at No 11, 1802-1812, who advertised himself as "Upright, Grand and Square Piano-Forte Maker to H.R.H. the Prince of Wales". He traded also in small coal, and appeared in this guise in the directories for many years. At no 13 lived the dancer Elizabeth Gamberini from 1753-63, whilst at No 16 lived Angelica Kauffman 1767-81, followed by another artist, Prince Hoare, until 1787. From 1789-94, Andrew Plimmer, the miniaturist, lived at No 28 and at No 35 Thomas Robinson lived from 1710-1724. Robinson, according to Burney, established weekly concerts and assemblies in the manner of conversazione which were frequented by all such as had any pretensions to politeness and good taste. The chief attraction appears to have been Robinson's daughter, Anastasia, the celebrated singer.

Golden Square was one of the first attempts at conscious town planning. It seems probable that Wren himself may have had some part in the design of the square, and by 1680, the controlling influence of Wren insured that those building from then onwards should build in a style uniform with the existing houses. The original parcels of land on which the area was built are shown in figure 50 overlaid on Horwood's map of 1799. From this it can be seen that the name Golden Square is probably derived from Gelding Close. On the Pulteney Estate, including Great Pulteney Street, the reconstruction of the area began about 1718, and was carried out to minimum specifications. There were four main rates of building ranging from the first, which was the lowest, and the cheapest. The houses in the principal streets of the Pulteney Estate were to be of the second rate, but were also protected by fire prevention regulations introduced in the Act of 1708, as well as having to comply with a fearsome list of building regulations. Thus, whilst Kirkman's first house in Great Pulteney Street was not of the largest or most attractive, it was a substantial and serviceable building, as may be seen to this day.

With the exception of Golden Square, and possibly Poland Street, which had a number of titled dwellers as well as legations, the area

did not attract citizens of the first rank. There are several causes for this. One of them must undoubtedly have been the prolonged period of building with its attendant noise and inconvenience, which continued for nearly half a century. A second, and perhaps more cogent reason for the absence of the upper classes was the proximity of a number of lesser streets, and parochial establishments. As social taste increased in Georgian England, so the gentry chose to live in peaceful and elegant surroundings, and the nearness of unsavoury streets and establishments was a great deterrent to the speculator who sought to sell his property well.

Whilst, as will be seen, Kirkman's second house in Broad Street was in itself a more elegant and spacious property than his first house, the area in which it stood must have been unattractive. In Great Pulteney Street, he had to suffer the fumes and effluent from Davis's Brewery which occupied the southern end of the street until 1745 at least. By 1730, the pest house which had been in the area had gone, but once removed to Broad Street, his property was nearer to the Burial Ground, which had been established in 1693, and was extended to the limits shown on Horwood's map in 1733. Next to this was the Poor House established in 1688, and the Workhouse at the corner of the Burial Ground, established in 1725-7. This latter had to be closed in 1742, but was subsequently reopened under new rules in 1762. By this date there were 1100 poor entitled to Parish Relief, and they received between them £6000 or £7000 per annum. The poor of the workhouse were set to work on silk weaving, and making of quilted petticoats. Though not so close as the workhouse, other unsavoury activities in the area included one Brewery in Colman Hedge Close, and two in Brewer Street. There was also metal smelting for guns in the area north of Piccadilly, and saltpetre houses in Peter Street, whilst in the ground behind Burlington House there was collecting night refuse, boiling for saltpetre and glass making. Many of these latter activities were on the wane by the time Kirkman set up in the area, but building was prohibited on medical grounds in the Marshall Street area, and the western end of Broad Street until the 1730s as a result of the contamination by the pest houses which had stood at the western end of Broad Street.

Despite the tremendous strides in hygiene made in the eighteenth and nineteenth centuries, even as late as 1854 a particularly serious outbreak of cholera in Broad Street was traced mainly to the Broad Street Pump, which stood outside No 40. Seven hundred people died as a result of this, one hundred and twenty seven dying in one day in September.

The Broad Street area is shown in figure 51 with the old numbers as on Horwood's map, and the new numbers as they now exist, in brackets; thus No 19, first occupied by Kirkman in 1750, is now No 54.<sup>1</sup> Subsequently, other members of the family acquired the houses on either side, so that No 18 (now No 52)<sup>1</sup> was occupied by Jacob Kirkman's nephew, Abraham Kirkman from the time that he went into partnership in the firm in 1772 until 1791, though in fact the house belonged to Jacob Kirkman.<sup>2</sup> Abraham's brother, also Jacob Kirkman, the organist and composer acquired No 20 (now No 56) in 1780, and lived there until 1801.<sup>3</sup> Thus the block of three houses 19-21 were in the family, and it is possible that harpsichord building was eventually carried on in at least two (18 and 19) and possibly all three.

The whole row, originally 16-21, (now 48-58) was built as a terrace unit, and luckily is still standing. All are the subject of a preservation order. Figure 54 gives an interior elevation of the present No 50, which is typical of all the houses in the row, whilst an exterior elevation of the row, and plans of each floor are given at figure 55. The exteriors of the houses are illustrated at figures 56 and 57. Unfortunately the fronts of the houses have suffered a number of changes since Kirkman's time, and the fourth storey and part of the third storey of each of the three houses has been rebuilt following bomb damage in the 1939-45 war. Nonetheless, the houses are still in such a state that their internal structure is much as it was, and the front door cases are original. Most of the main rooms of the houses are panelled, though generally this panelling has been painted. In the ground floor front room of the present No 56, there is a round headed, semi-circular, niche on either side of the chimney

1. Survey of London, Vol. XXXII

2 & 3. GLC Record Office, Document E/HOD/144, Lease of House in Broad Street.

breast, and in the back room and the closet there are corner chimney pieces, moulded on the inner and outer edges and with shaped lintels. In the first floor back room of the present No 54, which was Kirkman's own house, the chimney piece has a wooden architrave, carved with egg and dart.

An examination of the houses does not yield any information about the likely use of the rooms in Kirkman's time. The largest rooms in the houses are the front rooms on the first and second floors. These are 18' x 10'6", and though they are elegant and attractive rooms, they are not large. From the account of Greville's meeting with Burney, it is certain that one room must have been a show room, and this would presumably have been one of the larger and more attractive rooms - most probably the first floor front room. The business of harpsichord building does require reasonable space, and it is usually most easily accomplished on the ground floor, where there is no necessity to move the instrument up or down stairs once it is completed (though one modern builder, Mr T. Goff, for many years had his workshop on the top floor of a larger, but similarly designed London house). For this reason it is suggested that the ground floor of the house was given over to workshop space. It would have been possible to have worked on two instruments in the front ground floor room, and one in the back room, but this would have been a little cramped. In the eighteenth century, however, working conditions were not so closely controlled as they are now, and in his earlier years, it is probable that Kirkman would have been prepared to sacrifice some comfort in order to boost production. By 1750, Kirkman was on his own and had no family to worry about; he would therefore have needed only a bedroom for himself.

Some light is shed on the other occupancy of the house by the account of a "break in" into Kirkman's house recorded in an Old Bailey Session Paper dated 1784,<sup>1</sup> reproduced at Appendix G. In this it is established that Kirkman had a servant, Sarah Spencer, living in the house, and a coachman, Thomas Morris who probably lived there too. It also implies that a second servant, Elizabeth Williams, lived in the house. If, in fact, there were two women servants it would not

1. GLC Record Office, OBSP 1784, Ap64



have been incompatible with eighteenth century practice for these two to have shared a bedroom. Assuming this to be the case, a possible layout is given below (the position of the coal cellar is also given from the above quoted Session Paper).

|           |                            |                                                                                  |
|-----------|----------------------------|----------------------------------------------------------------------------------|
| 3rd Floor | (front) Coachman's Room    | (back) Servants' Room                                                            |
| 2nd Floor | (front) Dining/living Room | (back) Kitchen                                                                   |
| 1st Floor | (front) Show Room          | (back) Kirkman's Room                                                            |
| Gnd Floor | (front) Workshop           | (back) Workshop                                                                  |
| Basement  | (front) Coal Cellar        | (back) Wood Store and area<br>for bending bent<br>sides of harpsichord<br>cases. |

An alternative arrangement to give Kirkman a larger room would be to transfer the Dining Room and Kirkman's Room, but this would have meant carrying food up and downstairs from the kitchen.

The above arrangement may be generous towards the domestic side of the house, and if it were that the Coachman did not live in, it would be reasonable for Kirkman to occupy the third floor front room, and the first floor back room would have been either workshop or finishing room.

Whilst in Broad Street, Kirkman was surrounded by a number of instrument makers, listed below:-

At No.7 Broad Street, 1782-89, Charles Trute<sup>1</sup>. By 1794 he had emigrated and was in partnership with Wiedberg in Philadelphia. His instruments occasionally are found from both his English and American workshop.

At No 22 Broad street, on the corner of Dufour's Place, opposite to Kirkman lived Christopher Ganer. The dates of his residence are uncertain but he is given the dates 1774 - 1809 by James<sup>2</sup>, and Boalch<sup>3</sup> records that letters of denization were granted to him on 11th February 1792. The 1799 Horwood map shows him as resident at 47, 48, and 49 in Broad Street.

At No. 16 John Street, George Pether worked. The dates are given by James<sup>4</sup> as 1775 - 1794. The words "From Mr. Kirkman's" on a square piano of his indicate that at one time he had been one of Kirkman's apprentices.

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1. Boalch p.126

2. James p. 68

3. Boalch p. 33

4. James p.74

In Wardour Street, on the west side lived Robert Stodart from 1776, until at least 1796, whilst two doors away lived William Frecker, piano maker from 1787 - 1800. Slightly further away in King St., (or Kingly Street) worked Thomas Garbutt from 1770 - 1776, and in the same street John Belthazar Zopfe had worked at least from 1747 until 1750, the year of his death, and the year of Kirkman's coming to Broad Street.

In Great Marlborough Street, from 1790 - 1794 at least, was the firm of Houston & Co., Spinet and Harpsichord makers.

Apart from the makers already listed in Great Pulteney Street, Adam and D. and J. Walker were working from 1772 - 1781, and Kirkman had some business with the firm when in 1786 he was asked by Thomas Jefferson in America to fit Walker's patent celestina stop to a new Kirkman harpsichord. Kirkman was much against doing this, but he eventually allowed Walker to fit the celestina himself.<sup>1</sup>

Two of Kirkman's distant relatives also worked in the area; Christian Burckard, a cousin worked in Swallow Street, and Kirkman in his will left £40 to his son, whilst Frederic Neubauer, whose daughter Charlotte married Abraham Kirkman's son, Abraham, worked at least from 1763 until his death in 1774 in Compton Street, Soho.

Kirkman must have enjoyed Royal patronage, and there are several references to his association with the Royal family. He is announced in The Universal Director of 1763 as "Kirkman, Jacob. Harpsichord Maker to her Majesty, and to several foreign Princes, Broad Street, near Golden Square".<sup>2</sup> As a result of this patronage, Kirkman adopted the King's Arms as his sign, whilst his rival, Shudi, who enjoyed the patronage of the Prince of Wales, took the Plume of Feathers as his sign. Rimbault<sup>3</sup> speaking of Kirkman says that his sign of the King's Arms in Broad Street, Golden Square was as well known to the nobility and gentry as the equestrian statue of Charles at Charing Cross. Kirkman obviously made instruments for the royal family, and the question of the instruments made for Queen Charlotte is discussed in Part II.

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1. Russell, Appendix Fourteen, p.170

2. The Universal Director or the Nobleman and Gentleman's True Guide to the Masters and Professors of the Liberal and Polite Arts and Sciences Mortimer, 1763

3. The Pianoforte E.F.Rimbault, Robert Cooke and Co. Edinburgh 1860, p. 90

It is interesting that when the firm was established  
as a piano makers, the name reverted to the  
KIRKMAN firm

Reveries Musical Directory 17879 (call number Dir 17402 e191)  
given on p 193  
KIRKMAN Joseph and ~~Son~~ Son 3 and 9 Soho Sq., W.,  
and Bradmore Works, Hammersmith, W., - P. f. Ma.

## The Spelling of Jacob Kirkman's Name

There is often confusion over the way in which the name Kirkman should be spelt. All genuine harpsichords bear an inscription of the form "JACOBUS KIRCKMAN LONDINI FECIT...." or "JACOBUS KIRCKMAN FECIT LONDINI...." followed by the date. There are one or two isolated cases in which this is not the case, and in all the examples where the name appears as KIRKMAN, the instrument is almost certainly by another maker.<sup>1</sup>

In Tabel's will, the name is signed with the spelling Kirckman, but in all other extant documents, (which without exception are later than the above will), the name is signed Kirkman without the c before the k. It is difficult to see any logical explanation for this behaviour, but one possibility may lie in the fact that the name was originally Kirchmann. When Kirkman came to England, he may have wished to anglicise the name to some extent and thus he adopted the spelling KIRCKMAN. He may well have used this as the spelling on his early instruments as well as on the will. Having thus established himself with the public, he may have felt that it would be unwise to change the signing of the instruments and so this spelling persisted on the nameboards. Nonetheless, the spelling with the c is found less often in England, and a random scanning of the London Telephone Directory reveals one or two examples of the spelling with the c, and 14 or so without it. Kirkman may thus have decided that he wished to become even more English (he took out naturalisation in 1755) and for this reason on all occasions other than when signing instruments, he used the form Kirkman. Until fresh evidence is found this can only remain as a speculative theory. Examples of Kirkman's signature are to be found at Fig 58. The 1738 version is from Tabel's will (fig 59 also),<sup>2</sup> the 1771 signature is from an indenture in which Kirkman leases a house in Broad Street<sup>3</sup> (probably No 18) and the third example is from Kirkman's own will dated 1792.<sup>4</sup>

### Kirkman's Personal Wealth

The question of the amount of Kirkman's personal wealth has exercised several researchers including Burney, who as quoted above, credited him with sums between £100,000 and £200,000, much of which came from sources other than harpsichord building.

1. See Part II for the question of the authenticity of the harpsichords by Falkener.

2. Principal Probate Registry

3. Greater London Record Office, Document E/HOD/144

4. Principal Probate Registry

As an example of the wealth which he had collected by 1764, he was able to negotiate the lease of the Great Tithes of Fulham Rectory<sup>1</sup> which substantial property cost him the sum of £4400 - no mean sum for those days. Despite Burney's confusion, an examination of the property and debts mentioned in Kirkman's will shows that it might have been possible for the total fortune at death to amount to over £200,000. There are preserved in the Public Record Office six parchment rolls, the records of legal suits between Jacob Kirkman and various defendants in the Chancery Court. The defendants had all borrowed sums from Kirkman and a precis of the most relevant matters is given at Appendix F. The sums of money involved range from £300 to a total of £6500, and all were apparently borrowed with good security. The earliest case is dated 1772 which was the year that Jacob Kirkman took into partnership his half brother Abraham (born Bischweiler 2 June 1737), and it is the writer's belief that from this time onward Jacob handed over the musical side of his business and concentrated more and more on financial dealings. By 1777 Jacob had bought a house in Greenwich and probably seldom visited the Broad Street premises.

Jacob Kirkman's will is full of references to various debts owed to him, the first being the interest arising from two turnpikes at Sherborne which was owed by Richard Cruttwell. There are annuities for £100 annually arising from from Mr. Fanshaw, Mr. Smith, Capt. Winter, George William Carrington, Stephen John, Catherine Sewell of the Adelphi and Thomas Oliver. There are also specific sums due from Colonel Fielding, Harry Laws Luttrell, Colonel Cragg, Sir Francis Vincent, General O'Hara, Robert Browne, Sir Charles Farnaby Radcliffe and Stephen Price. The list of property owned by Kirkman is extensive and is summarised at Appendix E. It is evident from the list that he must have purchased considerable real estate, and he was receiving annual rents ranging from £7 up to £60 from well over twenty different properties. In addition there was his own property in Broad Street and the house which he retired to in Greenwich. He must also have spent much money on paintings. Boalch<sup>2</sup> records that at the sale of his paintings at Christie's on 8th February 1793 there were 198 items. The catalogue states that Kirkman paid over 900 guineas for one of these paintings, but it realised only £100-16-0, by far the highest price.

1. Greater London Record Office, Document E/FLD/25 and E/FLD/26

2. Boalch p.62

## The Picture of Jacob Kirkman

In the Guide to the Loan Collection of the International Inventions Exhibition, London 1885, the following entry occurs on page 85 "Kirkman Mr.- 133. Portrait of Jacob Kirkman (founder of the house of Kirkman and Son) by Hogarth!"

Mr R.Ormond, Assistant Keeper of the National Portrait Gallery reports that it was also exhibited at the Royal Albert Hall in 1855 with the exhibition of musicians, though the writer has not been able to verify the entry in the catalogue.

In a thorough study of the wills of the Kirkman family it has been possible to build up a family tree which is illustrated at fig .... In the will of the Abraham Kirkman who was the second son of the Abraham who was in partnership with Jacob Kirkman, there is a mention of a picture. The entry runs "the portrait of my late Uncle Jacob Kirkman..." and this was left to his son John. Unfortunately the wording does not clarify the situation, for there are two people who could qualify for the title "my late Uncle Jacob", i.e. the founder of the firm, and Jacob Kirkman the organist (1746-1812). Both men could qualify equally and it may be that there were two portraits in existence.

The wills of the family are fairly complete and it is possible to trace the way in which the property of Jacob Kirkman the founder was dispersed. A resume of the main points of the wills of the members of the family is given at Appendix E. It will be seen from fig 63 that the last of the family to be called Kirkman were the sons and daughters of Joseph Kirkman who styled himself "Piano Maker of 3 Soho Square" and who died in 1877. His elder son Henry predeceased him in 1874 and the majority of his property went to his elder daughter Louisa who married Robert Reece. The son of this marriage, Henry Reece, married Annie Smith (nee Findlay) who had previously been married to George Stevenson. There were no children of the marriage of Henry Reece and Annie Smith, and it appears that such property as belonged to Henry Reece passed on his death to the son of the marriage of Annie Smith and George Stevenson. Probably because this son felt embarrassment at having a surname different from that of his mother, he subsequently changed his name from George Macaulay Stevenson to George Macaulay Stevenson Reece, and it was thus

that he was known by those who met him in Sevenoaks where he passed his years at least from the time of the 1939-1945 war. He appears to have been somewhat eccentric and to have ridden a horse to the shops in Sevenoaks to collect his rations! He undoubtedly possessed some of the Kirkman relics as is evidenced by a letter written by Louisa Kirkman when a girl, and which was found in his effects when he died in 1965 (fig 64 ). In Reece's will he left a wide variety of possessions to a number of people including "the portrait of a gentleman of about 1760 resting his left hand on books! This portrait was left to Dr. Edgar Archer of Sevenoaks who had been Reece's physician. The writer was privileged to meet Dr. Archer in 1969, and it was with his kind permission that it was possible to obtain a photograph of the painting. Unfortunately Dr. Archer died in 1973 but the portrait is still in the possession of the family. The reproduction is shown at fig. 60. The original is in oils, and the is about 2' x 3' in a gilded frame. The background is a dark maroon and the sitter wears a royal blue coat. There is no artist's signature and no mark on either portrait or frame to give an indication of the identity of artist or sitter. Notes on an envelope enclosing a photograph of the original indicate that at some time Mr. Reece must have had the picture valued by Sothebys. The valuer commented that he thought the work was almost certainly American, and probably an early Gilbert Stuart. In 1969, the picture was examined by Mr. Ormond of the National Portrait Gallery, and he thought that it was later than 1760 and almost certainly the last quarter of the eighteenth century. He thought it was English and possibly by L.F.Abbott. In order to give some comparison, fig 61 is a portrait of William Cowper by L.F.Abbott, and fig 62 is a Gilbert Stuart. None of this evidence can confirm or deny that the portrait left by George Reece is Jacob Kirkman. The fact that the will of Abraham Kirkman in 1832 speaks of a portrait in crayons makes it fairly certain that the portrait shown here is not the one mentioned in the will, but as has been pointed out it is possible that there are two portraits.

The gentleman in the picture is well dressed as would befit either of the two Kirkmans but there is nothing in the picture to suggest a musical connection. One might have expected that Kirkman would have been shown at a harpsichord as the famous picture of Shudi<sup>1</sup>, though if it were 1. Dale p.65 (The original picture is in the possession of the house of Broadwood.)

painted in the last quarter of the eighteenth century it is more than likely that Kirkman would not have been particularly interested in being associated with the harpsichord side of the business and might well have preferred to be shown as a wealthy entrepreneur. All those who have seen the picture agree that it is unlikely to be by Hogarth and a thorough examination of the list of the latter's works reveals no mention of a portrait of Kirkman. It seems, however, that in the nineteenth century it was fashionable to attribute much more to Hogarth than he ever produced in his lifetime.

It would appear unlikely that the problem can be satisfactorily resolved until further evidence can be brought to light unless by some stroke of luck someone is able to identify the sitter. On the whole, considering the paucity of the evidence, the writer regretfully concludes that the portrait is unlikely to be either of the two Kirkmans.

#### The Management of the Kirkman Firm

The date at which Kirkman set up on his own is fairly well proven as 1739. It is therefore surprising to find an advertisement in the Daily Graphic, London, 31st July 1893 announcing "Kirkman and Sons. Est 1730. Manufacturers of Grand and Upright Pianofortes, 12a George St., Hanover Square W. Telegrams: Trichords London, Telephone No 3,738." The date of establishment is curious, and may be the one link which would give a clue to the exact date when Kirkman came to London.

Until 1771 Jacob managed the firm himself, but in 1772 he took his nephew into the firm with him, and there are instruments of 1772 signed "JACOBUS ...." and others of the same year signed "JACOBUS ET ABRAHAM..." All instruments from 1772 until 1789 are signed by both makers with the exception of instruments which can be shown to be by other makers even though they carry the name Kirkman (see Part II ). In 1789 there are harpsichords signed "JACOBUS ET ABRAHAM....." and one signed "ABRAHAM ET JOSEPHUS...." This must be taken as an indication of Jacob's formal retirement from the business at the age of 79. The instruments are signed by Abraham and his son Joseph until at least 1791. Unfortunately there is a gap in our knowledge of the instruments until 1798 when instruments appear signed by Joseph alone. Since Abraham died in 1794 it seems most probable that Joseph would have managed the firm from his father's death



in that year. A square piano seen by the writer at Messrs Morleys in Bromley in 1970 is inscribed "Josephus Kirckman Londini Fecit 1795, No 19 Broad Street, Soho" and from this it may be concluded that Joseph managed the firm from at least 1795 onwards. The last harpsichord was made in 1809 according to an article in The Musical Times, Some Account of the Clavichord 1 July 1879 - "The late Mr Kirkman (i.e. the son of this Joseph) told me that he, with his father constructed the last harpsichord in 1809." Joseph died in 1830 and at least from that date onward the firm was managed by his son who was also Joseph. This latter took his son Henry into the business, but as is mentioned above, he predeceased his father in 1874, and Joseph carried on the business until his death in 1877.

The fortunes of the firm are surprisingly difficult to trace from the beginning of the nineteenth century and once the trade had become predominantly one of making pianos there is very little evidence of the management or the size of the undertaking. One interesting piece of evidence came to light in 1969 when Harold L. Haney, Editor of the American publication Harpsichord discovered the following undated and unreferenced newspaper clipping pasted inside an unidentified scrapbook in the archives of the Special Collection Section of the New York Public Library Music Research Division in the Library and Museum of Performing Arts at Lincoln Center:- 1

"We regret to have to record the almost total destruction by fire<sup>2</sup> on the morning of Wednesday week, of the extensive pianoforte manufactory of Messrs. Kirkman and Son, situated in Dufour's Place, Broadstreet, Golden Square; together with nine houses and a chapel.

The firm of Messer.'s Kirkman is one of the oldest in the trade, having originally been harpsichord makers, and is coeval with the first introduction of that instrument into this country; and from that time to the present has taken a leading part with other eminent firms in the manufacture and improvement of piano fortes.

An immense number of piano forte of every description finished or in progress, have been totally destroyed. But what is more to be regretted is the destruction of some musical relics and curiosities connected with the progress of the art. Among these was a curious clavichord, once belonging to the great G.F. Handel, and from which the idea of making the square piano forte was originally taken.

Here, also, was the harp used by the Court Bard of Charles II, the head beautifully carved by Grinling Gibbons; a small japanned harpsichord by Andreas Ruckers of Antwerp, made in the year 1634- the sounding board and inside of the top beautifully and elaborately painted with flowers and cupids; and once used by his Majesty George III.

1. THE HARPSICHORD International Harpsichord Society, Denver, Colorado, February March April 1969

2. Though the narrative is undated, it is most probable that the date of the fire was 1853. Vide V&A Catalogue, Part I, 1968 HMSO, p 43

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Another of the lost relics was the celebrated harpsichord formerly the property of Joah Bates, who for many years conducted the Antient Concerts; together with a large harpsichord fitted with curious German pedals, made for Mr. Greateorex who succeeded Mr. Bates as Director of the Antient Concerts."

Further in the article by Mr. Haney, he mentions that The TIMES newspaper was approached for further information about this fire, but despite their approach to the City of Westminster (presumably the Public Library) nothing more could be found, though they did state that the earliest reference to Kirkman's premises at Dufour's Place is in 1848 and they were transferred to Gregory J. Smith in 1879. A glance at the map will show that Dufour's Place is immediately behind the Kirkman houses in Broad Street, and it is therefore not surprising that a factory grew up in this area.

Boalch<sup>1</sup> says that the firm continued until 1896 when it was amalgamated with Collard, which in turn was taken over by Chappell. Unfortunately Chappells have no records whatsoever of the firm and it is difficult to understand how the firm was managed between 1877 and 1896. In his will of 1877 Joseph Kirkman says that all his paintings, drawings prints etc.... which should be about his messuages and manufactories at Soho and Hammersmith should remain in those premises to form part of the capital of the business as agreed in a settlement made in 1877. Unfortunately this settlement cannot be found. Joseph's fourth child, also Joseph, is only mentioned in passing in the will, but it would seem probable that he might have continued as part of the business if only for the purpose of keeping the name of the firm.

Boalch<sup>2</sup> reports that Mr. J.G.Morley in 1954 saw a print of about 1750, representing a lady playing a two manual harpsichord on whose nameboard the signature Thomas Kirkman appears clearly in an oval cartouche. Recent correspondence with Mr. Morley has thrown no light on this matter, but further research by Boalch shows that the print is a stipple engraving by Peter W. Tompkins (d. 1840, pupil of Bartolozzi), after H.W. Bunbury. The print is thought to be nearer 1790 than the original estimate of 1750. As far as is known, there was no member of the family called Thomas Kirkman at least in the eighteenth century, and connected with harpsichord building.

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1. Boalch p. 62

2. Boalch p. 61

## The Final Years of Jacob and Abraham Kirkman

Assuming that Jacob Kirkman finally ceased to take any active part in the harpsichord business from 1789 onward it seems likely that he retired to Greenwich in that year and lived at the house at the top of Crooms Hill Greenwich which is now known as Park Hall. (The property owned by Kirkman at Greenwich is the subject of Appendix H. Since he had held the house from at least 1777, he must by then have had a number of friends in the area and he probably enjoyed a happy and contented social life in the pleasant surroundings of Blackheath. From his will it may be deduced that he was looked after by a housekeeper, Sarah Simpson, Elizabeth Piper, a servant, and that he had a coachman. He left his money and possessions widely and a summary of his will and those of other members of the family is at Appendix E.

He died in 1792 and the entry in the register of the Parish Church of St. Alfege, Greenwich records:-

Date            June 1792  
9            Jacob Kirkman a Gent

He had, in fact, asked that he should be buried in the German Church in the Savoy, of which he was a member, but he also allowed that his executors could bury him in any other such place as they thought fit. He asked that his body should be carried to the grave in a hearse with four horses attended with three mourning coaches.

The last years of Abraham Kirkman's life were probably passed at Broad Street or in Hammersmith. It is known that he lived at No. 18 Broad Street until 1791, and from the Survey of London<sup>1</sup> it is known that he received Kent House, Lower Mall, and numbers 11 and 12 Upper Mall, Hammersmith from William Cox on 26 September 1792.

Kent House is still standing and is a large attractive yellow brick house of two storeys with bay windows on either side flanking an impressive entrance approached through wrought iron gates (fig 65 and 66). It fronts onto the river in a good position which would have befitted a gentleman of substance. At the time of writing it is the headquarters of the "Hammersmith Club Society". Further details of the Hammersmith and Fulham properties belonging to Jacob and Abraham are given at Appendix J. From these it can be seen that Abraham's wife Charlotte was shown as the occupier of Kent House in 1795, and she was responsible for paying the rates.

1. Survey of London Volume VI, 1916, pp 41, 42, 43

It may be that by 1793 either Abraham was too infirm to be able to manage the affairs of the property, or that he had left his wife. The latter seems more probable for had he continued at Kent House he would almost certainly have been buried in the parish of Fulham. In the event he died in 1794 and asked in his will to be buried in the vault in Greenwich Church with the remains of his late uncle.

The Parish register entry runs:-

April 1794

16 Abraham Kirkman a Gent

## Appendix B

### Measurement of Instruments

At the beginning of the work it was obvious that a large number of instruments would have to be recorded and measured in some detail. The harpsichord is particularly resistant to accurate measurement, and many amateur and professional makers wishing to copy an old instrument have found it necessary to make a full scale drawing or template of the instrument. The easiest method now available is to use the form of transparent sheet known as Mylar. Whilst this has attractions when copying an instrument there are two disadvantages in that Mylar sheet is very expensive, and to copy the details of many harpsichords would have resulted in a substantial expense. Secondly, when it comes to making comparative measurements the full size template would have had many shortcomings. In addition, it would have been almost impossible to have included these drawings with a thesis.

A general scheme of recording was therefore adopted consisting of the following qualitative surveys:-

Date of Examination:

Location of Instrument:

Makers name and inscription from name batten:

Other Inscriptions, particularly those on reverse of battens, under soundboard, on casework, or on the keyboard and action:

Number of Manuals:

Compass:

Details of missing keys such as FF sharp, and short or broken octave:

Registers:

Disposition:

Stops (details of operation, positioning, details of machine):

Pedals:

Music Desk:

Description of Casework: (internal and external)

Description of Lid, including where possible a rubbing of the strap hinges and lid hinges:

Details of Swell etc:

Description of Stand:

Description of Keyboards: (Where possible these were removed for examination and details of inscriptions, balance and weighting taken)

Description of Action, including notes on the woods used for the jacks, any obvious changes which had been made, and where possible a rubbing of the numbers stamped on the jacks:

Details of soundboard including material, direction of grain, details of rose, barring and present observable defects:

Details of bridge and nut profiles and 8ft hitch pin rail, including materials:

Carcass structure: where possible, details of the structure were noted either by direct observation, or from notes made by the owner or restorer at the time when the carcass was opened. In most cases details of the spine and bottom boards were noted, and this on occasions enabled a reconstruction of the internal structure to be made:

String gauges noted on nut, or elsewhere:

Extent of double pinning on 8ft bridge:

Present breaks from steel to brass, and a note of the likelihood of the present strings being original:

Present general state of the instrument:

Present owner to whom acknowledgement should be made:

The amount of quantitative data gathered was generally dependent upon the amount of time available for the examination. Where the examination had to be short the main details taken included length overall, width, depth, and the main measurements of the string band. The length of all F strings from FF to  $f^3$  was taken together with  $c^2$  and the plucking points for 8ft<sub>1</sub>, lute, and 4ft where applicable. From the outset however, it was intended that a more comprehensive set of measurements should be taken which should enable a complete drawing of the layout to be made.

When describing the position of points in a two dimensional space mathematicians resort to one of two methods known either as the polar or the cartesian system of ordinates. In the Polar system (fig 73), a reference point, O, and direction OX are used in conjunction with a vector which rotates anti-clockwise about the reference point. The position of any point A, relative to the fixed point and the direction OX may then be specified by the angle  $\theta$  (theta) made by the vector with the reference direction and the distance along the vector at which the desired point is to be found. Thus if OX is the reference direction, point A may be specified uniquely by the scalar values  $r$  and  $\theta$ . An initial attempt was made to employ this method in the measurement of the harpsichord, and whilst it does have some advantages in theory, it was found to be difficult to apply when working single handed on an instrument, particularly when the instrument was large. Even using a reference point in the geometric centre of the harpsichord a vector of up to 4'6" was needed for a 9' harpsichord. This proved both cumbersome and not easy to transport.

In the cartesian system (fig 74), an orthogonal set of axes X and Y is used, and in the diagram, the point A is described as (x,y) where x and y are the scalar values of the perpendicular distance of the point from the axes. Thus in the diagram, the point A is described as (3,2).

It is relatively easy to construct a similar set of axes on the harpsichord as in fig 75, using the apex of the tail as the origin of the axes, and the distance along the spine as x (strictly -x), and the distance perpendicular to the spine as y (strictly -y). Thus in the diagram the point A on the bent side is uniquely specified as (48,32). In order to do this a Tee square was

built, using a metre rule as the long arm, and having an adjustable tee which could be fitted to it. When measuring an instrument, the tee was adjusted so that the zero end of the rule was level with the outer edge of the spine and the rule then lay across the instrument perpendicular to the spine, crossing the bent side on the opposite side of the instrument, (See fig 21). It was then possible to specify the distance of any point on the soundboard or bent side by moving a pointer over the rule until it was over the desired spot, and then reading off the y measurement. For a normal examination the distance along the spine was measured at intervals of six inches and four points were noted:

- A - the distance from spine to the line of pins on the 4ft bridge,
- B - the distance from spine to the line of 4ft hitch pins,
- C - the distance from spine to the line of pins on the 8ft bridge,
- D - the distance from spine to the outer case at the bent side.

Measuring from the tail at six inch intervals, it was usual to get readings for D only for the first one or two points, and then gradually to get C, B and A. As the tee square approached the line of jacks, the angle made with the tee and the 8ft and 4ft bridges became less, thus giving rise to greater inaccuracy, and for this reason readings were taken at intervals of 3" along the spine for the last three or four readings.

Fig 21 shows the main dimensions taken when using this procedure; the stations at I, II, III, IV etc being at intervals of 6" whilst those at IXa, Xa etc are at 3" intervals.

This method of procedure gave reasonably good results, and it was possible to produce a plan drawing subsequent to an examination which was accurate to about  $\frac{1}{4}$ " for most dimensions. In order to achieve this, a number of other lengths were needed, and these are shown by letters on the diagram, and are described as follows:-

- A, Overall length of instrument from tail to proximal edge of casework at the upper edge of the spine. Tail mouldings are not included.
- B, Length from tail to proximal edge of soundboard at the spine edge.
- C, C, M and R are a triangulation of the tail end such that R is the perpendicular distance from spine to the mitre corner, M is the length of the outer case of the mitre end, and C is the length from the tail end to the foot of the perpendicular R.
- D, Width of wrestplank (Where the plank tapers, this measurement is taken at both ends.
- E, E, F, G, H, J, and K are all dimensions giving the distance of the 8ft bridge from the inner case edge. The distances are taken perpendicular to the case at the points where each F string crosses the 8ft bridge, the reference point being the pin line on the bridge. Thus for example H is the distance from the inner edge of the case

to the point where the longer string for f contacts the pin on the 8ft bridge. (Dimension F was also taken for early recordings, and was the perpendicular distance from the inner edge of the straight part of the bent side to the point where the lowest string for FF crossed the 8ft bridge. It was found to be a difficult measurement to take, and in some cases (particularly where the instrument had a double curved bent side,) non-existent or meaningless. Similarly, dimension L, the equivalent of K but at the point where f<sup>3</sup> crossed the 8ft bridge was found to be impractical in most instruments.)

M, See above at C.

N, Overall length of wrest plank from inner edges of case.

O, Distance from proximal edge of case to the front of name board.

Oj Distance from proximal edge of case to the back of the name board.

P, Overall width of instrument excluding all mouldings.

Q, Length of cheek.

R, See C above.

Dimensions S to V as follows are all used in the setting out of the string band:

S, Inner edge of case at spine side to edge of wood of 8ftnut.

T, Inner edge of case at cheek side to edge of wood of 8ftnut

U, Distal edge of wrest plank at cheek side to 8ftnut pin at furthest right hand edge of nut.

V, Distal edge of Wrest plank at spine side of case to the 8ft nut pin at furthest left hand side of nut.

W, Inner edge of case at spine side to point where lowest 8ftstring crosses 8ftbridge.

X, Inner edge of case at spine side to point where lowest string crosses 8ftnut.

Y, Inner edge of case at cheek side to point where highest 8ft string crosses 8ftnut.

Z, Inner edge of case at cheek side to point where highest 4ft string crosses 4ftnut.

Xj Inner edge of case at cheek side to the point where highest 8ft string crosses 8ft bridge.

Yj Inner edge of case at spine side to point where lowest 4ft string crosses 4ftbridge.

Xj' Inner edge of case at spine side to point where lowest 4ftstring crosses 4ft nut.

Yj' Inner edge of case at cheek side to point where highest 4ft string crosses 4ft nut.

Dj Proximal edge of wrest plank to the point where lowest 4ft string crosses 4ftnut.

Vj Proximal edge of wrest plank to the point where highest 4ft string crosses 4ftnut.

In addition to the above, overall measurements of the instrument were taken with the lid in position, and full details noted of any measurements contributing to any significant departure from standard practice, or case distortion. An example of a typical survey follows on the next pages:-



## An Example of a Full Survey of an English Harpsichord

Examination of a Kirkman double manual harpsichord.

Date of examination:- 23 September 1969

Owner:- Mr. and Mrs. C. Warburg, 6 Oakhill Lodge, Oakhill Park, Hampstead, London, N.W.3.

Previous known history:- From Boalch: previous owners - Mr. Charles Staal, Brompton Rd., S.W.3., (1947) who bought it from an unknown vendor at Christie's; Mr. van Zwannenberg (died about 1951); Messrs. Jetley, Bruton St., W.1., (1954); repaired by Broadwoods (1897) and Mr. T. R.C. Goff (1947).

No other information available from owner.

Boalch No. 3.

Name and Date from nameboard:- Instrument does not have the normal batten, but on the front board above the keys there is a beautiful silver trophy of instruments inlaid in either ebony or tortoiseshell (it is difficult to be certain- Boalch says the latter). The trophy is that used by the Kirkman Concert Society, and a photograph was taken. The trophy has an upper scroll on which is written "O DECUS PHAEBI" (according to Boalch this is from Horace, Odes I. 32. 13) and a lower scroll inscribed "IACOBUS KIRCKMAN LONDINI FECIT 1754"

Other Inscriptions:- There is a brass plaque inside the right hand side above the wrest plank "Restored and restrung by TRC Goff and JC Cobby in 1947. The stringing is in accordance with eighteenth century guages marked on the bridge. Tune to Concert pitch C 522"

Compass:- 5 octaves FF to f<sup>3</sup> No FF sharp.

No of manuals:- 2

Length over keys:- 32.75" (832mm)

Registers:- 8ft<sub>1</sub> quill, 8ft<sub>2</sub> leather, 4ft quill, lute-quill, no harp.

Disposition:- Normal Kirkman arrangement.

Stops:- L2 - lute, L1 - 4ft, R1 - 8ft<sub>1</sub>, R2 - 8ft<sub>2</sub>, machine in left cheek.

Stand:- Cabriole talon and ball solid walnut.

Pedals:- One pedal only at left to operate machine. Note that though there is evidence of a nags head swell there is no evidence of a second pedal.

Music Desk:- None and no space for one provided.

Casework:- External casework is in burr walnut panels, surrounded by a stringing (sketch 1) of elm or walnut and box, and cross banded with straight grain walnut. Front board with trophy inlay is unique in that it slides

out easily. Unfortunately there are no inscriptions on the back of this board. The battens in the spaces over, under and between the keyboards were removed, but there were no inscriptions there either, though the backs of the battens are curiously pitted as though nails had been driven in just below the stringing which is inlaid at the middle of the front side. The trophy on the front upper board has been inlaid into a hole which passes right through the board. It seems likely that it was made in a workshop away from the instrument and inserted into the board on arrival at the cabinet makers workshop.

With the board out, the wrest plank can be seen - oak - 2.65" (67.2mm) thick. Longside veneered in straight grain English walnut with no cross banding and veneer grain running vertically. There is no moulding on the longside. Main case moulding is of oak, veneered with walnut to the traditional section. Longside veneer comes right down over the edges of the bottom boards. It does not look original. (see sketch 2).

Boalch reports that the instrument had a lid swell (details later), but is now (1954) fitted with a venetian swell. At the date of examination, the owners explained that when they received the instrument extra wood had been added to the case sides to accommodate the venetian swell. They had this latter removed by a firm in Earl's Court and it is now in store in the owners' house. Thus all edge veneer on the upper edge of the case is new. The holes for the venetian swell have been plugged, though they are still visible. (See sketch 2 for other longside markings.) The machine mechanism is still in place and still operative. The box covering this mechanism is not secured by four screws as is usual, but is held by two brackets in a manner not seen elsewhere.

Case Thickness:- See sketch 4.

Lid:- Solid oak, veneered in burr walnut, and cross banded to match the rest of the case, both inside and out. The lid has a lid swell which is different in shape to that found on the instruments from 1766 onwards (see sketch 3 for dimensions). The moving area of this lid is much larger than that found on the later models, and it effectively bisects the lid. This moving portion has now been secured so that the swell is completely inoperative. The hinge line is visible on the outside of the case, but internally, the whole panel seems to have been reveneered and there is only the faintest mark to show where the hinge line was. There is no evidence of the existence at any time of the normal type of actuating mechanism which is found on later lid swells, though the veneer has been

replaced at one point on the spine and this could be to cover a plugged hole for the actuating bar. Sketches 2 and 5 show this veneer replacement and a similar replacement in the bent side which could indicate that at one time the case was fitted with the wooden bar running across over the soundboard to provide a housing for part of the actuating mechanism as well as providing support for the lid.

Strap Hinges:- A rubbing was taken.

Bottom Boards:- Very good condition. They look as if they had never been off.

Keyboards:- Normal Kirkman style keyboards. Double scoring on naturals.

Lengths of naturals:- Upper 5" (127 mm), Lower 4.5" (114 mm)

Keyboards were not removed in entirety, but lower FF was removed and has an inscription in pencil "Look over W. Walstow 10/5/12". There is one distal weight on FF, but not on lower manual f<sup>3</sup> which was also removed. Balance pins on the upper manual are so high that no keys can be removed without taking out the keybed.

Action:- Jacks are in very good condition. Pear with holly tongues. No apparent change to box in the bass of the lower register. Rubbings were taken (see fig 19 ).

(It may be noted that in the case of most examinations a note was made of the lengths of the upper and lowermost jacks in each register. In this case, due to pressure of time this was not done.)

Soundboard:- Depth of soundboard from top of case:- 2" (50.8 mm)

Thickness of the board was not measured as it was difficult to get the micrometer onto the edges of the board, and the rose was in place. Using the caliper guage, the thickness at the edges of the proximal edge of the board was approximately 0.12" (3.04 mm). IK and harping King David Rose. 8<sup>ft</sup> bridge looks strangely clumsy though of usual section. It looks as if it had been taken off at some time. The last 15" (381 mm) have been renewed with slightly too sharp a curve. Bridges and nuts are all beech. Double pinning reaches to b<sup>1</sup>, but there are plugged holes where double pinning has been carried out in the wrong place, thus adding weight to the thought that the bridge has been off and then replaced in a different position. (This may have been merely to replace the 15" section in the bass. There are several shakes in the treble, but the board is basically in good condition. Barring is not observable, but tapping indicates that it is standard.

(It would have been normal practice to sketch bridge and nut profiles and to measure heights and thicknesses at both ends. On this occasion

time was running short, and this part of the examination was omitted.) With the front board out it was possible to see clearly the wrest pins which were drilled and were an average diameter of 0.195"D (4.95 mm D) though they varied considerably by up to  $\pm 0.02$ " ( $\pm 0.5$  mm).

Wrest Plank Layout:- First 22 pins of 4ft are forward of lute slide.

Numbers on Nut:- The string gauge numbers are written on the nut in ink.

|              | Note number | Gauge                |
|--------------|-------------|----------------------|
| 4ft register | 12          | 7                    |
|              | 13          | 6                    |
|              | 20          | 6                    |
|              | 21          | 5                    |
|              | 30          | 5                    |
|              | 31          | 4                    |
| 8ft register | 2           | 13                   |
|              | 8           | 11                   |
|              | 10          | 10                   |
|              | 12          | 9                    |
|              | 14          | Has X stamped on nut |
|              | 15          | 7                    |
|              | 24          | 7                    |
|              | 25          | 6                    |
|              | 30          | 6                    |
|              | 42          | 5                    |
|              | 43          | 4                    |

String Lengths:-

|                | 8ft length  | 8ft pluck  | lute pluck | 4ft length  | 4ft pluck |
|----------------|-------------|------------|------------|-------------|-----------|
| FF             | 70.5 (1792) | 7.5 (190)  | 2.75 (70)  | 40.6 (1030) | 4.4 (112) |
| F              | 56.5 (1435) | 6.13 (156) | 2.0 (51)   | 30.38 (772) | 4.0 (103) |
| f              | 38.5 (978)  | 4.75 (121) | 1.25 (32)  | 18.5 (469)  | 3.25 (83) |
| f <sup>1</sup> | 20.5 (521)  | 3.68 (93)  | 0.88 (22)  | 10.25 (260) | 2.75 (70) |
| f <sup>2</sup> | 10.25 (260) | 2.75 (70)  | 0.63 (16)  | 5.0 (127)   | 2.38 (60) |
| f <sup>3</sup> | 5.2 (132)   | 1.75 (44)  | 0.38 (9.5) | 2.5 (64)    | 1.88 (48) |
| c <sup>2</sup> | 13.5 (343)  | 3.0 (76)   | 0.75 (19)  | 6.75 (172)  | 2.5 (64)  |

Note shortest f<sup>3</sup> string is 5.0 (127)

Case Layout:-

| Stations | A           | B           | C           | D           |
|----------|-------------|-------------|-------------|-------------|
| I        |             |             |             | 10.63 (269) |
| II       |             |             | 5.38 (137)  | 12.38 (314) |
| III      |             |             | 7.75 (197)  | 14.25 (362) |
| IV       |             |             | 9.5 (251)   | 16.13 (409) |
| V        |             | 5.0 (127)   | 11.38 (289) | 17.88 (453) |
| VI       | 2.33 (59)   | 7.88 (200)  | 13.33 (338) | 19.88 (504) |
| VII      | 6.63 (168)  | 10.5 (267)  | 15.5 (393)  | 21.88 (555) |
| VIII     | 9.88 (251)  | 13.5 (343)  | 17.5 (444)  | 23.88 (603) |
| IX       | 13.13 (333) | 16.5 (418)  | 19.88 (503) | 26.0 (659)  |
| X        | 17.13 (435) | 19.76 (500) | 23.0 (583)  | 29.5 (747)  |
| XI       | 22.75 (577) | 25.88 (657) | 27.75 (704) | OC*         |
| XII      | 27.0 (685)  | 29.75 (755) | 32.25 (818) | OC*         |

\*OC means that the curve of the bent side has been passed and that this measurement is the overall width from spine to cheekpiece. OC = Outer Case.

Case dimensions:-

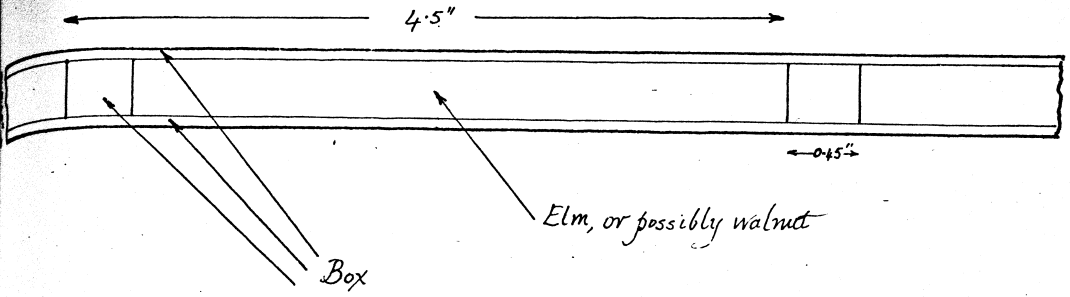
|                  |                  |                |
|------------------|------------------|----------------|
| A - 95.25 (2415) | M - 10.5 (267)   | U - 1.5 (38)   |
| B - 71.5 (1816)  | N - 35.0 (887)   | V - 7.0 (178)  |
| C - 3.8 (96)     | O - 11.25 (286)  | W - 2.88 (73)  |
| D - 9.75 (248)   | O' - 11.88 (301) | X - 1.5 (38)   |
| E - 7.5 (191)    | P - 36.25 (920)  | Y - 1.5 (38)   |
| G - 5.5 (140)    | Q - 29.75 (755)  | X' - 1.33 (34) |
| H - NT*          | R - 9.88 (251)   | Y' - 2.5 (63)  |
| J - 5.38 (137)   | S - 1.38 (35)    | D' - 9.13(232) |
| K - 4.63 (117)   | T - 1.3 (33)     | V' - 9.5 (251) |

Present State of Instrument:-

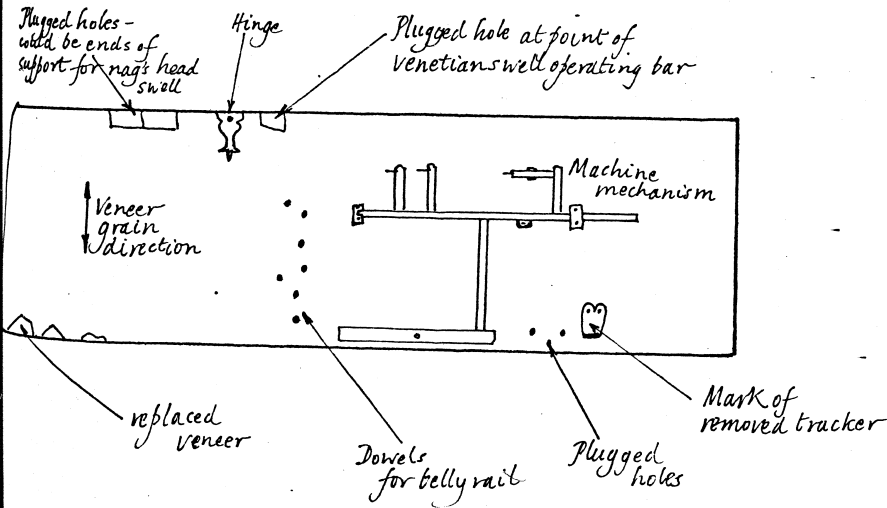
The instrument is in a generally good state of preservation and is played regularly by the owners who are keen musicians.

Acknowledgements to:-

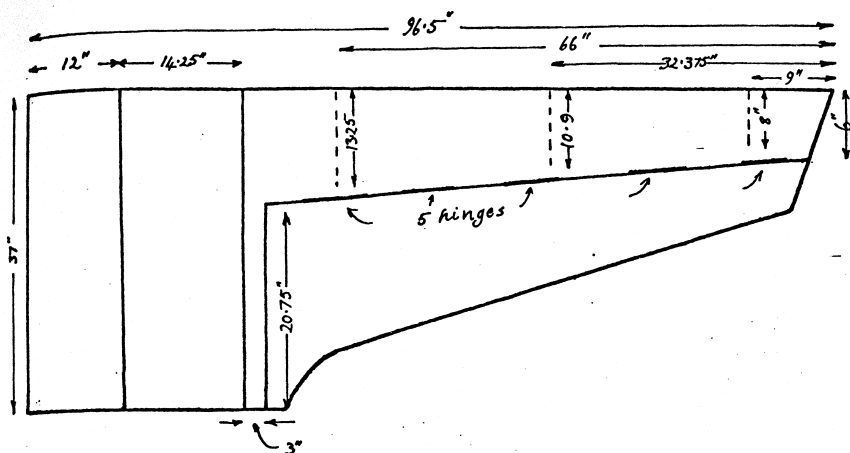
The owners.



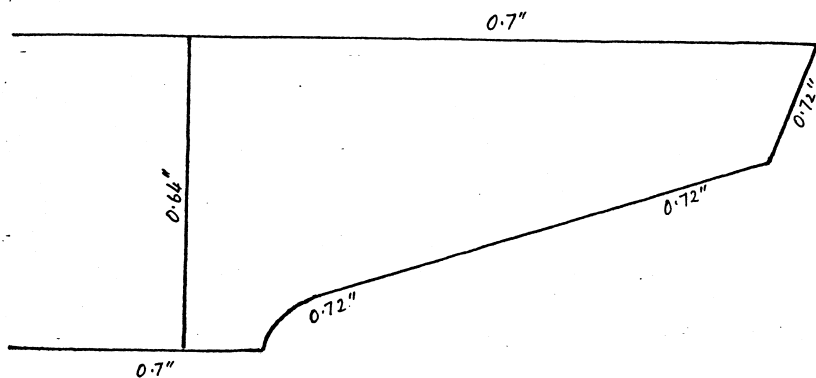
Sketch 1 Case stringing (full size)



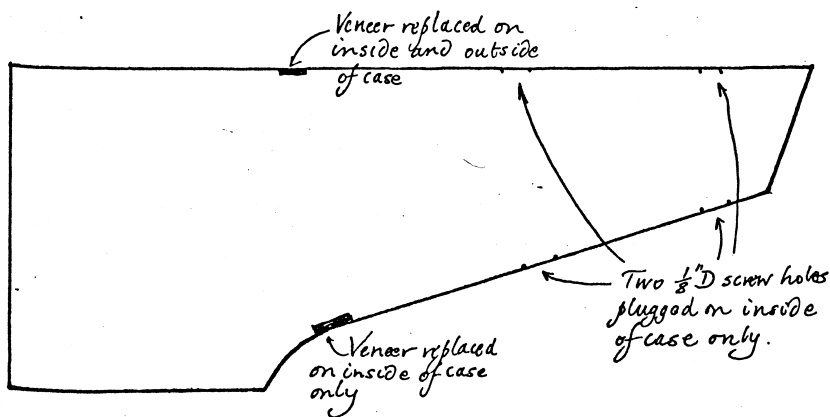
Sketch 2 Details of longside



Sketch 3 Lid details



Sketch 4 - Case thickness



Sketch 5 Replaced veneer on case

## Appendix C

## Notes on Jacob Kirkman, Composer and Organist

In the Dictionary of National Biography, it is strange to find that the only Kirkman mentioned is a Jacob Kirkman who was "probably a nephew of Jacob Kirkman who carried on the business of harpsichord maker in Broad Street, Golden Square, London, about 1770."

The family tree<sup>1</sup> shows that the supposition is correct for the harpsichord maker is the elder (1710-1792), whilst the Kirkman mentioned in D.N.B. was the brother of the nephew, Abraham, whom the harpsichord maker took into partnership. Boalch<sup>2</sup> gives this younger Jacob the dates 3 March 1746 - 29 April 1812 and though the former date has not been verified it seems reasonable, whilst the date of death may be verified from his will which is still available at the Principal Probate Registry, Somerset House.

The D.N.B. states that the "younger Kirkman acquired some reputation as a pianist and composer of pianoforte works in London before the end of the eighteenth century".

A list of seven of Kirkman's works is given in the D.N.B., and others are preserved in the British Museum Library. A list of these works compiled with the most informative detail from both sources is given at Appendix D.

The full title page of Opus 16 bears the words "Four Progressive Duettings For Two Performers on One Piano-Forte. Composed and Dedicated to Miss Ellis and Miss Caroline Ellis By J. Kirkman Organist of St George's Hanover Square. Op 16th. Price 6s/- London. Printed for Rt. Birchall at his Musical Circulating Library, 133 New Bond Street. Speedily will be published by the same Author A Set of Progressive Sonatinas for the Use of Schools & Beginners. Also A Treatise on Composition - Thorough Bass &c &c". This page is interesting in that it establishes that Jacob Kirkman the composer was also sometime organist of St. George's Hanover Square. His association with the church must have been a long one as is evidenced by entries in the Vestry minutes.<sup>3</sup>

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1. Fig 63

2. Boalch, p 61

3. Vestry Minutes of the Parish of St. George's Hanover Square.  
Westminster Public Library, Buckingham Palace Rd. London.



Unfortunately the date of his instatement as the organist cannot be found in the minutes. His predecessor in the post was John Keeble who became organist in place of Thomas Roseingrave by authority of a vestry minute dated 26th February 1767 - "Resolved that the salary of the organist of this Parish be fixed at £50 a year. And Mr. Keeble the Assistant Organist being acquainted therewith agreed to accept thereof if the Board would please appoint him. Resolved Unan that Mr. John Keeble be appointed organist in the room of Mr Thos. Rosingrave deceased, the salary to commence from Midsr. last the time of Mr. Rosingrave's death."

It may well have been that Kirkman cultivated Keeble's friendship in order to get the post of organist, or they may already have been friendly for another of Kirkman's works is entitled "Six Sonatas for Harpsichord or Pianoforte. Dedicated with respect To Mr. Keeble. Composed by Jacob Kirkman, Printed for and Sold by the Author No 18 Broad Street, Carnaby Market & at the Music Shops Price 10s 6d!"

There is no mention in the vestry minutes of anything further to do with the organist (except on 22nd May 1786, when the death of Mr. Snetzler the organ tuner is mentioned and Mr. James Jones was appointed in his stead) until 20th January 1801, when the following entry is the first of a series of reports which culminated in Kirkman's retirement: "Complaint was made by a Gentleman of the Vestry that Mr. Kirkman the Organist does not attend to his Duty in Person, and that the Duty is badly performed by his Deputies!" The Vestry referred to a letter from Mr. Kirkman dated Brighton, November 13th 1799 in which he promised to fix himself near the church that he might be able to attend to the duty himself. "Ordered that Mr. Greville the Parish Clerk be desired to inform the next Vestry how often Mr. Kirkman has attended his Duty in Person since the date of the said Letter!"

It seems that Mr. Greville must have given Kirkman the news that he was in trouble for on the 31st January 1801, the minutes read:- "The Vestry then took into consideration the conduct of Mr. Kirkman the Organist as resolved on at the last Vestry and finding from the report of Mr. Greville the Clerk and from Mr. Kirkman's own Account (who was sent for) that for many Years past he has done very little

Duty in Person and that he has chiefly resided at Richmond and at Brighthelmstone Mr. Kirkman was asked in what manner he intended to go on in future and he requested to be permitted to continue at Brighthelmstone till September next to reestablish his Health which he has been advised can only be done by a long Residence within the influence of the Sea Air. The Vestry ordered therefore that he should have Leave of Absence till Christmas next his whole Salary from this time to Christmas being retained by the Vestry for the purpose of providing a Deputy and the Vestry undertaking to settle with the present Deputy Mr. Ansell for what he has done since Christmas last, Resolved that the Rt Rev. Lord Bishop of Exeter, the two churchwardens and Mr. Palmer be requested to provide a proper Deputy Organist to officiate in the mean Time."

Later in February 1801, in response to a request from Kirkman, the period of absence was ordered to run from Lady Day 1801 until Christmas.

The outcome of the affair was settled by a Vestry Minute of 20th February 1802: "A letter from Mr. Kirkman the Organist dated Brighton, December 17th was read requesting that his leave of absence may be extended for 12 months in Hopes of re-establishing his health by a Residence at Bath and Brighton, which Letter also contains the following paragraph vizt. "I trust this Act of Humanity will not be refused me by the Vestry, but if it should, deeply as I shall regret it, I must beg they will accept my Resignation now". The Vestry considering that when Mr. Kirkman in Janry. and Febry 1801 asked for leave of absence from Michaelmas it was granted 'till Christmas and that for many years past he had done very little Duty in Person having resided mostly at Richmond and Brighton &c declined complying with his present Request of another year's leave of Absence, and resolved to accept his Resignation of which the Clerk is to inform him by Letter. Resolved that the Advertisements be inserted in the True Briton & Morning Herald desiring Candidates for the office of Organist to send in letters addressed to the Clerk on or before this day fortnight...."

There were 20 candidates, of whom eventually eleven appeared on a Saturday in March and played for about a quarter of an hour to the gentlemen of the Vestry, from "Compositions of some eminent Master."

A ballot was held the following Monday and on 22nd March, the Vestry minutes recording that Mr C.Knyvett Junr received 61 votes, Mr. Malme 1 vote, and the others none. Knyvett was therefore elected.

There is one small rider to this affair, in that on 27th March, Mr Henry Donman, who had performed Kirkman's duties as Deputy during his absence complained that he had been required to do more work than he had expected to, and asked for his salary to be made up by the payment of £16-3-4. This was agreed, and Donman eventually received the full year's salary of £50.

Boalch reports this encounter between the Vestry and Kirkman, and suggests that he spent his time at Brighton for reasons not primarily connected with his health. There is nothing in the Vestry minutes to suggest this, though Kirkman's will mentions three illegitimate children, and his compositions are dedicated mainly to ladies. It seems therefore that he was attracted by women, but never sufficiently to marry them.

It will be seen from fig 51 (which is taken in part from the Survey of London) that Jacob Kirkman the Organist lived at No 20 Broad Street. The Survey of London has been found to be very accurate. Therefore it is puzzling to find the address of Kirkman's published compositions as No 18 Broad Street, which was almost certainly Abraham Kirkman's house. It can only be concluded that either this was a misprint, or Abraham sold music from his premises as well as making harpsichords. By analogy with modern practice this would have been quite reasonable.

Jacob Kirkman's will is dated 22th September 1797, and reads rather quaintly as if written by a genial well-to-do Uncle bestowing his gifts which were considerable.. It starts "As I Jacob Kirkman of Broad Street in the Parish of St. James Westminster in the County of Middlesex Gent. am about to go on a journey into Dorsetshire and considering the uncertainty of this life and that my three dear natural children would be totally unprovided for in case I was to die without a will and that it is my duty to provide for them as well as I am able to do therefore make publish and declare this as my last will and Testament ....." His three "dear natural children were Sarah Louisa Kirkman whose mother was Mrs. Pritchard, Henry Green, mother Eliza Green, and Emma, who was an infant at the time of the will, and whose mother, Mary Worthington was by 1797 dead.

In the will, he left his possessions mostly to the children and there was a considerable amount of property, including much which had come to him through his brother Abraham, and his uncle Jacob, the Harpsichord maker.

The D.N.B. quotes an entry in the Gent. Mag. 1812 1 596, in which it states that one Jacob Kirkman died in Upper Guildford Street., London 29 April 1812, aged 67. This ties in with the birth date of 1746 given by Boalch<sup>1</sup> It is however, difficult to decide on what is meant by Upper Guildford Street. There is no such street in London now, though there may have been one in 1812. It is thought that it is more likely to be Upper Berkley Street , where Kirkman had a leasehold house at number 30. This house he left as his first mentioned property in his will to his daughter Sarah Louisa, and it was also at this address that Charlotte, his sister in law died in 1798. Kirkman's will shows him to have been a man of substance for he mentioned at least 16 leasehold premises which were his as well as the house on Crooms Hill at Greenwich which is described in the section on Kirkman's houses. He also left three charges of £50 per year on the Opera House together with three silver tickets. His will ends with the peculiar cautionary request that "my remains may be decently buried in this my parish in the New Burying Ground or where my executors may think proper not however until about one week after my supposed decease nor then unless there appear convincing signs of my being really dead."

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1. Boalch p. 61

## Appendix D

## List of Compositions by Jacob Kirkman

## 1. Listed in British Museum:-

- a. Call Mark:- e.120.(7) London (1785)? obl.fol.  
 "Four Duetts. Three for two performers on one Harpsichord or Piano Forte and One for a Harpsichord and Piano Forte. Compos'd and Humbly Dedicated to the Right Honourable Lady Viscountess Cranbourne by Jacob Kirkman. Opera 2 Price 10/6."  
 London. Printed by Longman and Broderip No 26 Cheapside and No 13 Haymarket. Where may be had by the same Author Six Sonatas for the Harpsichord or Piano Forte Opera lmo. Price 10/6.  
 NOTE The fourth duet of the above has only the Piano part. The Harpsichord part is in the Library of the Music Faculty of Cambridge University.
- b. Call Mark:- e.5.o.(3) London (1780)? obl.fol.  
 "Six Sonatas for the Harpsichord or Piano Forte. Dedicated with Respect to Mr Keeble. Composed by Jacob Kirkman, London. Printed and sold by James Blundell No 110 St. Martin's Lane. Son in Law and Successor to the late Mr Welcker Gerrard Str. Soho. Price 10/6. Where may be had all the works of the above Author.
- c. Call Mark:- e. $\frac{5}{4}$ .h.  
 "Six Sonatas for Harpsichord or Piano Forte. Dedicated with Respect to Mr Keeble. Composed by Jacob Kirkman, London. Printed for and Sold by the Author No 18 Broad Street, Carnaby Market and at the Music Shops Price 10/6."  
 NOTE This copy has an autograph of the composer.
- d. Call Mark:- e. $\frac{5}{6}$ . (1785)?  
 "Six Lessons for the Harpsichord or Piano Forte. Composed and Humbly Dedicated to the Right Honble the Earl of Plymouth by Jacob Kirkman. Opa IIId. London Pr 10s6d. Printed for and Sold by the Author No 206 Oxford Street and to be had at the Music Shops."  
 NOTE The title page has an autograph
- e. Call Mark:- g.161.f.(4) London (1790)? fol.  
 "Three Sonatas for the Piano Forte or Harpsichord with an Accompaniment for the Violin Op VIII. Composed by and respectfully dedicated to the Rt. Honble Lady Mary Bligh by Jacob Kirkman. Printed by Longman and Broderip No 26 Cheapside and No 13 Hay Market."
- f. Call Mark:- e.120.(7) London (1790)? obl.fol.  
 "A Collection of Six Voluntaries for the Organ, Harpsichord and Piano Forte ..... Dedicated to Miss Margaret Cocks ,.... Op IX. London. Printed by Longman and Broderip No 26 Cheapside and No 13 Hay Market Music Sellers and Musical Instrument Makers to His Royal Highness the Prince of Wales, where Musical Instruments in general are manufactured and sold, Namely Organs, Harps, Harpsichords, Piano Fortes &c. Lent out, conveyed, Tuned, in Town and Country on the shortest Notice &c...&c..&c."

g. Call Mark:- f.484.

This is a book entitled "Series of Progressive Studies for Piano Forte, Organ or Harmonium. Edited and Fingered by Josiah Pittman." It contains "Three Preludes and Fugues by Jacob Kirkman".

h. Call Mark:- g.130.(5)

"Four Progressive Duettings for Two Performers on one Piano Forte. Composed and Dedicated to Miss Ellis and Miss Caroline Ellis by J. Kirkman organist of St George's Hanover Square. Op 16th Price 6s. London. Printed by Rt. Birchall at his Musical Circulating Library 133 New Bond Street. Speedily will be published by the Same Author A Set of Progressive Sonatinas for the Use of Schools and Beginners. Also A Treatise on Composition - Thorough Bass &c &c."

On the page following the Title Page there is a uniform giving "Musical Publications. Printed for and Sold by Rt. Birchall Music Seller to Her Royal Highness the Duchess of York at his Musical Circulating Library No 133 New Bond Street".

"Terms of the Library Yearly Subscribers £1-11-6, Half Yearly £1-1-0 Quarterly 12s. The money to be paid at the time of subscribing."

There is a list of compositions available but it does not include Kirkman's compositions.

2. Listed in D.N.B. :-

- a. Duets for the Pianoforte, Op.V.
- b. Trois Sonatas a quatre mains, et une a deux temps (Amsterdam).
- c. A Sonata for Pianoforte.
- d. Eight Ballads dedicated to the Marchioness of Salisbury Op X.
- e. "Forty Interludes to be played between the verses of Psalms.". Written by Jacob Kirkman and John Keeble.

## Appendix E

Relatives, Friends and Property of Members of the Kirkman Family.  
Information obtained from Wills - Ref: Principal Probate Registry,  
Somerset House.

## 1. Jacob Kirkman, 1710-1792

## a. Relatives of Jacob Kirkman (1710-1792) as at 31 March 1792

Brother: Abraham Kirkman of Bischweiler  
 Nephew: Jacob Kirkman, 2nd son of Abraham above  
 Nephew: Abraham Kirkman  
 Nephew: John Peter Kirkman  
 Niece: Susanna Reinbold, or Reinhold (apparently has children)  
 Late Niece: Mary Magdalen Golner, or Solner, married to Landwith  
 or Landwich Golner, and has children.  
 Nephew: Jacob Spiegelberg son of late sister Susanna  
 Spiegelberg.  
 Niece: Mary Esther Knitzel married to Peter Knitzel  
 Great Nephew: Joseph Kirkman (Grandson of Nephew Abraham Kirkman)  
 Cousin: Christian Burckhard, has son also Christian  
 Burckhard of Swallow Street, Harpsichord Maker, son  
 has sisters Ann Burckhard and Elizabeth Burckhard  
 Cousin: Abraham Burckhard, Ropemaker  
 Cousin: Isaac Burckhard, Cabinet Maker and Joiner.

## b. Friends of Jacob Kirkman

Sarah Simpson - Housekeeper  
 Charles Newby of Poland Street - Apothecary  
 George Lockett of Sutton Street - Carpenter  
 John Turk Senr.  
 John Turk Jnr.  
 Edward Wilkie  
 David Jones  
 Evan Francis  
 Robert Roberts  
 Joseph Kingenberg - Cooper (has daughter who is Jacob's Goddaughter)  
 Elizabeth Piper - Servant

## c. People owing Annuities or Money to Jacob Kirkman

Richard Crutwell, or Cruttwell of Sherborne, Dorset  
 Interest in 2 Turnpikes at Sherborne  
 Annuity - Mr Fanshaw, Annuity - Mr Smith  
 Annuities of £100 annually from Capt Winter, George William Carrington  
 and Stephen John Sewell of the Adelphi, and his wife Catherine, and  
 Thomas Oliver.  
 Money due from: Colonel Fielding, Harry Laws Luttrell, Colonel Cragg,  
 Sir Francis Vincent, General O'Hara, Robert Browne, Sir Charles  
 Farnaby Radcliffe, Stephen Price.

d. Property left by Jacob Kirkman at his Death in 1792.

Messuages or Tenements as follows:-

In Spitalfields, lately bought of General William Taylor  
 Billingsgate Wharf, Greenwich, purchased of William Taylor  
 At Blackheath, occupied by John Duffell  
 In Northumberland Street, (Strand) Tenure of Stephen Price  
 In Noals Yard (Queen Street, St Giles) Tenure Mr Gibson, Wheelwright  
 £28 Mr Digby £14 Mr Sander £10, Mr Hollins £7.  
 In Rose Street and Crook Street (could be Greek Street) St Anns,  
 Westminster, Tenure of Mr Donn £20, Mr Bond £30, Mr Dohange £24  
 In King Street, St Giles, Mr Hollingshead £34, Mr Leigh £30  
 At corner of Green Street (Leicester Fields) Mr Boltz, Baker £57-10-0.  
 5 properties in Walkers Court, St James.  
 In Great Russell Street purchased of Mr Knight  
 In Strand, in tenure of Mr Halmouth £60 and Mr Clarke £56.  
 House in Broad Street, belonging to himself (presumably one of the  
 three now known to have belonged to the family).  
 House on Crooms Hill. (Greenwich)  
 (See also Appendix J for property in Hammersmith and Fulham)  
 2. Abraham Kirkman (1737-1794)

a. Relatives and Abraham Kirkman as at November 1792

|                 |                                                                                  |                      |
|-----------------|----------------------------------------------------------------------------------|----------------------|
| Wife:           | Charlotte Kirkman                                                                |                      |
| Son:            | Jacob Kirkman                                                                    |                      |
| Son:            | Joseph Kirkman                                                                   |                      |
| Son:            | George Frederick Kirkman                                                         |                      |
| Daughter:       | Charlotte Susannah Wheatley - married William<br>Wheatley of Greenwich, Organist |                      |
| Daughter:       | Harriett )                                                                       | all under 21 in 1792 |
| Daughter:       | Frances )                                                                        |                      |
| Daughter:       | Ann )                                                                            |                      |
| Daughter        | Maria )                                                                          |                      |
| Brother:        | John Peter Kirkman                                                               |                      |
| Brother:        | Jacob                                                                            |                      |
| Brother:        | Samuel Omphalius of Bischweiler                                                  |                      |
| Aunt:           | Barbara Ham (has daughter)                                                       |                      |
| Brother in Law: | Phillip Birkinyoung the Elder                                                    |                      |

b. Friends of Abraham Kirkman

George Lockett)  
 Charles Newby ) same people as are mentioned by Jacob Kirkman

c. Debts owed to Abraham Kirkman

None specifically mentioned

d. Property left by Abraham Kirkman

Copyhold House with outhouses, buildings, garden, land near River  
 Thames at Hammersmith (Probably what is now known as Kent House)  
 2 Houses let to Mr Hudson 7 gns p.a. Houses are near the one above  
 and were purchased of Mr William Cox.  
 Leasehold House and Garden and Premises on Crooms Hill, let to Mrs  
 Farr £150 p.a.



d. Property left by Abraham Kirkman Cont.

Leasehold House on Crooms Hill let to Mr Crompton at £21 p.a.  
 Leasehold House in Upper Brook Street, let to Mrs Webb £105  
 Leasehold House in Compton Street, let to ? Meux Esq £40  
 House and Premises In Wardour Street  
 House and Premises in John Street, Tottenham Court Road, let to  
 Mr Lake, and purchased originally from Kirkman's son Joseph  
 2 Leasehold Houses in Kennington Lane, Vauxhall  
 1 Leasehold House in Kings Row, Grosvenor Street, let to Mrs  
 Craven £50  
 Several Houses in Peter Street, Nr Berwick Street  
 Estate at Carmarthen

3. Jacob Kirkman (Organist & Composer) 1746-1812

a. Relatives of Jacob Kirkman as at 12 September 1797

Natural Children

|                |                                                       |
|----------------|-------------------------------------------------------|
| Daughter:      | Sarah Louisa Kirkman - by Mrs Pritchard               |
| Son:           | Henry Green - by Mrs Eliza Green                      |
| Daughter:      | Emma Worthington - by Mary Worthington                |
| Brother:       | Peter Kirkman of Bischweiler (has 5 children in 1797) |
| Nephew:        | Jacob Kirkman                                         |
| Half Brother:  | Samuel Omphalius of Bischweiler                       |
| Half Cousin:   | ? Ham of Bischweiler                                  |
| Cousin:        | Jacob Spiegelberg of Bischweiler                      |
| Cousin:        | Christian Rheinbold of Bischweiler                    |
| Sister in Law: | Mrs Kirkman, widow of my late brother Abraham         |
| Nephew:        | Joseph Kirkman                                        |

b. Friends of Jacob Kirkman

Charles Newby of Poland Street, Apothecary  
 George Burley of 8 Lincoln's Inn, Attorney at Law  
 Mr Moon, Partner of Mr Burley  
 Mrs Pritchard  
 Mrs Eliza Green of Lower John Street, Golden Square  
 Mary Worthington  
 Mrs Sarah Simpson "my late uncle's worthy Housekeeper".  
 Mrs Smith late of Bell Street, Paddington, now residing with Mrs  
 Scouler of Great Russell Street  
 Ann Elizabeth Christian Burckhard  
 Mrs Willimas Smith (late Servant of Uncle Jacob)  
 Mrs Williams Smith's Daughter, his Goddaughter  
 Charlotte Woodcock, Goddaughter  
 Eliza Hudson  
 Mr Hall, Park Street; Mr Millington, Golden Square  
 Mr Marklin, Fleet Street; Mr Scouler, Great Russell Street (perhaps  
 the Harpsichord Maker)  
 Mr Hookham Senr, of Bond Street  
 The Revd. Mr. Will

c. Debts owing to Jacob Kirkman

£2000 owing from William Winter of the Island of St John, North America

In his Will, he says that he bequeaths all the debts taken over from his late Uncle viz:

Earl of Oarhampton, Colonel Fielding, Sir Francis Vincent, Bart.

Other debts due from Lt Col Eyres, Lieut Paymr. Stuart, Lieut Milne, Lt James, Mr Stephen Price.

d. Property left by Jacob Kirkman

Leasehold House at 30 Upper Berkeley Street, Portman Square

Leasehold House at 20 Great Russell Street, Bloomsbury

2 Leasehold Houses in King Street, Tenure of Mr Hollinshead, Turner and Mr Lythgoe, Shoemaker

Leasehold Premises in Noals Yard, Mr Boach - Wheelwright, Mr Smith - a Smith and said Mr Hollinshead

2 Leasehold Houses in Rose Street, Soho, Tenure Mr Bond, Plumber and Mr Barratt, Bricklayer

Leasehold House in Greek Street, de la Grange, Bookseller

Leasehold House in Frith Street No 40, Mr Tabu, Bricklayer

Leasehold House in Queen Street, Soho (Corner of Bateman's Buildings) Mr Ford van Dresser

Leasehold Premises in Bishopsgate Street, Shoreditch, Mr Woodyer £120

Leasehold Estate in Skinner Street, Mr Woodyer 30 gns

2 Leasehold Houses in the Strand, Nr Exeter ? Mr Poland, Furrier; Mr Neale, Engraver

Leasehold House No 8 Northumberland Street, Mr Stephen Prior - Attorney

Freehold Houses in Church Street, Wood Street, Red Lion Court, Spitalfields bequeathed by my late Uncle

House on Crooms Hill, in Tenure of Miss Morris

Leasehold Estate in Upper Cleveland Street, Fitzroy Square, consisting of House occupied by Mrs Gifford, Baker; House occupied by Mr Bridgens, Letter Carrier, and 2 small Houses in Cambridge Street.

4. Charlotte Kirkman, Wife of Abraham Kirkman (No 2 above)

Died November 1798, Intestate. Place of Death: Upper Berkeley Street. Administration of Goods, Credits, and Chattels granted to her two Sons, Joseph and Abraham on 16th November 1798. Effects under £1000.

5. Joseph Kirkman, Son of Abraham and Charlotte Kirkman

Will dated 23 February 1830. Last known address: 64 Westbourn Terrace, Bayswater. Styled in Will as Joseph Kirkman of Broad Street, Pianoforte Maker. Body to be interred in vault under parish church of Paddington.

Natural Son: Robert Long Kirkman (aged 17 at date of Will and residing with his Father)

Robert Long Kirkman receives the Leasehold Estate called "The Swan Tavern" in Tenure of Richd Park at Old Brompton, Middlesex and Leasehold Cottage at Old Brompton in Tenure of Mr Hill and Leasehold Messuage at 7 Gloucester Place, Portman Square in occupation of Mrs Fairfield.

5. Joseph Kirkman, Son of Abraham and Charlotte Kirkman Cont.

Daughter: Josephine Lucy Long Kirkman (residing with Father at date of the Will)  
 Wife: Mary Kirkman, Testator was married to her but appears to be separated from her in 1808. William A. Beckett of Broad Street was the Solicitor.  
 Annual Annuity of £80 paid to Mary Kirkman, and to Mrs Sarah Sand. The money for these annuities is provided from the revenue of property in Wardour Street,

Mentions other Children:

Son: Augustus Frederick  
 Daughter: Jane  
 Son: Joseph Kirkman, no mention of him but he carried on after his Father

Other Relatives Mentioned:

Brother: Abraham Kirkman  
 Nephew: Abraham Kirkman the Younger  
 John Kirkman

Trustees and Executors:

Brother: Abraham Kirkman of Blackwell Hall  
 Nephew: Abraham Kirkman the Younger  
 John Kirkman

6. Abraham Kirkman of Blackwell Hall, Chesham, Bucks (Brother of Joseph No 5 above) Will dated 6th April 1829.

All Property left to Wife, Catherine, with the exception of the following items:

To Son Abraham: Double gun by Bond, Heppinstalls Bible and £25  
 To Son John: Gold Snuff Box, Broach of Negro's Head set with diamonds, Portrait in crayons of my late Uncle Jacob, £25  
 To Daughter in Law, Maria: £5  
 To Son William: "My gold watch which I usually wear with the gold chain, all my seals, silver snuff box which he gave me together with my diamond shirt pin and £25 for mourning."  
 To Daughter in Law, Julia: £5  
 To Daughter, Martha (Martha Ann married Son in Law Edward Wright): Upright Grand Pianoforte, £5

Executors are to sell all property except the Leasehold Houses at Kennington, Vauxhall and Walworth. These are not to be sold during the lifetime of Wife.

Executor: Son, John, Executrix: Wife Catherine  
 Will is not Witnessed

There is a codicil to say that George Rutherford of 21 Cannon Street, and Joseph Kirkman of Soho Square verified the Will. In this, Abraham Kirkman is given as "of Blackwell Hall, and late of the Wandsworth Road, in the Parish of St Mary, Lambeth".

6. Abraham Kirkman of Blackwell Hall Cont.

The present owner of Blackwell Hall has no knowledge of Kirkman's tenancy. (1969)

On 14th September 1876, Administration of unadministered goods granted to William Wright, Doctor of Medicine (presumably son of Martha and Edward Wright).

7. Joseph Kirkman (Son of Joseph Kirkman No 5 above)

Will dated 6th July 1877. Address No 3 Soho Square and Sunnyside, Goldhawk Road, Shepherds Bush.

Daughters: Louisa Reece and Georgina Kirkman receive 7 Marine Parade, Eastbourne and contents of No 10 Ladbroke Square.

All Contents of manufactories at Soho Square, and Hammersmith are to remain therein to form part of the Capital of the Business, as agreed in a settlement made in 1877.

Son: Joseph Kirkman

Wife: Eleanor Kirkman receives Freehold Property Nos 3, 4, 5 Princes Street in the Barbican. Several Settlements made on Wife from 1874 onwards.

No mention of Henry John Kirkman, his Son, who predeceased him - see below.

8. Henry John Kirkman (Son of Joseph above) died intestate 9th February 1874.

Late of 3 Soho Square, died at 10 Ladbroke Square, Bayswater.

Administration of Goods granted to Father, Joseph Kirkman 23rd March 1874.

Effects under £80,000, Leasehold

Further administration of unadministered Goods January 1887.

## Appendix F

Legal Suits involving Jacob Kirkman. Taken from the Records of the Chancery Court. All References quoted are from Chancery Records at the Public Record Office.

The following records of suits involving Jacob Kirkman were found at the Public Record Office. Altogether within the years 1758-1800, the indexes of the Chancery Court Records show cases involving 16 people with the surname Kirkman. These were called and examined. Several of them were obviously Kirkmans other than the harpsichord family but there were others which are given in outline below. All the records are on parchment, and handwritten, and usually start with a fairly stereotyped opening narrative, in which the petition is addressed to the Lord Chancellor, and starts with the words "Humbly Complaining" in large flowery Old English script, and then an oration, written more simply as if it were repeated verbatim from the words of an advocate in court. Occasionally, the scribe has omitted all that was said, especially when the advocate was being flowery, and writes etc etc etc. The parchments are about 2' by 3' and if the defendant makes a reply or defence this is given separately at the end.

The suits involving Kirkman are:-

Cl2 2386 52 dated 1772

A suit between "Jacob Kirkman of the Parish of Saint James within the liberty of Westminster in the County of Middlesex Harpsichord Maker" and James Miller. The narrative starts by showing how Richard Fitzwilliam, Governor of the Bahamas made a will in 1743 leaving the money to various people including a Michael Barrett, and James Miller. In 1759 an indenture was made between Michael Barrett of Pall Mall, James Miller of Rathbone Place and Jacob Kirkman, in which Barrett borrowed £520 of Kirkman, using Miller as security. The whole suit is quite complex, but appears to be an attempt on Kirkman's part to recover his £520.

Cl2 2386 54 dated 21st March 1774

This is the first of three suits involving William Taylor and his Wife Mary, nee Myddleton, in each of which they borrow sums from Kirkman on the security of money which came to Mary on her marriage to Taylor. This one, the first starts as do most of these suits "Humbly Complaining sheweth unto your Lordship your orator Jacob Kirkman of the Parish of Saint James in the County of Middlesex Harpsichord Maker". It goes on to show how William Taylor in 1754 was a Major in the Regiment of Foot under command of Colonel Leighton, and was about to marry Mary Myddleton, then of the Parish of St George's, Hanover Square. She had inherited £7500. £5000 of this came from the estate of Sir William Myddleton due to lands and tenements in Denbigh. These were settled on her by her father John Myddleton of Chirk Castle, Denbigh after he had received them as part of a settlement when he had married Mary Myddleton's mother, Mary Liddell. Before the marriage, William Taylor, and Mary agreed that this £7500 should be assigned to Henry Liddell of Bedford Row, Middlesex, and William Lloyd, for the purpose of providing for the upbringing of their children or for Mary's benefit, should either both of them or the father die. Later, Kirkman goes on to show that the marriage took place about 22nd March 1754, and that they subsequently borrowed £3500 on condition that they assigned the £7500 to him.

It was agreed that Kirkman would not recall the loan during the lifetime of William and Mary, provided that the interest at 4% per annum, payable in half yearly instalments was paid promptly. (This amounts to £70 per year.) This suit appears to be a plea that Taylor and his wife should appear before the bench to ratify the conditions of the loan.

Cl2 1056 48

This is a similar document to the above, and though not examined fully, it appears to show that William and Mary Taylor borrowed a further sum of £2000 on the security of the original £7500 in 1779.

Cl2 1538 20

Yet a further document showing that William and Mary borrowed a further £1000 on much the same conditions in 1784.

In both documents, Kirkman's address is given as Blackheath.

Cl2 1394 10 (dated 10th November 1790)

"Humbly complaining sheweth unto your Lordship your orator Jacob Kirkman of Blackheath in the County of Kent Esquire Assignee of James Hole a Lieutenant in the Royal Navy who was a descendant of the first cousin of Thomas Talbot, late of Ullingworth in the County of Hereford Doctor in Divinity deceased that the said Thomas Talbot in his lifetime made a will or Testamentary writing" etc. In this it transpires that Kirkman had lent to Benjamin Hole £300 and that Hole had £502-10-0 left to him by a very complex agreement. In 1788, Kirkman had covered his loan by receiving the assignment of this £502. The indenture was underwritten by James Hole, who had died intestate, and whose estate was then in the hands of Benjamin Hole through an Administration. Kirkman asked to be repaid his £300 and in his reply Benjamin Hole allowed Kirkman to recover £251-5-0 from the Estate of James Hole.

Cl2 690 18 dated 11th April 1799

"Humbly complaining sheweth unto your Lordship your orators and oratrixes Jacob Kirkman of the Parish of St Marylebone in the County of Middlesex Gentleman Joseph Kirkman of Broad Street of the Parish of Saint James within the liberty of Westminster Harpsichord Maker Abraham Kirkman of Cornhill in the City of London Stationer William Wheatley of Greenwich in the County of Kent Gentleman and Harriet Kirkman of Hammersmith in the said County of Middlesex Spinster...."

This suit is rather complex and is not fully understood. It is to do with the purchase of some of the inheritance left to all these people by Abraham Kirkman, by Richard Myddleton of Chirk Castle, and William Pulteney of Bath House, Piccadilly. The other information which is of use is that the wives of the above orators are given as: Jacob and Susanna Kirkman, Joseph and Mary Kirkman, William and Charlotte Susanna Wheatley (we know that Charlotte Susanna was a Kirkman) and that the Jacob mentioned is the eldest son of Abraham (the Abraham who was Uncle Jacob's partner, and who died in 1794) whilst the others are his children.

It also gives the names of places which were apparently owned by old Abraham in Denbighshire (could it be that he acquired them as a result of the failure of William and Mary Taylor to repay their debts? Could it also be that this suit is to do with the efforts of Richard Myddleton to recover these estates for the Myddleton family?). The places listed are:- Coedmareham in Head y Groes - Parish of Llanvoorog, (Buildings, Messuages and Tenements, arable land etc), Llainvair Dyffryn Dlwyyd Gyffiliog Llanarman Ruthin otherwise Dyffryn Glwydd Llanvoorog Llanynis Evenected Derwen Llanrhaider in Kinmerch Llanbeber and Wrexham.

## Appendix G

Ref: GLC Record Office OBSP 1784 Ap64

## Middlesex ?

The Information of Sarah Spencer, Elizabeth Williams, Robert Edmonds, James Cridland, Timothy Coombes, Thomas Morris and William Stanton taken before me this 29th day of March 1784.

Who on their oath say and first the said Sarah Spencer says that she is servant to Jacob Kirkman at Broad Street Carnaby Market Harpsichord Maker says that on Saturday night last between 9 and 10 o'clock she locked the coal cellar door in the area before her Masters House and did not open it afterwards that night. And the said Elizabeth Williams says that she does not recollect unlocking or opening the said coal cellar door at any time afterwards on that night - and the said Robert Edmonds says that the cutlass now produced by William Stanton is this Informants property and was lent by this Informant to William Duff now present on Saturday was awake between 11 and 12 o'clock at night who at that time pretended that some Thieves had attempted to break into his Master's house and that he Duff wanted a Cutlass to Defend the same and afterwards on a subsequent Day pretended that He had broke said Cutlass. And said Timothy Coombes says that he is a Watchman and between 2 and 3 o'clock Yesterday morning as he was going his Round in Broad Street he observed three Men in said Mr Kirkman's Area upon which he made an alarm. And the said James Cridland says that he came to said Coombe's assistance and after searching Mr Kirkman's house some time he found William Duff, Robert Reed and John Lewis now present in the aforesaid Coal Cellar and upon the person of said Lewis he found 7 picklock keys one saw, a stock and two centrebits and Tinder Box now produced together with matches Gimblet and Tinder and further says that the said Coal Cellar Door appeared to this Informant to have been burst open. And the said Thomas Morris says that he is Coachman to said Mr Kirkman and that after the said three Men were secured and taken away He examined the said Coal Cellar and found the Iron Crow and Screw Driver, Rope and piece of Candle now produced. And the said William Stanton says that after the said three Men were secured he found in said Mr Kirkman's Area the Cutlass now produced.

Sworn before me this 29th day of March 1784

Samuel Wright

Sarah Spencer  
Elizabeth Williams  
Robert Edmonds  
James Cridland  
Timothy Coombes  
William Stanton



## Appendix H

Property belonging to Jacob Kirkman at Greenwich

From Boalch it was known<sup>1</sup> that Jacob Kirkman retired to Greenwich and that he died there. The particular house in which he lived was thought by Boalch to be one of those at the bottom of Crooms Hill, but subsequent research has enabled the exact house to be identified.

The Rate Books of the Parish of St. Alphege (or Alfege) of Greenwich are written in much the same way as those for the Parish of St. James' Piccadilly mentioned above but the custom appears to have been to write in the rateable value of the house followed by the poor rate and the highways rate. These were collected by the collector who went from door to door with the book in his hand. Unfortunately, since the particular area is an open heathland, the rows of houses are not even, and it is therefore difficult to be able to see exactly the route followed by the collector. However, as will be seen from the rate books and from the maps of the time<sup>2</sup> there is corroborative evidence to show that the house occupied by Jacob Kirkman in his retirement is the large red brick house standing at the top of Crooms Hill, and now known as Park Hall.

Kirkman's name first appears in the rate books in the assessment for the period of six months from Michaelmas 1776, dated 4th April 1777, and he must have moved in during this period:-

|                          |         | Poor   | Highways |
|--------------------------|---------|--------|----------|
| The Duke of Montague     | 100 - - | 5 - -  | 16 8     |
| The Earl of Chesterfield | 100 - - | 5 - -  | 16 8     |
| Elizabeth Scott          | 75 - -  | 3 15 - | 12 6     |
|                          | 70 - -  | 3 10 - | 11 8     |
| Mr. Kirkman              | 73 - -  | 3 13 - | 12 2     |
| Edwd Long                | 25 - -  | 1 5 -  | 4 2      |
| Mrs. Charlie             | 63 - -  | 3 3 -  | 10 6     |
| The Revd. Dr. Burnaby    | 70 - -  | 3 10 - | 11 8     |

In the previous period, the space occupied above by Mr. Kirkman is occupied by Mrs. Johnson. The entries until the Midsummer Quarter of 1792 are much the same as above and an example from Michaelmas Quarter 1791 dated 30 Dec 1791 will show that Kirkman had moved socially from Mr. Kirkman to Jacob Kirkman Esqr. In addition, with his characteristic business acumen he had managed to reduce his rates from a value of £73 to £64, though the others mostly stayed the same.

1. Boalch p.61

2. Rocque's Map of London 1745 Sheet II (fig 67 ) and Ordnance Survey of London, Edition 1894 - 1896, Sheet XII. 32 (fig 68 )

|     |                           |     |     |      |       |      |
|-----|---------------------------|-----|-----|------|-------|------|
| 510 | Ann Bridges               | 18  | - - | - 18 | -     | 1 6  |
| 511 | The Dutchess of Buccleugh | 100 | - - | 5    | - -   | 16 8 |
| 512 | Richd. Hulse Esqr         | 100 | - - | 5    | - -   | 16 8 |
| 513 | Elizabeth Scott           | 75  | - - | 3    | 15 -  | 12 6 |
| 514 | Jemima Morris             | 50  | - - | 2    | 10 -  | 8 4  |
| 515 | Jacob Kirkman Esqr        | 64  | - - | 3    | 4 -   | 10 8 |
| 516 | Thos Farr Esqr            | 25  | - - | 1    | 5 -   | 4 2  |
| 517 | Anna Catherine Elliott    | 63  | - - | 3    | 3 -   | 10 6 |
| 518 | Mr. Mayne                 | 50  | - - | 2    | 10 -  | 8 4  |
| 519 | The Revd. Dr. Burnaby     | 60  | - - | 3    | - - - | 10 0 |

The last entry for Kirkman is in the quarter ending 28th September

1792: -

|     |                    |    |     |   |     |      |
|-----|--------------------|----|-----|---|-----|------|
| 519 | Jacob Kirkman Esqr | 64 | - - | 3 | 4 - | 10 8 |
|-----|--------------------|----|-----|---|-----|------|

In the previous quarter from Lady Day to Midsummer 1792 the entries for Kirkman, Thos. Farr, and Dr. Burnaby are all preceded by a script capital A. The meaning of this is not clear, but from the entry for the last one for Kirkman, and for Thos. Farr who died in 1791, it might be thought that the meaning was that the owner had died. The continued residence of Dr. Burnaby disproves this however, and it may be that the owners were absent at the time of the visit of the collector. Whatever the meaning, the next entry shows that the widowed Mrs. Farr had moved out of her house into that vacated by Kirkman in the next quarter:-

Quarter from Michaelmas 1792

|     |                 |    |     |   |      |     |
|-----|-----------------|----|-----|---|------|-----|
| 526 | Jemima Morris   | 50 | - - | 2 | 10 - | 4 2 |
| 527 | Mrs. Farr       | 64 | - - | 3 | 4 -  | 5 4 |
| 528 |                 | 25 | - - | 1 | 5 -  | 2 1 |
| 529 | Leonard Addison | 63 | - - | 3 | 3 -  | 5 3 |

From Kirkman's will<sup>1</sup> it is known that his house at Crooms Hill was left to his cousin Abraham, who subsequently left it to his wife Charlotte on his death in 1794. In Abraham's will it is mentioned that in 1794 it was let to Mrs. Farr at a rent of £150 per annum. Abraham also mentions a second house let to Mr. Crompton at a rent of £21 per annum., and this second house is dealt with below. The writer is particularly indebted to the Borough Librarian of Greenwich and to Mr. A.R.Martin for the following notes on Park Hall, the retirement home of Kirkman:-

On Kirkman's death, when Mrs. Farr took over the property, it is probable that she added to the house for by 1801 her rates were increased from £64 to £88 and the rate books<sup>2</sup> mention "house, coach house, and

1. Principal Probate Registry

2. Rate books of the Parish of St. Alphege, Greenwich.

stable! In 1803 she was succeeded by Robert Campbell, Lt. Colonel Commandant of the Greenwich Volunteer Regiment of Infantry<sup>1</sup> and whose wife was a sister of Elizabeth Farr. By 1830 when Captain Matthew Smith was in occupation, the rate had risen to £90. Captain Smith's widow, Jane, appears on the 1841 census, and by 1851 the house had become a school, and at some subsequent date it received the name Park Hall. The house was almost certainly built by Sir William Hooker<sup>2</sup> who also built the Grange for his own use half way down Crooms Hill. Park Hall is an attractive, elegant red brick building which would have been a fitting residence for a man of Kirkman's substance. Despite its conversion to a school, and its subsequent conversion to its present day use as flats it still retains many features which must have existed in Kirkman's time. There is much internal panelling, which is quite like that at Broad Street, and the main rooms are large and airy. Its situation may be seen on the map at fig 68, and photographs of the building are shown at figs 69. and 70.<sup>3</sup>

On the death of Abraham Kirkman in 1794, Park Hall and the smaller property mentioned above as being let to Mr. Crompton passed to Abraham's wife Charlotte. She died intestate in 1798 and the administration of her effects was granted to her first and second sons, Joseph and Abraham. In Kimbell's Charities of Greenwich, on page 27 the following passage is quoted from the list of herbage, which was a due paid to the Parish for the use of Blackheath or other Common land:-

The representatives of the late Sir William Hooker, Knt., for the Herbage and Pasture of a piece or parcel of Waste or Common of Blackheath at the top of Crooms Hill, whereon he had erected a house, together with a Piece of Ground at the south end, used as a dunghill, at per annum

£1-10-0

These premises are in the occupation of Robert Hains Esq., as Tenant to Mrs. Kirkman, on which there are considerable arrears due.- The counterpart of the lease is in the chest at the Church.

Robert Hains Esq., for the Herbage and Pasture of a small Piece of Land of which the Common of Blackheath, fronting the aforesaid House, which he has railed in, at per annum

6d

1. John Kimbell, Charities of Greenwich, 1816, p.169
2. Information supplied by Mrs. Beryl Platts of the Greenwich and Lewisham Antiquarian Society.
3. Much useful information in establishing Kirkman's house as Park Hall has been supplied by the following residents of Greenwich to whom my thanks are due:- The Rev. Cecil Morrison, H.Sewell Esq., Mrs. B.Platts, Mrs. Birkett, D.Leggatt Esq., Mrs. Mann, the late Mr. Magnaldi, Messrs Stocker and Roberts, and A.R.Martin Esq.

Thus it appears that a Mrs. Kirkman must have had an interest in one or other of the houses on Crooms Hill as late as 1816. The rate books show no sign of a Kirkman having a house at this date, and Park Hall was by then in the possession of Robert Campbell.

The position is slightly clarified by the will of Jacob Kirkman the organist of St. George's Hanover Square, who died in 1812 and left "all that my house on Croom's Hill Blackheath in the tenure or occupation of Miss Morris" to his infant, illegitimate son Henry Green. According to the rate books, Jemima Morris was succeeded in the house next door to Kirkman (on the other side from the Farris) by Ann Morris, who was in turn succeeded by Robert Hains. Looking at the entries in the rate books for any year (1805 for example) the order is:-

587 The Honourable George Fulke Lyttleton     In those days Lyttleton House  
now Macartney House.

588 Ann Morris

589 Robert Campbell     Now established as Park Hall

A survey of the map will show that it is almost impossible for the Rate Collector to have gone to any other house than what is now called The White House between Park Hall and Macartney House. Thus it must be concluded that Jacob Kirkman the organist owned The White House even if he never lived there. Mr. A.R. Martin is able to corroborate this by his own research which shows that Robert Hains lived at the house from 1813 until 1832

Two final problems remain unsolved:- How did Jacob Kirkman the organist acquire The White House from Abraham, and who was the Mrs. Kirkman whose tenant was Robert Hains?

The answer to the first question must be that Jacob Kirkman either bought the property from Charlotte Kirkman's two sons, or they gave it to him. The former seems more likely since Jacob was a man of substance and could well afford the house. Being in the family, he may well have got it at a bargain price.

The second question of the identity of Mrs. Kirkman is more difficult. Since at the time of Jacob's death, Henry Green to whom it was left was an infant, the trustees of his estate would have decided what to do with the estate. These trustees were Charles Newby, Apothecary of Poland Street, George Burley, Attorney of 8 Lincoln's Inn, Mr. Wood, his partner, and the organist's nephew, Jacob Kirkman. As far as is known, the organist Jacob Kirkman never

1. The White House is illustrated at figs 71 and 72.

never married and so it was not his wife who owned the White House.  
The most likely person would have been the wife of the Jacob Kirkman  
who was trustee of the will.

## Appendix J

Property in and around Fulham and Hammersmith belonging to Jacob and Abraham Kirkman.

Documents E/FLD/25 and E/FLD/26 in the Greater London Record Office show that Jacob Kirkman negotiated the lease of the Great Tithes of Fulham Rectory in 1764. From earliest times the Parish Church was closely connected with the Manor, and with the exception of two brief intervals the Lord always exercised the right of patronage to the Rectory. Until the abolition of such benefices by 3 and 4 Vic., c. 113, s. 48, the Rectory of Fulham was a sinecure in that the incumbent had no spiritual duties to perform. As the name Rectory or Parsonage House implies the Rector did at one time live in the Parish but it is probable that at no time was he bound to do so, and as he generally held preferment elsewhere which involved residence. He therefore entrusted the care of souls to his Vicar and lived in another place. Two tithes existed; The Great or Parsonage Tithes which were the property of the Rector and the Little Tithes which belonged to the Vicar. At a very early date the Great Tithes became impropriate, i.e. they passed into the hands of the laity, the Rector taking the income from the lease of the tithes which was generally for life and at a yearly reserved rent of £40.<sup>1</sup>

Feret quotes much background detail of the way in which the lease of the Great Tithes changed hands, and it is difficult to follow the exact way in which the Tithes came into Kirkman's hands for there appear to be a number of people beside Kirkman who held some interest in them. Quoting from the exchange lease of 25 March 1738 when Timothy and Joseph Bullock were granted the lease by The Hon. Charles Fielding and his wife, Elizabeth, Feret gives:

"All that site of the Manor House of Fulham aforesaid with one private Chappell and all buildings outhouses etc, theretobelonging and two footbridges and one great bridge and three Closes of pasture called the Warren, which premises are all inclosed with a Moate, about two poles over and in most parts thereof floated and drained at pleasure and do contain together with the moate  $36\frac{1}{2}$  acres by estimation."

It would appear that there were further tithes leviable on the following meadows and fields:

"Pale Mead, Rowberry Mead, Garlick Close, Gt. Havlingham Field, Windmill Shot Millbank, Stroud Mead, Churchfield, Wild Mead, Broom field or close, the Windmill and ground adjoining, Frogmill bank, Crabtree close, Dock Mead, Jackson's Mead, the Warren, near Broom house, the Coopit and Pingle, parts of Fulham Fields, the ozier

1. C.J.Feret. Fulham Old and New, Leadenhall Press, London 1900, Vol II p. 8

and reed ground adjacent to the Thames, and the royalty for fishing for salmon in the river."

On each occasion of the making of a new lease of the Tithes, the Rector was permitted to levy a "fine". In the instance quoted above the Rector, the Rev. W.N. Blomberg, received £205-12-5.

It is not clear who held the lease of the Great Tithes immediately before Kirkman. In 1751, the Tithes passed to the Hon. Edward Finch and Sir Cordell Firebrace, the devisees of Fielding and subsequently it appears that the Rector the Rev. Samuel Knight leased the tithes to his son, Mr. Samuel Knight, and it was probably from him that they passed on to Kirkman in 1764.

Hammersmith Public Library possesses a document dated 7 May 1774<sup>1</sup> in which Kirkman leases the "tythes of Corn and Grain and all other Tythes... distinguished by the name of Great Tythes yearly coming, growing or renewing in or out of the rectory of Fulham.....to John Evans, farmer of Fulham, and William Shaddock". The rent charged was £220 per annum and the lease was to run for three years until 1778. The document has been used a second time in order to save writing a new lease by the simple expedient of crossing out and writing in new names and dates. It establishes that the Great Tithes were no longer Kirkman's by 6 April 1779 when Rev. Samuel Knight leased them to his son Samuel, John Leigh and John Piston. The main part of the document with its crossings out, as read a second time is a lease by Kirkman of the same Tithes dated 24 March 1782 to John Strange and William Shaddock for a period of 21 years at a rent of £320 per annum. (Shaddock must have been a local worthy for he appears in the vestry minutes of 1782 as a churchwarden.)

It would appear that Jacob Kirkman must have taken some part in the affairs of the parish for in the Minutes of the Vestry Meeting of Chappell of the Hamlet of Hammersmith in the Parish of Fulham<sup>2</sup> on Sunday 15 September 1771 the Vestry returned 11 people as Surveyors of the Highways of which Jacob Kirkman was one. He was similarly returned again on 23 September 1776. Further evidence of Jacob's interest in the parish is to be found in a manuscript book dated 1793<sup>3</sup> in which all the property is listed within the parish

1. DD/115/16. Hammersmith Public Library.
2. PAH/1/1. Hammersmith Public Library.
3. A Survey and Valuation of all the Lands and Buildings within the Hamlet of Hammersmith in the County of Middlesex, John Willcock, 1793. PAH/1/157 Hammersmith Public Library.

by Landlord and tenant together with the area of the land and what is called its assessed value (presumably rateable value). Extracts are given below:-

| Landlord                    | Tenant        |                                         | Acres<br>Roods<br>Perch | Value |
|-----------------------------|---------------|-----------------------------------------|-------------------------|-------|
| Jacob Kirckman <sup>1</sup> | Thomas Arnold | House, barn<br>Stableyard and<br>garden |                         | £12   |
| Do                          | John Wadmore  | House and garden                        |                         | £5    |
| Do                          | Robert Hatton | House and garden                        |                         | £4    |
| Jacob Kirkman <sup>1</sup>  | Wm Whatley    | House and Garden                        |                         | £5    |

The above entries are from the "second Division" on page 2. This was bounded on the south by the Great Western Road, on the west by Brook Green and on the north and east by Blyth Lane.

|                                 |                     |                                              |        |     |
|---------------------------------|---------------------|----------------------------------------------|--------|-----|
| Jacob Kirckman Esq <sup>1</sup> | Thomas Oliver       | House, Court and garden                      | 0 0 24 | £16 |
| Do                              | Ann Naisbett        | House and garden                             | 0 0 33 | £18 |
| Do                              | Thomas<br>Levermore | House, Garden and<br>Orchard walled<br>round | 1 0 13 | £30 |

These entries are from the "Fifth Division" on page 15. This was bounded by the Back Lane on the north, by Fulham parish on the east and south and by Fulham Road on the west.

|                   |         |                                                                                                       |  |      |
|-------------------|---------|-------------------------------------------------------------------------------------------------------|--|------|
| Jacob Kirkman Esq | Himself | House, Offices<br>gardens walled<br>round, Hothouse,<br>Greenhouse, Two<br>Coaches and Two<br>Stables |  | £100 |
|-------------------|---------|-------------------------------------------------------------------------------------------------------|--|------|

further down on the same page

|                   |                      |                |  |     |
|-------------------|----------------------|----------------|--|-----|
| Jacob Kirkman Esq | Bartolomew<br>Powell | House          |  | £4  |
| Do                | John Evans           | House          |  | £4  |
| Do                | James Phillips       | Shed           |  | £2  |
| Do                | John Brown           | House and yard |  | £8  |
| Do                | James Hudson         | House and yard |  | £10 |

These entries are from the "Tenth Division" bounded by Queen St. in the east, the Thames on the south, the Creek at High bridge on the west and High Bridge Lane on the north. An examination of the map shows that the large house mentioned above must almost certainly be Kent House.

Finally on page 32, also in the tenth division appears:

|                   |                    |                |  |    |
|-------------------|--------------------|----------------|--|----|
| Jacob Kirkman Esq | Robert<br>Goodrick | House and yard |  | £5 |
|-------------------|--------------------|----------------|--|----|

One last piece of evidence of Jacob Kirkman's interest in Fulham is provided by a document which is an indenture dated 24 December 1768<sup>2</sup>

between Jacob Kirkman and James Scott of Hammersmith and is a lease

1. Notice the different ways of spelling and addressing Kirkman.

2. Document DD/115/15a. Hammersmith Public Library.



for several parcels of land in Fulham all about one acre in size for the purpose of digging brick earth. The yearly rent to be paid by Scott was £7 and a fine of £420 was payable for opening up and breaking the ground. Of this sum, £120 was payable on the delivery of the lease, £150 was payable on or before 25 December 1769 and the remaining £150 before 25 December 1770. Scott was allowed in the lease to erect houses or kilns for brick making and the lease was for 14 years. Unfortunately the lease does not bear Kirkman's signature.

Table 1

Physical Characteristics of the Surviving Harpsichords from 1579 - 1730

Notes:

1. The data given on the following pages is a summary of the physical characteristics of the English harpsichords which survive from the years 1579 - 1730. The listing is given in an order which is thought to represent the chronological order of their dates of manufacture.
2. The maker's name on page 1 is the Anglicised form of the name shown on the instrument, or where this is not known, it is the name by which the instrument is now most usually identified. The date on the instrument is not necessarily the date of manufacture. Where an instrument is not dated the letters nd appear in the table.
3. The place of origin is the place at which the instrument first came to the notice of present day researchers.
4. The number of notes given under keyboard details refers to the number of speaking strings. This number differs from the number of keys only in those instruments with broken octaves.
5. It is only possible to be certain of the barring details of the soundboard when the underside has been seen. In the case of the Theeuwes, the information comes from Mr John Barnes, and he and Mr Grant O'Brien have kindly given details of the two Ruckers style instruments (Nos 13 & 14). No 12 has been seen by the author through an inspection port, whilst the Barton was in the possession of the author and the barring was deduced from careful inspection through cracks in the soundboard. A possible barring for the Hitchcock is given by Hubbard. The Slade, Hancock and Wilbrook have also been seen partially through inspection holes.
6. Details of the keyboards and external finish of the 1729 Shudi are from Dale's description in Tschudi the Harpsichord Maker.
7. Under Type of Slide, the term Flemish denotes an upper thin slide and a fixed thin lower guide, whilst Italian refers to a box slide with no lower guide.
8. Overall dimensions refer to the case without lid. Under Type of Bracing, diagonal refers to the style in which diagonal members run at bottom board level from spine to bentside whilst parallel means that the members are roughly parallel to the main gap. Longitudinal bottom boards run throughout from front to rear whilst perpendicular boards run lengthwise under the soundboard and parallel to the main gap under the keyboard. A framed keyboard end has reinforcement strips of wood running up the spine and cheek at the proximal end and usually under the keyboard end also.

| No. | Maker's Name     | Date on Instrument | Number of Manuals | Original Owner          | Place of Origin          | Present Owner                       |
|-----|------------------|--------------------|-------------------|-------------------------|--------------------------|-------------------------------------|
| 1   | Ludovic Theeuwes | 1579               | 1                 | Roper Family            | Ightam Mote, Kent        | V & A Museum                        |
| 2   | John Iasard?     | 1622               | 1                 | not known               | Knole, Kent              | Lord Sackville                      |
| 3   | Cassus Jesses?   | nd                 | 1                 | not known               | not known                | Mr Robert Johnson, USA              |
| 4   | Charles Haward   | 1683               | 1                 | not known               | Hovingham Hall, Yorks    | The late Sir William Worsley        |
| 5   | Joseph Tisseran  | 1700-1712          | 2                 | Edward Hanford          | Woolas Hall, Worcs       | T. Burns Esq., Rous Lench.          |
| 6   | Thomas Barton    | 1709               | 1                 | not known               | Purton, Wiltshire        | Dr Mirrey, Redhill                  |
| 7   | Benjamin Slade   | nd                 | 1                 | not known               | Braboeuf Manor           | Dr Mirrey, Redhill                  |
| 8   | William Smith    | nd                 | 1                 | not known               | Morleys in 1920s         | Mrs Audrey Blackman, Oxford         |
| 9   | Thomas Hancock   | 1720               | 1                 | not known               | Cobham Park, Kent        | Russell Collection, Edinburgh       |
| 10  | Thomas Hitchcock | nd                 | 2                 | not known               | Ightam Mote, Kent        | V & A Museum                        |
| 11  | Herman Tabel     | 1721               | 2                 | not known               | not known                | County Museum, Warwick              |
| 12  | Unsigned         | 1623               | 2                 | Possibly Heneage family | East Coker               | Michael Thomas Esq                  |
| 13  | Johannes Ruckers | 1634               | 2                 | 4th Earl of Dysart      | Ham House                | V & A Museum                        |
| 14  | Andreas Ruckers  | 1646               | 1                 | Lord Tollemache         | Helmingham Hall, Ipswich | Lord Tollemache                     |
| 15  | Burkat Shudi     | 1729               | 2                 | Anna Strada del Po      | Shudi's Workshops        | M. Carl J. Michaelson<br>Copenhagen |
| 16  | John Wilbrook    | 1730               | 2                 | not known               | Saleroom                 | Dr Mirrey, Redhill                  |
| 17  | Francis Coston*  | nd                 | 2                 | not known               | 1885 Exhibition?         | not known- possibly in<br>Edinburgh |
| 18  | Francis Coston*  | nd                 | 2                 | not known               | 1885 Exhibition?         | not known- possibly in<br>Edinburgh |
| 19  | Unsigned         | nd                 | 1                 | not known               | Blairgowrie Castle       | Sir Peter and Lady Orde             |

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\* The definite existence of these two instruments cannot be proved, neither is it certain that they are two separate harpsichords. They are included here for the reason that it is believed that one or other is in existence in Edinburgh.

| No. | Name      | Details of Casework and Dimensions |        |        |                                            |              |               |               |            |                                                          |                           |                           |
|-----|-----------|------------------------------------|--------|--------|--------------------------------------------|--------------|---------------|---------------|------------|----------------------------------------------------------|---------------------------|---------------------------|
|     |           | Overall Dimensions                 |        |        | Type of Internal Bracing                   | Keyboard End | Bottom Boards |               | Spine Wood | Bentside Wood                                            | Bentside Finish           | Mitre end or Double curve |
|     |           | Length                             | Width  | Depth  |                                            |              | Material      | Type          |            |                                                          |                           |                           |
| 1   | Theeuwes  | 81.0                               | 35.0   | 9.0    | Parallel unique                            | Plain unique | Oak           | longitudinal  | Oak        | Oak                                                      | Tooled Leather            | Mitre end                 |
| 2   | Iasard    | 98.0                               | 33.0   | 9.5    | Unique diagonal buttress                   | Plain        | Oak           | longitudinal  | Oak        | Oak                                                      | Plain                     | Mitre end                 |
| 3   | Jesses    | 64.75                              | 33.5   | 10.875 |                                            | Plain        | Pine          |               | Lime       | Oak                                                      | Painted                   | Mitre end                 |
| 4   | Haward    | 88.0                               | 33.375 | 9.75   | Diagonal                                   | Framed       | Pine          | longitudinal  | Pine       | Walnut                                                   | Plain                     | Double curve              |
| 5   | Tisseran  | 90.0                               | 33.375 | 10.25  | Probably parallel - confirmed by M. Thomas | Framed       | Pine          | longitudinal  | Pine       | Pine                                                     | Lacquered                 | Mitre end                 |
| 6   | Barton    | 77.5                               | 33.0   | 7.3    | Diagonal                                   | Plain        | Pine          | longitudinal  | Pine       | Walnut                                                   | Plain                     | Mitre end                 |
| 7   | Slade     | 79.5                               | 37.5   | 8.125  | Diagonal                                   | Framed       | Pine          | longitudinal  | Pine       | Walnut                                                   | Plain                     | Double curve              |
| 8   | Smith     | 79.25                              | 37.25  | 9.375  | Probably parallel                          | Framed       | Pine          | longitudinal  | Pine       | Walnut                                                   | Plain                     | Mitre end                 |
| 9   | Hancock   | 82.75                              | 36.0   | 9.0    | Diagonal                                   | Framed       | Pine          | longitudinal  | Pine       | Pine                                                     | Walnut veneer             | Mitre end                 |
| 10  | Hitchcock | 92.0                               | 37.0   | 10.5   | Diagonal                                   | Framed       | Pine          | longitudinal  |            |                                                          | Walnut                    | Double curve              |
| 11  | Tabel     | 97.25                              | 37.125 | 10.875 | Parallel like Kirkman                      | Plain        | Modern        | Perpendicular | Oak        | Oak                                                      | Crossbanded Walnut        | Mitre end                 |
| 12  | Unsigned  | 85.5                               | 36.0   | 10.125 | Diagonal with shelf                        | Plain        | Pine          | Perpendicular | Pine       | Pine                                                     | Painted                   | Mitre end                 |
| 13  | Ruckers J | 86.0                               | 36.5   | 10.0   | Diagonal with shelf                        | Plain        | Pine          | longitudinal  | Pine       | Pine                                                     | Painted                   | Mitre end                 |
| 14  | Ruckers A | 82.5                               | 34.9   | 10.1   | Diagonal with shelf                        | Plain        | pine          | longitudinal  | Poplar     | Pine                                                     | Painted                   | Mitre end                 |
| 15  | Shudi     |                                    |        |        | Probably like Tabel                        | Plain        |               |               |            |                                                          | Crossbanded               | Mitre end                 |
| 16  | Wilbrook  | 97.25                              | 37.25  | 11.15  | Similar to Tabel                           | Plain        | Pine          | Perpendicular | Oak        | Oak                                                      | Crossbanded Walnut        | Mitre end                 |
| 17  | Coston    |                                    |        |        |                                            |              |               |               |            | Russell gives case of oak with satinwood or hawood inlay |                           |                           |
| 18  | Coston    |                                    |        |        |                                            |              |               |               |            | Dale gives case veneered in walnut                       |                           |                           |
| 19  | Unsigned  | 82.25                              | 36.625 | 9.375  | Probably like Kirkman                      | Plain        | Pine          | Perpendicular | oak        | oak                                                      | Crossbanded in walnut/box | Mitre end                 |

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| No. | Name      | Keyboard Details                   |           |                           | Number of Notes | Compass               | Key Finish                                                                      |                                    |                                                                                      | Remarks                                   |
|-----|-----------|------------------------------------|-----------|---------------------------|-----------------|-----------------------|---------------------------------------------------------------------------------|------------------------------------|--------------------------------------------------------------------------------------|-------------------------------------------|
|     |           | Number of Keys                     | FF sharp? | Broken Octave             |                 |                       | Naturals                                                                        | Sharps                             | Fronts                                                                               |                                           |
| 1   | Theeuwes  | 49                                 | No        | No                        | 49              | C-c <sup>3</sup>      | Keys missing                                                                    |                                    |                                                                                      | Sharps may have been inlaid box and ebony |
| 2   | Iasard    | Keyboard missing. No details known |           |                           | 53              |                       | Keys missing                                                                    |                                    |                                                                                      |                                           |
| 3   | Jesses    | 57                                 | No        | No                        | 57              | AA-f <sup>3</sup>     | Boxwood                                                                         | Marquetried                        | Arcaded                                                                              |                                           |
| 4   | Haward    | 57                                 | No        | No                        | 57              | FF-c <sup>3</sup>     | Ebony                                                                           | Ivory                              | Gold blocked paper                                                                   |                                           |
| 5   | Tisseran  | 52                                 | No        | D sharp split             | 53              | BB(AA)-d <sup>3</sup> | Ebony                                                                           | Ivory                              | Gilt blocked paper                                                                   |                                           |
| 6   | Barton    | 52                                 | No        | C sharp and D sharp split | 54              | BB(GG)-d <sup>3</sup> | Original Keys missing. Replaced by modern keys based on Barton Spinet of 1714   |                                    |                                                                                      |                                           |
| 7   | Slade     | 61                                 | No        | No                        | 61              | GG-g <sup>3</sup>     | Blackwood                                                                       | Ivory                              | Black blocked paper                                                                  |                                           |
| 8   | Smith     | 61                                 | No        | No                        | 61              | GG-g <sup>3</sup>     | Ivory                                                                           | Sandwich: Ebony/Ivory/Ebony        | Painted black                                                                        |                                           |
| 9   | Hancock   | 58                                 | No        | No                        | 58              | GG-e <sup>3</sup>     | Ebony                                                                           | Sandwich: Ivory/Ebony/Ivory        | Blocked paper painted red                                                            |                                           |
| 10  | Hitchcock | 61                                 | No        | No                        | 61              | GG-g <sup>3</sup>     | Ivory                                                                           | Sandwich: Ebony/Ivory/Ebony        | Ivory Arcaded                                                                        |                                           |
| 11  | Tabel     | 60                                 | No        | No                        | 60              | FF-f <sup>3</sup>     | Ebony                                                                           | Ivory slips on stained pine        | Reeded                                                                               |                                           |
| 12  | Unsigned  | 60                                 | No        | No                        | 60              | FF-f <sup>3</sup>     | Ivory                                                                           | Ebony                              | N.B. The present keyboards are modern no details are known of the original keyboards |                                           |
| 13  | Ruckers J | 58                                 | No        | No                        | 58              | GG-e <sup>3</sup>     | Ivory                                                                           | Black stained wood (possibly pear) | Reeded ebony                                                                         |                                           |
| 14  | Ruckers A | 59                                 | No        | No                        | 59              | FF-e <sup>3</sup>     | Ivory                                                                           | Black stained wood                 | Plain                                                                                |                                           |
| 15  | Shudi     | 60                                 | No        | No                        | 60              | FF-f <sup>3</sup>     | Blackwood                                                                       | Ivory slips on blackwood           | not known                                                                            |                                           |
| 16  | Wilbrook  | 60                                 | No        | No                        | 60              | FF-f <sup>3</sup>     | Ebony                                                                           | Sandwich: Ivory/Ebony/Ivory        | Reeded                                                                               |                                           |
| 17  | Coston    | 60*                                | No*       | No*                       | 60*             | FF-f <sup>3</sup>     | Ivory                                                                           | not known                          | not known                                                                            | *By inference from report by Russell      |
| 18  | Coston    | 59*                                | No*       | No*                       | 59*             | GG-f <sup>3</sup>     | Ivory                                                                           | ebony inlaid ivory slips           | gilded                                                                               | *By inference from report by Dale         |
| 19  | Unsigned  | 60                                 | No        | No                        | 60              | FF-f <sup>3</sup>     | Present keys are modern replacements having ivory naturals and sharps of cherry |                                    |                                                                                      |                                           |

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| No. | Name      | Soundboard Details                                                     |                            |                                                       | Action                        |                   |                              | Number of Stops | Remarks                                       |
|-----|-----------|------------------------------------------------------------------------|----------------------------|-------------------------------------------------------|-------------------------------|-------------------|------------------------------|-----------------|-----------------------------------------------|
|     |           | Direction of Grain                                                     | Rose Details               | Type of Barring                                       | Original Jacks                | Type of Numbering | Type of Slide                |                 |                                               |
| 1   | Theeuwes  | Perpendicular                                                          | Hole for one rose          | 4" hpr acts as cut off bar plus four soundbars        | missing                       |                   | Flemish with movable lower   | 3               | Upper guide is fixed & lower slides move      |
| 2   | Iasard    | Soundboard missing, though there is evidence that it was perpendicular |                            |                                                       | missing                       |                   | Lower guide remains only     | none            |                                               |
| 3   | Jesses    | not known                                                              | 2 carved roses             | not known                                             | not known                     |                   | slides project through cheek | nk              |                                               |
| 4   | Haward    | Perpendicular                                                          | 2 large and 2 small roses  |                                                       | 1 rank original<br>1 rank new | stamped           | Flemish                      | 2               | Originally slides projected through cheek     |
| 5   | Tisseran  | 25 degree angle to spine                                               | Rose painted on soundboard | Soundbars parallel to the cut-off bar                 | probably original             | stamped           | Flemish                      | 3               |                                               |
| 6   | Barton    | Perpendicular                                                          | No rose                    | 2 bars running across board parallel to header        | same original                 | ink               | Italian box slide            | 2               |                                               |
| 7   | Slade     | Perpendicular                                                          | No rose                    | Cut off bar plus one or more soundbars                | original                      | stamped           | Flemish                      | 2               |                                               |
| 8   | Smith     | 50 degree angle to spine                                               | No rose                    |                                                       | original                      | ink               | Italian                      | 2               | There are wooden casings over the stop levers |
| 9   | Hancock   | Perpendicular                                                          | No rose                    | Probably cut off bar plus three soundbars             | about half are original       | stamped           | Italian                      | 2               | There are indications of original stop covers |
| 10  | Hitchcock | 35 degree angle to spine                                               | No rose                    |                                                       | original                      | ink               | Flemish                      | 4               |                                               |
| 11  | Tabel     | Perpendicular                                                          | Rose incorporates monogram |                                                       | modern                        |                   | Flemish                      | 4               |                                               |
| 12  | Unsigned  | Perpendicular                                                          | Rose painted on soundboard | Cut off bar plus four soundbars                       | modern                        |                   | Flemish                      | 4               |                                               |
| 13  | Ruckers J | Perpendicular                                                          | Ruckers style rose         | Cut off bar and four sound bars running under bridges | Probably 18th C               | Stamped           | Flemish                      | 3               | Evidence of wooden stop lever covers          |
| 14  | Ruckers A | Perpendicular                                                          | AR Ruckers style rose      | As above instrument                                   | As above                      |                   | Flemish                      | 3               | Instrument now incorporates a machine pedal   |
| 15  | Shudi     | Perpendicular                                                          | not known                  | not known                                             | not known                     |                   |                              | 4               | *From Dale's report                           |
| 16  | Wilbrook  | Perpendicular                                                          | Hole for one rose exists   | Cut off bar and four soundbars                        | original                      | Stamped           | Flemish                      | 4               |                                               |
| 17  | Coston    |                                                                        |                            |                                                       |                               |                   |                              |                 | Russell says "No Pedals"                      |
| 18  | Coston    | Dale reports soundboard painted with flowers and parrots.              |                            |                                                       |                               |                   |                              | 3               | *according to Dale                            |
| 19  | Unsigned  | Perpendicular                                                          | No rose                    |                                                       | 1 original<br>18th C          | Stamped           | Flemish                      | 3               |                                               |

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| No. | Name      | Casework Continued                                           | Lid                |                      |                        |                                                              | Main Gap<br>Angled or Perpen-<br>dicular to spine |                                                                                                     |
|-----|-----------|--------------------------------------------------------------|--------------------|----------------------|------------------------|--------------------------------------------------------------|---------------------------------------------------|-----------------------------------------------------------------------------------------------------|
|     |           | Details of internal<br>decoration                            | Wood               | External<br>Finish   | Internal<br>Finish     | Type of<br>Strap Hinges                                      |                                                   | Type of<br>Fold hinges                                                                              |
| 1   | Theeuwes  | Embossed paper                                               |                    |                      | Pictorial scene        |                                                              |                                                   | Perpendicular. Main gap has three rows of mortises cut through sound-board and covered with leather |
| 2   | Iasard    | Painted latin mottoes on yellow ground                       | Lid is missing     |                      |                        |                                                              | No hinges                                         | Angled to spine                                                                                     |
| 3   | Jesses    | See Plate XII of Boalch I                                    | Lime               | Painted              | Pictorial scene        |                                                              |                                                   | Angled to spine                                                                                     |
| 4   | Haward    | Characteristic English 17C marquetry over keys.              | Walnut             | Plain                | Plain                  |                                                              |                                                   | Angled to spine                                                                                     |
| 5   | Tisseran  | Painted Pictorial decoration on key surrounds                | Pine               | Lacquer as case      | Dark green lacquer     | See Fig 24                                                   | See Fig 24                                        | Perpendicular to spine                                                                              |
| 6   | Barton    | Veneered with wood of pinkish colour (possibly cypress)      | Walnut             | Plain                | Plain                  | See Fig 24                                                   | See Fig 24                                        | Angled to spine                                                                                     |
| 7   | Slade     | Box stringing inlay on walnut ground over keyboard.          | Walnut             | Plain                | Plain                  | Same as No 6                                                 |                                                   | Angled to spine                                                                                     |
| 8   | Smith     | Sycamore veneer with black-wood vertical stringing every 10" | Walnut             | Plain                | Plain                  | See Fig 24                                                   | See Fig 24                                        | Angled to spine                                                                                     |
| 9   | Hancock   | Blackwood stringing on light (sycamore?) ground.             | Walnut             | Plain                | Plain                  | Similar to No 6                                              |                                                   | Angled to spine                                                                                     |
| 10  | Hitchcock | Walnut with herring bone stringing                           | Walnut             | Plain                | Plain                  | See Fig 24                                                   | See fig 24                                        | Perpendicular                                                                                       |
| 11  | Tabel     | 1" wide stringing of light walnut on sycamore ground         | Walnut             | Plain                | Plain                  | See Fig 24                                                   | See fig 24                                        | Perpendicular                                                                                       |
| 12  | Unsigned  | Painted flowers, birds and scrollwork on gilt ground         | Pine               | Painted              | Painted Panels         | See Fig 24                                                   | See fig 24                                        | Angled to spine (very slightly)                                                                     |
| 13  | Ruckers J | Mixture of applied papers some handblocked                   | Pine               | Painted              | Painted Lat-in Mottoes | Small decorative hinges unlike any other English Harpsichord |                                                   | Perpendicular                                                                                       |
| 14  | Ruckers A | Gold paint on keyboard surrounds and on wrestplank.          | Pine               | Lacquered Dark green | Pictorial Scene        | As above instrument                                          |                                                   | Perpendicular                                                                                       |
| 15  | Shudi     | No details available                                         |                    |                      |                        |                                                              |                                                   |                                                                                                     |
| 16  | Wilbrook  | Burr walnut panels with herring bone stringing               | Walnut             | Plain                | Plain                  | See Fig 24                                                   | See fig 24                                        | Slightly angled to spine                                                                            |
| 17  | Coston    | No details from Russell's description                        |                    |                      |                        |                                                              |                                                   |                                                                                                     |
| 18  | Coston    | Strap hinges like Hitchcock*                                 |                    |                      |                        |                                                              |                                                   |                                                                                                     |
| 19  | Unsigned  | Three panels of walnut cross banded mahogany over keys       | mahogany or Walnut | Plain                | Plain                  | Similar to 18th C Kirkman style                              |                                                   | Perpendicular                                                                                       |

| No. | Name      | Present Specification                                                                                                                                                               | Layout of string band                                                                      |          |                  |
|-----|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|----------|------------------|
|     |           |                                                                                                                                                                                     | Scale at c<br>Length                                                                       | Plucking | Lute<br>Plucking |
| 1   | Theeuwes  | Single Manual: Three rows of mortises in the main gap indicate that originally there were three registers which from present layout appear to have been 2x8' and 1x4'               | 14"                                                                                        |          |                  |
| 2   | Iasard    | Single manual: Soundboard is missing but there were undoubtedly three choirs of strings and three rows of jacks. Pitch as yet not fully determined but probably 2x8' plus one other | Though soundboard is missing, studies indicate a scale of between 10" and 12" for pitch c. |          |                  |
| 3   | Jesses    | Single manual: Two choirs at unspecified pitch                                                                                                                                      | 8"                                                                                         | 1.625    |                  |
| 4   | Haward    | Single manual: 2x8' with one choir quill and the other leather, though this is modern.                                                                                              | 10.125                                                                                     | 1.875    |                  |
| 5   | Tisseran  | Double manual: Lower; 1x8' Leather (modern), 1x8' Quill (dogleg), 1x4' quill.<br>Upper; 1x8' Quill (dogleg)                                                                         | 12.75                                                                                      | 2.875    |                  |
| 6   | Barton    | Single manual: 2x8' both quill                                                                                                                                                      | 11.25                                                                                      | 2.75     |                  |
| 7   | Slade     | Single manual: 2x8' both quill                                                                                                                                                      | 10.75                                                                                      | 3.0      |                  |
| 8   | Smith     | Single manual: 2x8' both quill                                                                                                                                                      | 10.3                                                                                       | 3.25     |                  |
| 9   | Hancock   | Single manual: 2x8' both quill                                                                                                                                                      | 9.7                                                                                        | 2.625    |                  |
| 10  | Hitchcock | Double Manual: Upper 1x8' quill (dogleg), Lute (quill)<br>Lower: 1x8' quill, 1x8' quill (dogleg), 1x4' quill                                                                        | 13.0                                                                                       |          |                  |
| 11  | Tabel     | Double Manual: Upper 1x8' quill (dogleg), Lute (quill)<br>Lower: 1x8' quill, 1x8' quill (dogleg), 1x4' quill                                                                        | 13.5                                                                                       | 3.125    | 0.625            |
| 12  | Unsigned  | Double Manual: Upper 1x8' quill (dogleg), Lute (quill)<br>Lower: 1x8' quill, 1x8' quill (dogleg), 1x4' quill                                                                        | 14.0                                                                                       | 3.25     | 0.375            |
| 13  | Ruckers J | Double Manual: Upper 1x8' quill (dogleg)<br>Lower: 1x8' quill (dogleg), 1x8' quill, Harp to 8', 1x4' quill                                                                          | 13.21                                                                                      |          |                  |
| 14  | Ruckers A | Single Manual: 2x8', 1x4'                                                                                                                                                           | 13.4                                                                                       |          |                  |
| 15  | Shudi     | Double Manual: Upper; 1x8', (dogleg) Lute (Details from Dale's description)<br>Lower; 1x8' (dogleg), 1x8', 1x4'                                                                     |                                                                                            |          |                  |
| 16  | Wilbrook  | Double Manual: Upper; 1x8' quill (dogleg), Lute (quill)<br>Lower; 1x8' quill (dogleg), 1x8' quill, 1x4' quill.                                                                      | 13.5                                                                                       | 2.75     | 0.25             |
| 17  | Coston    | Double Manual: 2x8', 1x4' buff (Russell's description)                                                                                                                              |                                                                                            |          |                  |
| 18  | Coston    | Double Manual: Octave, 1st and 2nd Unison (Dale's description)                                                                                                                      |                                                                                            |          |                  |
| 19  | Unsigned  | Single Manual: 2x8', one quill, one leather but this is probably modern. Harp to one 8'                                                                                             | 10.75                                                                                      | 2.8      |                  |

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| No. | Name      | Layout details continued       |        |       |                 |        |       |                                        |       | Remarks                                     |
|-----|-----------|--------------------------------|--------|-------|-----------------|--------|-------|----------------------------------------|-------|---------------------------------------------|
|     |           | Longest String                 |        |       | Shortest String |        |       | 4 <sup>1</sup> scale at c <sup>2</sup> |       |                                             |
|     |           | Note                           | Length | Pluck | Note            | Length | Pluck | Length                                 | Pluck |                                             |
| 1   | Theeuwes  | c                              | 60.0   |       | c <sup>3</sup>  | 7.0    |       |                                        |       |                                             |
| 2   | Iasard    | Soundboard and strings missing |        |       |                 |        |       |                                        |       |                                             |
| 3   | Jesses    | AA                             | 52.75  | 4.875 | f <sup>3</sup>  | 3.5    | 1.125 |                                        |       |                                             |
| 4   | Haward    | FF                             | 73.25  | 6.25  | d <sup>3</sup>  | 3.75   | 1.375 |                                        |       |                                             |
| 5   | Tisseran  | BB                             | 66.25  | 5.875 | d <sup>3</sup>  | 5.375  | 1.625 | 6.0                                    | 2.5   |                                             |
| 6   | Barton    | BB                             | 61.0   | 5.0   | d <sup>3</sup>  | 4.5    | 1.875 |                                        |       |                                             |
| 7   | Slade     | GG                             | 63.0   | 6.5   | g <sup>3</sup>  | 3.375  | 1.875 |                                        |       |                                             |
| 8   | Smith     | GG                             | 61.5   | 7.0   | g <sup>3</sup>  | 3.5    | 1.625 |                                        |       |                                             |
| 9   | Hancock   | GG                             | 64.5   | 6.125 | e <sup>3</sup>  | 3.7    | 1.1   |                                        |       |                                             |
| 10  | Hitchcock | GG                             | 68.0   | 8.75  | g <sup>3</sup>  | 4.5    | 2.125 |                                        |       |                                             |
| 11  | Tabel     | FF                             | 72.5   | 6.625 | f <sup>3</sup>  | 5.0    | 2.25  | 5.9                                    |       |                                             |
| 12  | Unsigned  | FF                             | 63.75  | 8.25  | f <sup>3</sup>  | 4.75   |       |                                        |       |                                             |
| 13  | Ruckers J | GG                             | 64.5   |       | e <sup>3</sup>  | 5.4    |       | 6.6                                    |       | Lengths kindly supplied by Mr Grant O'Brien |
| 14  | Ruckers A | FF                             | 68.3   |       | e <sup>3</sup>  | 5.0    |       |                                        |       | As above                                    |
| 15  | Shudi     | FF                             |        |       | f <sup>3</sup>  |        |       |                                        |       |                                             |
| 16  | Wilbrook  | FF                             | 72.0   | 6.5   | f <sup>3</sup>  | 5.25   | 1.875 | 6.75                                   |       |                                             |
| 17  | Coston    | FF                             |        |       | f <sup>3</sup>  |        |       |                                        |       |                                             |
| 18  | Coston    | GG                             |        |       | f <sup>3</sup>  |        |       |                                        |       |                                             |
| 19  | Unsigned  | FF                             | 64.25  | 7.3   | f <sup>3</sup>  | 4.3    | 1.4   |                                        |       |                                             |

Table 2

Surviving harpsichords from the workshops of English builders 1744-1800

| Makers                                                                                                                                                                                | Surviving two<br>manual h'chords | Surviving one<br>manual h'chords | Other instruments and<br>remarks                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|----------------------------------|------------------------------------------------------------------------------------------|
| Kirkman                                                                                                                                                                               | 65                               | 80                               | 2 other harpsichords number<br>of manuals unknown: 6 spinets<br>1 claviorganum           |
| Shudi                                                                                                                                                                                 | 28                               | 14                               | Other harpsichords mentioned<br>by Boalch, but it is not<br>known if they have survived. |
| Longman &<br>Broderip                                                                                                                                                                 | 5                                | 14                               | 1 h'chord with number of<br>manuals not known. 10 spinets.                               |
| Thomas Blasser                                                                                                                                                                        | 1                                |                                  |                                                                                          |
| John Crang                                                                                                                                                                            |                                  |                                  | 1 claviorganum. 1 spinet.                                                                |
| Americus Backers                                                                                                                                                                      | 1                                |                                  |                                                                                          |
| Baker Harris                                                                                                                                                                          | 2*                               | 1                                | 18 spinets.* Includes one<br>allegedly by Henry Tull                                     |
| James and John<br>Simpson                                                                                                                                                             | 1                                |                                  |                                                                                          |
| Thomas Haxby                                                                                                                                                                          |                                  | 3                                | 4 spinets                                                                                |
| William Pether                                                                                                                                                                        |                                  | 1                                |                                                                                          |
| Robert Stodart                                                                                                                                                                        |                                  |                                  | 2 manual combined h'chord<br>and pianoforte (May not<br>be genuine.                      |
| Thomas Culliford - A number of Longman and Broderip instruments given<br>above are by Culliford though sold under their name. In<br>addition Boalch reports one h'chord and 1 spinet. |                                  |                                  |                                                                                          |
| Robert Falkener                                                                                                                                                                       | 2                                |                                  | Instruments appear to be by<br>Kirkman, but are not.                                     |
| John Joseph Merlin                                                                                                                                                                    |                                  |                                  | 1 manual combined h'chord<br>and pianoforte                                              |
| John Kirshaw                                                                                                                                                                          |                                  | 1                                | Also transverse h'chord<br>with 2 strings per note<br>and 5 spinets.                     |

TABLE 3

Chronological table of events in the development of English furniture styles in the period 1550 - 1800

| Period           | Approximate dates | Individuals                                                        | Publications                                                                    | Introduction of specific pieces, woods used and characteristic features                                                                                                                                                                                                                                                                                       |
|------------------|-------------------|--------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Elizabethan      | 1550 - 1603       | Inigo Jones<br>(1573-1652)                                         |                                                                                 | Most domestic furniture of oak, usually solid and heavy. Introduction of press and ct. cupboard, long table with 6 or 8 legs often with bulbous supports. By 1580 joined stools appear. Plain solid walnut used for some fine pieces particularly ct. cupboards.                                                                                              |
| Stuart           | 1603 - 1649       |                                                                    |                                                                                 | Solid oak and solid walnut as in previous period. The chest of drawers evolves from the mule chest by about 1640                                                                                                                                                                                                                                              |
| Cromwellian      | 1649 - 1660       |                                                                    |                                                                                 | Oak and walnut as before. Caning and leather upholstery introduced.                                                                                                                                                                                                                                                                                           |
| Carolean         | 1660 - 1689       | Grinling Gibbons<br>(1648 - 1720)<br>Daniel Marot<br>(c1660- 1720) | Evelyn, <u>Sylva</u> , 1664<br><br>Stalker and Parker<br><u>Treatise</u> , 1688 | The beginning of the craft of the cabinet maker. Walnut much used, beech gains ground, often painted black as a substitute for walnut. Veneering introduced by 1670 and marquetry and lacquer used. Upholstery becomes general. The earliest form of cabriole leg found in 1680s. Gesso. New furniture includes the day bed, scrutoir and large mirror glass. |
| William and Mary | 1689 - 1702       |                                                                    |                                                                                 | Oriental taste begins to enjoy varying popularity. Veneers include walnut, burr walnut, laburnum and yew. Upholstered wing chair Pier Glass and bureau introduced.                                                                                                                                                                                            |
| Queen Anne       | 1702 - 1714       |                                                                    |                                                                                 | Veneers include burr walnut, mulberry and yew. Cabriole legs extensively used.                                                                                                                                                                                                                                                                                |

Early  
Georgian

1714 - 1745

William Kent  
(1685 - 1748)

The "Baroque" period. From 1710, furniture styles influenced greatly by architects. Oak and other native woods much used in country districts for plain furniture and throughout the 18th C. Finer pieces still employ walnut veneers and gesso until 1730 when mahogany begins to supplant walnut. Mahogany often employed in solid though also used as veneer. Cabriole leg still much used.

Chippendale 1745 - 1779

Thomas Chippendale  
(1718 - 1779)

Chippendale, Director,  
first edition 1754.  
Ince and Mayhew,  
Universal System, 1759  
- 1763.

The "Rococo" period. Gothic and Chinese styles intermittently popular for nearly three quarters of a century. Finest Spanish mahogany used, walnut almost completely discontinued. By 1750 the straight leg used much for furniture in Gothic and Chinese styles. By 1770 the cabriole leg disappears completely. Introduction of Pembroke table and basin or washing stand.

Adam

1762 - 1792

Robert Adam  
(1728 - 1792)

The "Neo-Classic" period. Fine inlays of Tulip wood, satinwood, amboyna usually on a mahogany ground. Satinwood also used as a main veneer for whole pieces. Painted furniture in favour again. Chinese influence.

Hepplewhite 1770 - 1794

George Hepplewhite  
( d. 1786)

Hepplewhite, Guide,  
1788.

Period characterised by graceful furniture. Mahogany used chiefly. Revival of marquetry and japanning. Some French influence (Louis XV & XVI). Straight taper leg and turned leg.

Sheraton

1790 - 1806

Thomas Sheraton  
(1751 - 1806)

Sheraton, Drawing  
Book, 1791 - 1794

Mahogany and satinwood still popular. Rosewood introduced at end of period. Plentiful use of inlay. Spring upholstery introduced.

Table 4. Chronological Table of Events in the  
Development of the English Harpsichord in the  
period 1439 - 1800

The table which follows gives the most significant events in the development of the English harpsichord from 1439 - 1800. In the period up to 1730, the surviving instruments are treated separately in column 2. Thereafter they are assigned to column 3 using the shorthand system of notation developed on page 126 of this thesis.<sup>1</sup> The makers are given by name with the exception of the Kirkmans, Shudi and Broadwood and Longman and Broderip who are assigned abbreviations according to the following:

JK - Jacob Kirkman, JAK - Jacob and Abraham Kirkman, AJK - Abraham and Joseph Kirkman, JoK - Joseph Kirkman, BS - Burkat Shudi, BJSB - Burkat Shudi and John Broadwood, JB - John Broadwood, L&B - Longman and Broderip, BN - Boalch No.

1. Note that in the shorthand descriptions of surviving instruments, the presence of a 0 indicates that the feature which would normally occupy that position is known to be missing, whilst a - indicates that there is no definite information on the presence or otherwise of the feature. Thus for example 22840L-S(L) is a two manual harpsichord with 2x8', and 1x4' with a lute stop. There is no harp stop, there is a lid swell. It is not known if there is a machine.

Note that in this table, dates between which an event occurred are separated by a x (eg 1654x1689) whilst dates during which an event occurred are separated by a hyphen (eg 1780-1790)

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Table 4

Chronological table of events in the development of the English Harpsichord

| Date            | Events Concerned with the English harpsichord                                                                        | Remarks                                                                                                                                                                                                                                    | Historical period and events occurring elsewhere                                                                                                        |
|-----------------|----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. 1439x1447    | John Prudd executes pictures of instruments including a harpsichord in the windows of the Beauchamp Chapel, Warwick. | First iconographical evidence of the harpsichord in England.                                                                                                                                                                               | 1422-1461 Reign of Henry VI<br>1455 Wars of the Roses begin                                                                                             |
| 2. 1465x68      | Wooden carving of an angel playing the harpsichord on a corbel in Manchester Cathedral                               |                                                                                                                                                                                                                                            | 1461-1483 Reign of Edward IV                                                                                                                            |
| 3. Mid 15c      |                                                                                                                      |                                                                                                                                                                                                                                            | Manuscript of Arnault of Zwolle showing harpsichord.                                                                                                    |
| 4. 15th Century | Carving of angel musician playing harpsichord at St. Wendreda's Church, March, Cambridgeshire.                       |                                                                                                                                                                                                                                            | 1483-1485 Richard III<br>1485-1509 Henry VII (Tudor line commences)                                                                                     |
| 5. 1521         |                                                                                                                      |                                                                                                                                                                                                                                            | Earliest surviving Italian harpsichord by Jerome of Bologna.                                                                                            |
| 6. 1530x53      | Various references in the court accounts to virginals- the generic term for all jack action instruments              | It seems most likely that at least some of these were harpsichords and one or two may have been double manual instruments.                                                                                                                 | 1509-1547 Henry VIII<br>(1515-1530 Administration of Wolsey)<br>Music receives general encouragement and the King takes an active part in music making. |
| 7. 1548         |                                                                                                                      |                                                                                                                                                                                                                                            | Earliest surviving Flemish instrument - a spinet by Joes Karest.                                                                                        |
| 8. c1550        |                                                                                                                      |                                                                                                                                                                                                                                            | Hans Ruckers the Elder born at Malines                                                                                                                  |
| 9. 1579         | Claviorganum by Ludovic Theeuwes of London                                                                           | Earliest surviving English instrument. Claviorganum with 49 note compass of C-c <sup>3</sup> . Probably originally 2x8', 1x4'. Instrument shows influences from Flanders and Italy and has some unexplained features. Case of English oak. |                                                                                                                                                         |
|                 |                                                                                                                      |                                                                                                                                                                                                                                            |                                                                                                                                                         |

|                    |                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                    |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| 10. 1558 x<br>1603 | Further references to virginals and other instruments in court accounts. No specific mention of an English instrument and the surviving examples such as the Queen Elizabeth virginals are Italian. |                                                                                                                                                                                                                                                                                                                                                                                                | 1558-1603 Reign of Elizabeth I. Music flourishes in England and the English virginalists produce keyboard music of high quality.   |
| 11. 1581           |                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                | Probably the earliest surviving authentic Ruckers instrument - a double virginal with removable ottavino. Now in the MMA New York. |
| 12. 1585           |                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                | Bertolotti Claviorganum made in this year. Now has 1x8', 1x4' but was probably 2x8'.                                               |
| 13. 1590           |                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                | Probably the earliest surviving Italian harpsichord with 2x8' and 1x4' by Francesco da Brescia or Domenico Pisarenensis.           |
| 14. 1594           |                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                | Possibly the earliest surviving authentic Ruckers harpsichord. Incorporates ottavino in bent side. Now in Berlin.                  |
| 15: 1603           |                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                | Stuart Line commences with James I 1603-1625                                                                                       |
| 16. 1622           | Harpsichord probably by John Iasard now at Knole, Kent                                                                                                                                              | A single manual harpsichord with three choirs of unspecified pitch, probably 2x8' and one other choir. Possibly the first appearance of the lute stop in England though not cut through the wrest plank. Possibly first appearance of the harp stop. Many Italianate features - short scale light case, Italian case bracing, nut standing on free soundboard. English oak used for main case. |                                                                                                                                    |
| 17. 1623           | Unsigned instrument with painted case in Flemish style is dated in this year by inscription on the soundboard. (Now property of Michael Thomas.)                                                    | The date 1623 may well be incorrect and instrument is probably English. If date is correct it is the earliest surviving 2 manual instrument built in England. Features include diagonal case bracing, shelf construction, and cut through lute- though this latter could well be later than the rest of the instrument.                                                                        | 1625 Accession of Charles I (1625-1649)                                                                                            |
|                    |                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                    |

|                     |                                                                                                         |                                                                                                                                                                                                                                                 |                                                                                                                      |
|---------------------|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| 18. 1630 x.<br>1680 | Cassus Jesses harpsichord probably built in this period. Instrument is generally thought to be English. | If the harpsichord is English it is the only surviving instrument to be decorated in the same style as the rectangular English virginals. Some evidence of an original lute stop and much Italian influence. Pitch not determined beyond doubt. |                                                                                                                      |
| 19. 1634            | Ham House Ruckers is dated in this year but is probably later and may well be English.                  | Instrument has many pointers to an English ancestry including diagonal case bracing and shelf construction, and in many respects resembles the 1623 unsigned instrument at 17 above.                                                            | 1637 Earliest surviving instrument by Zenti.                                                                         |
| 20. 1637            | Sir F. Windebank starts negotiations with Gerbier for a Ruckers double manual harpsichord.              | The instrument, a transposing double, was not considered satisfactory when delivered in 1638, demonstrating that the English had no use for or at least did not understand the purpose of such a harpsichord.                                   | Earliest surviving harpsichord by Zenti.                                                                             |
| 21. 1641            | Earliest surviving English rectangular virginals by Gabriel Townsend.                                   | English virginals may well have been made earlier than this date. Townsend for example was free of the Joiners' Company by 1625.                                                                                                                |                                                                                                                      |
| 22. 1646            | Apparent Andreas Ruckers single manual harpsichord now at Helmingham Hall is dated in this year.        | Instrument is probably English and may well have similar history to the Ham House Ruckers. There are many constructional similarities.                                                                                                          |                                                                                                                      |
| 23. 1649            |                                                                                                         |                                                                                                                                                                                                                                                 | 1649-1653 The Commonwealth                                                                                           |
| 24. 1650            |                                                                                                         |                                                                                                                                                                                                                                                 | Van Blankenburg gives this as the date of the last Ruckers transposing double.                                       |
| 25. 1653            |                                                                                                         |                                                                                                                                                                                                                                                 | 1653-1660 The Protectorate                                                                                           |
| 26. 1664            | Zenti appointed King's Virginal maker.                                                                  |                                                                                                                                                                                                                                                 | 1660-1685 Charles II. Restoration of the Monarchy.                                                                   |
| 27. 1667 x<br>1668  | In 1668, Samuel Pepys mentions the purchase of a spinet from Haward for £5                              | One of the earliest pieces of evidence for the English spinet.                                                                                                                                                                                  | Andreas Ruckers the Younger had died by 14 July 1667. Probably the last Ruckers harpsichords were made in this year. |
|                     |                                                                                                         |                                                                                                                                                                                                                                                 |                                                                                                                      |



|                   |                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                     |                                                                        |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| 28. 1674          | Charles Haward paid £6-10-0 for mending pedals.                                                                                                                                                                                         | First documentary evidence of the pedals being applied to English harpsichords.                                                                                                                                                                                     |                                                                        |
| 29. 1676          | Full account of the pedals of Charles Haward given by Mace in <u>Musick's Monument</u> .                                                                                                                                                | Confirmation of the fitting of the pedals to a harpsichord in order to change the registration. Also gives further confirmation of the lute and harp stops in English instruments.                                                                                  |                                                                        |
| 30. 1679          | Latest surviving English virginals by Charles Rewallin.                                                                                                                                                                                 |                                                                                                                                                                                                                                                                     |                                                                        |
| 31. 1683          | Surviving harpsichord by Charles Haward, now at Hovingham Hall, Yorks<br><br>At about this time or a little before, the characteristic English leg of mutton or wing shape spinet begins to be made in numbers for modest domestic use. | Single manual, 2x8' choirs. First surviving instrument to exhibit many of the characteristics to be found in surviving English single manual harpsichords up to at least 1720. Further evidence of the lute stop. Earliest use of walnut in an English harpsichord. | 1685-1689 James II                                                     |
| 32. 1689x<br>1704 | Talbot Manuscript probably written in this period.                                                                                                                                                                                      | Description of Jenny's harpsichord - probably an English instrument. The manuscript confirms much of the practice which is evidenced by the simple single manual instruments which still survive from the period 1683 - 1720.                                       | 1689 - 1702 William and Mary                                           |
| 33. 1694          | Patent by Joyce and East to apply some sort of barrell mechanism to the harpsichord.                                                                                                                                                    |                                                                                                                                                                                                                                                                     |                                                                        |
| 34. 1696          |                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                     | Surviving Italian harpsichord by Antonius de Migliais has 3x8' choirs. |
| 35. 1700          | Earliest possible date for the Tisseran harpsichord                                                                                                                                                                                     | See at 38 below                                                                                                                                                                                                                                                     | Description of Cristofori's first grand piano by Fedorigo Meccoli.     |
| 36. 1702          | Burkat Shudi born                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                     | 1702-1714 Queen Anne                                                   |
| 37. 1709          | Surviving harpsichord by Thomas Barton. Now the property of Dr Mirrey of Redhill.                                                                                                                                                       | Single manual, 2x8' choirs. Typical English instrument of period 1683-1720.                                                                                                                                                                                         |                                                                        |
|                   |                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                     |                                                                        |

|               |                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                     |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 38. 1712      | <p>Correspondence concerned with the purchase of the Tisseran harpsichord between Thomas Day and Edward Hanford who bought the instrument which is now at Rous Lench Court, Worcs.</p> <p>Reference in the above correspondence to a two manual harpsichord by Playen which may be earlier than the Tisseran, and which was by an English builder rather than a continental maker who had come to London.</p> | <p>The Tisseran harpsichord is the earliest surviving two manual instrument to be built in England. Earliest authentic appearance of the dogleg 8' and a diagonally laid soundboard. The instrument has considerable Flemish influence and in some ways foreshadows the Tabel Harpsichord. It still has a shortish scale at 12.75"</p> <p>*This presupposes that the instruments at 17, 19 and 22 are not correctly dated.</p> |                                                                                                                                                                                                                     |
| 39. 1710-1725 | <p>Surviving harpsichord by Benjamin Slade probably built in this period. Instrument is now property of Dr Mirrey.</p>                                                                                                                                                                                                                                                                                        | <p>Single manual with 2x8' choirs. Similar in many ways to the Barton but has double curve in bentside, and is probably the earliest surviving harpsichord to have a 5 octave compass of GG-g<sup>3</sup>.</p>                                                                                                                                                                                                                 | 1714-1727 George I                                                                                                                                                                                                  |
| 40. 1715-1730 | <p>Surviving harpsichord by William Smith who may have been an apprentice of Benjamin Slade. Instrument is now the property of Mrs Audrey Blackman, Oxford.</p>                                                                                                                                                                                                                                               | <p>Single manual with 2x8' choirs and many similarities with the above harpsichord. The second English harpsichord to have a diagonally laid soundboard, and probably the earliest surviving instrument with white naturals. (5 octave compass as above)</p>                                                                                                                                                                   |                                                                                                                                                                                                                     |
| 41. 1716      | <p>First mention of Herman Tabel as resident in Oxenden Street. He was probably producing harpsichords by this date.</p>                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                     |
| 42. 1718      | <p>Burkat Shudi comes to London</p>                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                     |
| 43. 1720      | <p>Surviving harpsichord by Thomas Hancock. Instrument is now in the Russell Collection, Edinburgh.</p> <p>2 manual harpsichord by Tabel known to have been at Cannons.</p>                                                                                                                                                                                                                                   | <p>Single manual, 2x8' choirs. Very similar in many respects to the Barton, Smith, and Slade.</p> <p>Mention also in same reference to a gut strung harpsichord by Longfellow.</p>                                                                                                                                                                                                                                             | Earliest surviving grand piano by Cristofori, now in the MMA, New York.                                                                                                                                             |
| 44. 1720-1730 | <p>Surviving harpsichord by Thomas Hitchcock probably in this period. Instrument is now in V&amp;A, London.</p>                                                                                                                                                                                                                                                                                               | <p>An example of a fully developed harpsichord by an indigenous English builder. 2x8', 1x4', lute and dogleg, 2 manuals. Diagonally laid soundboard, 5 octaves, GG-g<sup>3</sup>, White naturals.</p>                                                                                                                                                                                                                          | Instrument is an interesting example of the transition by an English builder from the simple singles to the style of instrument built by Tabel. There are still traces of the transitional English characteristics. |

|                   |                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                      |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 45. 1721          | Surviving harpsichord by Herman Tabel. Instrument is now in the County Museum, Warwick.                                                                                           | Earliest surviving harpsichord with heavy oak case, veneered and cross banded. Flemish style braced case and long scale(now 13.5" but may have been longer). 2 manuals, 2x8', 1x4', lute, dogleg.                                                                                               | Shudi was probably Tabel's foreman at the time when this instrument was made.                                                                                        |
| 46. 1725          | Ham House Ruckers dated 1634 (see 19 above) was purchased by the 4th Earl of Dysart.                                                                                              | Instrument may have been built in this year, but was more probably built a little earlier and then changed in 1725 to the present typically English specification of 2x8', 1x4' with dogleg on both manuals.                                                                                    | The apparent Andreas Ruckers from Helmingham Hall (see 22 above) may have undergone a similar transformation at this time though the instrument has only one manual. |
| 47. 1726          | Thomas Barton invents an upright harpsichord.                                                                                                                                     |                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                      |
| 48. 1729          | Tabel moves from Oxenden Street to Swallow Street.<br><br>Shudi had left Tabel by this time and in this year built his earliest surviving instrument, which is now in Copenhagen. | Harpsichord has same specification as the Tabel which it resembles closely. Last surviving instrument to have the Ruckers style Roman lettered nameboard. Keyboards are said to be replacements, but they have black naturals.                                                                  | 1727-1760 George II                                                                                                                                                  |
| 49. 1700x<br>1738 | Sometime in this period Francis Coston built at least two 2 manual harpsichords which probably still survive though the whereabouts are unknown.                                  | According to two different sources one instrument had compass GG-f <sup>3</sup> with painted soundboard, walnut case and ivory naturals, whilst the other had a case of oak, five octave compass from FF and ivory naturals. The white naturals would indicate a date probably later than 1720. |                                                                                                                                                                      |
| 50. 1730          | Surviving harpsichord by John Wilbrook- an apprentice of Tabel. Instrument is now the property of Dr Mirrey of Redhill.                                                           | Instrument is generally much the same as the Tabel, though it is the last surviving harpsichord to have a slightly angled main gap (not present in the Tabel). It is also the last harpsichord to have black naturals though this feature is found later in spinets.                            |                                                                                                                                                                      |
| 51. 1730          | John Harris patent for a form of octave or sub-octave coupler.<br><br>William Barton patent for quills of "Silver, Brass, Steel and other Sorts of Metall"                        |                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                      |

| 52. 1730<br>continued | Firm of Kirkman founded in this year according to an advertisement in the <u>Daily Graphic</u> , 31 July 1893.                                                                                                                                     | Probably it was in this year that Jacob Kirkman came to England and was apprenticed to Herman Tabel.                                      |                                                  |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| Period to 1800        | Events concerning the English harpsichord and the makers.                                                                                                                                                                                          | Additional remarks and surviving instruments (The shorthand scheme of page 126 is used)                                                   | Events occurring elsewhere and historical period |
| 53. 1732              | John Broadwood born at Cockburnspath, Scotland (died 1812)                                                                                                                                                                                         |                                                                                                                                           |                                                  |
| 54. 1735              | Earliest authenticated mention of Joseph Mahoon on an instrument illustrated in the second plate of Hogarth's <u>Rake's Progress</u> . 17 September - John Joseph Merlin born at Huys near Liege. (died 1804)                                      |                                                                                                                                           |                                                  |
| 55. 1737              | Thomas Haxby born.<br>Abraham Kirkman born at Bischweiler, 2 June.                                                                                                                                                                                 |                                                                                                                                           |                                                  |
| 56. 1738              | Tabel died.<br>Jacob Kirkman married Susanna Tabel in this year or in 1739.<br>Francis Coston sold up his stock and went out of business.                                                                                                          | Mahoon 22840L00                                                                                                                           | Earliest surviving harpsichord by Jean Goermans. |
| 57. 1739              | Jacob Kirkman set up business at 17 Great Pulteney Street.<br>Joshua Shudi born.                                                                                                                                                                   |                                                                                                                                           | Ferdinand Weber moved to Dublin.                 |
| 58. 1740              | Earliest authentic date for Baker Harris. Susanna Kirkman had died by October 1740.                                                                                                                                                                | Last spinet by Thomas Barton recorded as being in the Taphouse Collection.<br>BS 94 2284-L—                                               |                                                  |
| 59. 1741              | Roger Plenius (born 1696) moved to South Audley Street, and took out Patent No 581.                                                                                                                                                                | Plenius's improvements included improving the stability of the harpsichord, quilling jack regulating screws, and changes to the keyboard. |                                                  |
| 60. 1742              | Last known English harpsichord to have a rounded tail and keyboard with black naturals and white sharps.                                                                                                                                           | Mahoon 12800000<br>10 subsequent Mahoon spinets are known.<br>BS 120 1—                                                                   |                                                  |
| 61. 1743              | Earliest known date for John Hitchcock. All his surviving instruments are spinets, but he probably made harpsichords for they are commended by John Arnold in the <u>Compleat Psalmodist</u> 1761. Shudi established in 32-35 Gt. Pulteney Street. | BS 144 2284HL00                                                                                                                           |                                                  |

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| 62. 1744 | Kirkman harpsichords usually 96.75" long decreasing gradually in succeeding years to 92" in the mid 1760s.<br>Earliest surviving Kirkman harpsichord.<br>Earliest known type A rose.<br>Instruments signed with words in the order "Jacobus Kirkman Fecit Londini" the space after Londini being occupied by the date. This order continued until 1758. | JK BN 01 2284-L— (earliest extant)<br>BS 160 128—<br>Thomas Blasser 2284HLM0      | Earliest surviving harpsichord by J.D.Dulcken |
| 63. 1745 | Plenius's second improvement, patent No 613 for the Welch harp, and for key bushing.                                                                                                                                                                                                                                                                    | JK BN 109 Claviorganum 22840L00<br>John Crang Claviorganum 22840L00               |                                               |
| 64. 1746 | Jacob Kirkman (organist and composer) born. He died in 1812.<br>Fulke Greville met Jacob Kirkman                                                                                                                                                                                                                                                        |                                                                                   | Latest authenticated harpsichord by Blanchet  |
| 65. 1747 |                                                                                                                                                                                                                                                                                                                                                         | BS 190 2—                                                                         | Earliest known date for Henri Hemsch.         |
| 66. 1749 | Samuel Blumer known to have lived in Great Pulteney Street from this date to 1755.                                                                                                                                                                                                                                                                      | JK BN 02 12800000<br>BS 229 2284HLM(V) 5½ octaves<br>(may not be correctly dated) |                                               |
| 67. 1750 | Jacob Kirkman moved to Broad Street.<br>Earliest verified Kirkman machine.<br>Earliest known date for Thomas Culliford.<br>Zumpe came to England and worked for Shudi sometime around this year.                                                                                                                                                        |                                                                                   |                                               |
| 68. 1751 |                                                                                                                                                                                                                                                                                                                                                         | BS 260 128—                                                                       | Earliest extant harpsichord by Henri Hemsch   |
| 69. 1752 | Latest verified Kirkman type A rose.<br>Earliest Kirkman (BN2) with satinwood veneered case though this may be later.<br>Kirkman advertised in the <u>General Evening Post</u> of July 14 - 16 as being able to take subscriptions for "Six Setts of Lessons for the Harpsichord by Richard Justice, Organist of St Mary's at Hull".                    | JK BN 2 1280-000                                                                  |                                               |
| 70. 1753 | Samuel Blumer made and sold an upright harpsichord for £63                                                                                                                                                                                                                                                                                              |                                                                                   | Gottfried Silbermann died                     |
|          |                                                                                                                                                                                                                                                                                                                                                         |                                                                                   |                                               |

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| 71. 1754 | Earliest verified cabriole leg stand on a Kirkman, also earliest verified type B1 rose. Earliest form of lid swell - the moving flap is larger than on later models and the fact that it has now been blocked up may indicate that it was not successful.                                            | JK BN3 2284OLMS(L)                                                                                      |                                                                  |
| 72. 1755 | Plenius's Lyrichord described in the <u>General Magazine of Arts and Sciences</u> . Jacob Kirkman took out naturalization papers on 25 April 1755.                                                                                                                                                   | JK BN 4 2284OL00<br>JK BN 5 1280-L00 (may not be genuine)<br>JK BN 5a 128-----                          |                                                                  |
| 73. 1756 | Plenius bankrupt.                                                                                                                                                                                                                                                                                    | JK BN 6 2284-L--                                                                                        | Latest extant harpsichord by Henri Hemsch.                       |
| 74. 1757 | Jacob Kirkman probably built a changeable harpsichord for Professor Robert Smith.                                                                                                                                                                                                                    | JK BN 7 2284OLM0                                                                                        |                                                                  |
| 75. 1758 | Latest year in which Kirkman harpsichords were signed with the word FECIT preceding LONDINI                                                                                                                                                                                                          | JK BN 8 2284-L--<br>JK BN 9 1284----<br>JK BN 9a 1284HOMO                                               |                                                                  |
| 76. 1759 | Abraham Kirkman moved to 40 Great Pulteney Street.                                                                                                                                                                                                                                                   | JK BN 10 2-----                                                                                         |                                                                  |
| 77. 1760 | Earliest verified year in which Kirkman harpsichords are signed with the words in the order JACOBUS KIRCKMAN LONDINI FECIT followed by the date. Earliest verified date for Robert Faulkner or Falkener. Walnut found rarely as a veneer from now onwards.                                           | JK BN 11 1284----<br>JK BN 11a 1284--M-<br>JK BN 12 2284OL00<br>JK BN 13 1284----<br>BS 407 2284---S(V) | Latest surviving harpsichord by Stehlin. Accession of George III |
| 78. 1761 | Shudi took Broadwood into the firm. George Washington ordered a spinet from Plenius who was presumably in business once more. Reference to Kirkman harpsichords as being the best in John Arnold. Latest verified example of a Kirkman marquetried harpsichord of the type made since at least 1744. | JK BN 15 2284OL00<br>JK BN 16 1284HOM-<br>BS 423 1284HOMO<br>Faked Kirkman BN 14 2284HLM0               | Marriage of George III to Queen Charlotte                        |
| 79. 1762 | First edition of Robert Faulkner's book. Earliest verified date for James Scouler BN 17 may be the earliest of the more usual style of lid swell                                                                                                                                                     | JK BN 17 2284HLMS(L)<br>JK BN 17a 2284-L--<br>JK BN 17b 1284----<br>JK BN 17c 1-----                    |                                                                  |

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|                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | JK BN 18 2284HLMO<br>JK BN 19 2284-LM-<br>JK BN 20 2284HLM-                                                                                                                         |                                                                                                                                 |
| 80. 1763        | Mortimer's <u>Universal Director</u> published and mentions the following London makers:-<br>John Crang, - Falkener, John Harris, Baker Harris, John Hitchcock, Charles James, Jacob Kirkman, - Mahoon, Frederic Neubauer, William Pether, William Phipps, - Plenius, James Scouler senr, Burkat Shudi, - Snetzler.                                                                                                                                                                             | JK BN 21 128-----<br>JK BN 21a 12800000<br>JK BN 23 2284H---<br>JK BN 24 2284--M-<br>JK BN 24a 1-----<br>JK BN 25 2284-L--                                                          | Latest extant harpsichord by Guillaume Hemsch.                                                                                  |
| 80. 1763 contd. | Frederic Neubauer mentioned in Mortimer as "maker of double basset and treble Key'd Harpsichords with six stops...and of Piano-fortes, Lyrichords, and Classichords". This could be a reference to a 16' and three manuals.<br>Latest known Kirkman with turned legs on a trestle stand                                                                                                                                                                                                         |                                                                                                                                                                                     |                                                                                                                                 |
| 81. 1764        | Mention in Privy purse accounts of payment of £73-10-0 to Jacob Kirkman for an upright harpsichord, and £105 for a double keyed harpsichord.<br>Jacob Kirkman leased Fulham rectory for 8 years.<br>Earliest extant spinet by Thomas Haxby.                                                                                                                                                                                                                                                     | JK BN 26 1-----<br>JK BN 27 1284----<br>JK BN 29a 1284--M-<br>JK not recorded 2----- (from Charles Willson)                                                                         | Latest surviving harpsichord by J.A.Hass (clavichords continued until 1768.<br>Earliest surviving harpsichord by Pascal Taskin. |
| 82. 1765        | Kirkman/harpsichords at their shortest length (about 92"). By the end of the decade the length had increased gradually to 94".<br>Earliest verified Shudi of 5½ octaves.<br>Introduction of satinwood to England.                                                                                                                                                                                                                                                                               | JK BN 30 128-----<br>JK BN 30a 12800000<br>BS 496 2284HLMO 5½ octave compass.<br>BS 499 2284HL00                                                                                    |                                                                                                                                 |
| 83. 1766        | Murray's <u>Dictionary</u> , Oxford 1901, Vol V, under the entry for Harpsichord appears "1766 Pennant Zool (1812) I 280 -"The quills of Ravens sell for twelve shillings the hundred being of great use in tuning the lower notes of a harpsichord."<br>Lid swells fitted to Kirkman harpsichords from this date, probably on request of purchaser. Music desks fitted as standard from this date.<br>Two marquetryed harpsichords in unique style.<br>Earliest extant English piano by Zumpe. | JK BN 31 2-----<br>JK BN 32 2284HLMS(L)<br>JK BN 33 2284HLMS(L)<br>JK BN 32a 1284H---<br>BS 511 2284 HLMO<br>BS 512 2284 HLMO<br>BS 529 2284HLMS(V)<br>Americus Backers 2284-L-S(L) |                                                                                                                                 |

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| 84. 1767 | James Longman founded the firm of music publishers and dealers in instruments at 26 Cheapside                                                                                                                                                                                                                                                                                                                                                                                             | JK BN 34 1284-M---<br>JK BN 35 2-----<br>JK BN 36 2284-L---<br>BS 540 1284-----                                                                                                                                                                           |                                                                                                                                                                                         |
| 85. 1768 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | JK BN 38 2284HLMS(V)<br>JK BN 39 128-----                                                                                                                                                                                                                 | Publication of Adlung's <u>Musica Mechanica Organ-<br/>oedi</u> .<br>Invention of peau de buffle by Taskin.<br>One surviving harpsichord by Collesse L'Aine and one by Joseph Collesse. |
| 86. 1769 | John Broadwood married Barbara Shudi. Longman joined by Lukey. Shudi patent no 947 for the Venetian swell. The only reference to Bernard Shudi - - - -                                                                                                                                                                                                                                                                                                                                    | JK BN 41 2284HLM-<br>John Kirshaw 1284H---<br>- Bernard Shudi 2-----                                                                                                                                                                                      | Earliest surviving harpsichord by Pascal Taskin.<br>Latest authenticated harpsichord by Dulcken.                                                                                        |
| 87. 1770 | Broadwood taken into partnership with Shudi. Jacob Kirkman alleged to have stopped the spread of the guitar by placing it in the hands of London prostitutes. 23 December, Thomas Haxby's patent for a pedal operated machine stop.                                                                                                                                                                                                                                                       | JK BN 43 128-----<br>JK BN 44 128-----<br>BS 625 2284HLMS(V)<br>Joshua Shudi 1----- (empty case)<br>Fake Kirkman by Faulkner 2284HLM0<br>Baker Harris 1-----<br>James and John Simpson 2-----                                                             | Latest surviving instrument by Albert Delin.                                                                                                                                            |
| 88. 1771 | Kirkman took legal action against Robert Faulkner. Richard Wakefield of Tamworth, Staffs took out patent no 989 for metal quills and fine tuning adjustment.                                                                                                                                                                                                                                                                                                                              | JK BN 46 2284HLMS(L)<br>JK BN 47 12800000<br>BS 639 2-----<br>BSJB 2284HLMS(V)                                                                                                                                                                            |                                                                                                                                                                                         |
| 89. 1772 | Abraham Kirkman moved to 52 Broad Street and joined Jacob in the firm. All instruments thereafter signed JACOBUS ET ABRAHAM KIRCKMAN LONDINI FECERUNT followed by the date. Earliest verified type C Kirkman rose. Adam Walker's patent no 1020 for the Celestine stop. Earliest verified Kirkman with a Venetian swell (BN 48) James Shudi Broadwood born. Christies held a sale of 15 of Neubauer's harpsichords. "Fifteen fine ton'd Harpsichords with double and single keys, several | JK BN 48 2284HLMS(V) marquetryed<br>JK BN 48a 2284-L--<br>JAK BN 49 2284HLM0 (5½ octave up to c <sup>4</sup> )<br>JK BN 50 2-----<br>JK BN 51a 128-----<br>BSJB 571 2284HLMS(V)<br>Americus Backers piano - earliest surviving example of English action. |                                                                                                                                                                                         |



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| 89. contd. | of which with double and single bass pedals.<br>Boalch thinks this may be a reference to a pedal keyboard. I believe it is merely a reference to one or two pedals controlling machine and swell.                                                                                                                                                                   |                                                                                                                                                                                                 |                                                                                                |
| 90. 1773   | 19 August, Death of Burkat Shudi<br>20 August, Broadwoods sent a harpsichord to Maria Theresa.                                                                                                                                                                                                                                                                      | JAK BN 52 1-----<br>JAK BN 53 2284-L--<br>BSJB 686 2284---- (5½ octaves)<br>BSJB 691 2----- (5½ octaves)<br>Joshua Shudi 2284HLMS(V)                                                            |                                                                                                |
| 91. 1774   | Merlin's patent no 1081 for combined harpsichord and piano and for downstriking piano action.<br>Patent no 1092 by Samuel Gillespy for a type of machine with new effects.<br>Death of Joshua Shudi, John Hitchcock, Roger Plenius and Frederic Neubauer.                                                                                                           | JAK BN 56a 1284HOMO<br>JAK BN 57 1284----<br>BSJB 736 128-----                                                                                                                                  | Latest authentic harpsichord by Jean Goermans.<br>Upright harpsichord by Henry Rother, Dublin. |
| 92. 1775   | Longman and Lukey joined by Broderip. They continued under the joint names in Cheap side until the following year when Lukey left the firm. During 1775 the firm purchased all the stock of Lewer in Moorfields and the instruments of the late Mahoon which they were prepared to sell at 50% below the usual prices.<br>Robert Stodart probably joined Broadwood. | JAK BN 75a 2-----<br>JAK BN 57b 2284HLMS(L)<br>JAK BN 57c 2284HL--<br>BSJB 750 2284HLMS(V)<br>L&B BN 1 1284HL--<br>Haxby BN 5 128-H--<br>Pether 128-H---                                        |                                                                                                |
| 93. 1776   | Lukey left Longman and Broderip.<br>Stodart set up on his own in Wardour Street.<br>Latest verified Type C Kirkman rose.                                                                                                                                                                                                                                            | JAK BN 58 1284----<br>JAK BN 59 1284----<br>JAK BN 60 1284--M-<br>JAK BN 60a 2284HLM-<br>JAK BN 60b 128-----<br>JAK BN 61 2284-LM- (marquetried)<br>JAK BN 61a 2284HL-S(L)                      |                                                                                                |
| 94. 1777   | Jacob Kirkman acquired Park Hall, Greenwich to which he eventually retired.<br>Stodart's patent no 1172 for a combined harpsichord and piano.                                                                                                                                                                                                                       | JAK BN 62 2284HLMS(L)<br>JAK BN 62a 1284----<br>JAK BN 63 2284HLMS(L)<br>JAK?BN 64 1284----<br>Haxby BN 6 1284HOMO<br>Combined harpsichord and piano by Stodart (could be later than this year) |                                                                                                |
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| 95. 1778  | Public Ledger of 2 Oct 1778 announced-<br>"To be sold by Christie and Ansell...<br>A remarkable fine ton'd Harpsichord by<br>Ephraim CELSON... It contains a double<br>Bass two Unisons and an Octave, the Welch<br>harp, Piano Forte and Celestial Harp".<br>This may be a reference to a 16' stop<br>in an English instrument. | JAK BN 65 1284H-M-<br>JAK BN 65a 1284-MS(L)<br>JAK BN 65d 1284H---<br>BSJB 837 2-----<br>BSJB 842 1284---S(V)                                                                                                                                               |                                                                                                                 |
| 96. 1779  |                                                                                                                                                                                                                                                                                                                                  | JAK BN 66 2-----S(L)<br>JAK BN 66a 1284-M-<br>JAK BN 66b 128-----<br>BSJB 862 1284HOMS(V)                                                                                                                                                                   | One surviving harp-<br>sichord by Sebastien<br>Erard.<br>Earliest surviving<br>harpsichord by<br>Vincenzo Sodi. |
| 97. 1780  | Composer and organist Jacob Kirkman known<br>to be living at 56 Broad Street.<br>The only authentic English harpsichord<br>to incorporate a 16' stop.                                                                                                                                                                            | JAK BN 66c 2----- (originally a single)<br>Baker Harris 2-----<br>Merlin combined harpsichord and piano<br>1x16', 2x8', 1x4', Welch harp, Celestial<br>harp, piano action and recording mechan-<br>ism.<br>L&B BN 3 1----- (Culliford)<br>L&B BN 4 1284---- |                                                                                                                 |
| 98. 1781  | Earliest appearance of second set of<br>Kirkman jack stampings.<br>Shudi and Broadwood harpsichords have<br>Broadwood's first name in latin form<br>JOHANNES.<br>Latest verified Kirkman with the lid<br>strengthening batten on upper side of lid.                                                                              | JAK BN 68a -284---S(L)<br>JAK BN 68b -284H-M- (has unique stand)<br>JAK BN 69 1-----MO<br>JAK BN 70 1-----MO<br>BSJB 899 2284HLMS(V)<br>BSJB 902 2284HLMS(V)                                                                                                |                                                                                                                 |
| 99. 1782  | Broadwood assumed full direction of the<br>firm.<br>Longman and Broderip moved to Haymarket.<br>James Scouler died.                                                                                                                                                                                                              | BSJB 919 2284HLMS(V) 5½ octave<br>BSJB 938 2284HLMS(V) 5½ octave<br>L&B BN 4b 1284HLMS<br>L&B BN 5 1284HLMS                                                                                                                                                 |                                                                                                                 |
| 100. 1783 |                                                                                                                                                                                                                                                                                                                                  | JAK BN ? 2284HLMS(L)<br>L&B 1284HOMS (Culliford)                                                                                                                                                                                                            |                                                                                                                 |
| 101. 1784 | Kirkman's house in Broad Street suffered<br>a break in.                                                                                                                                                                                                                                                                          | JAK BN 71a 1284H---<br>L&B BN 9 1284HOMO (Culliford)                                                                                                                                                                                                        |                                                                                                                 |
| 102. 1785 | Earliest recorded Kirkman with a 61 note<br>compass including FF sharp, though this may<br>have been adopted as early as 1781.                                                                                                                                                                                                   | JAK BN 71c 1284H-M-<br>JAK BN 72 2284HLMS(L)<br>JAK BN 73 2284HLMS(L)<br>JAK BN 73a 1284----                                                                                                                                                                |                                                                                                                 |

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| 102. contd | Latest known Kirkman with a cabriole leg stand.                                                                                                                                                                                                                                                                                         | JAK BN 73b 2284H-M-<br>BSJB 1015 2284HLMS(V)<br>L&B BN 11 2284HOMS(V)<br>L&B BN 11a 2284HLMS(V) (Gulliford)<br>L&B BN 13 -2840---<br>L&B BN 14 2284HLMS(V)                                                                                                       |  |
| 103. 1786  | Francis Hopkinson carried out experiments with quills.<br>Thomas Jefferson ordered a special harpsichord from Kirkman which was to be fitted with Walker's Celestine stop.<br>John Geib's patent no 1571.                                                                                                                               | JAK BN 74 2284HLMS(L)<br>JAK BN 75 2284-L--                                                                                                                                                                                                                      |  |
| 104. 1787  | Latest verified example of Kirkman type B1 rose.<br>Patent no 583 by Wardhaugh Thompson for a monochord to be used for tuning.                                                                                                                                                                                                          | JAK BN 76 1284H-M-<br>JAK BN 77a 128-----<br>JAK BN 78 12840---<br>JAK BN 79 2284HLMS(L)<br>JAK BN 79a 2284HLMS(L)<br>BSJB 1070 2-----<br>L&B BN 15 1-----<br>There are 5 single and 2 double manual harpsichords by L&B surviving after this year, but undated. |  |
| 105. 1788  | Earliest verified type B2 rose (Like B1 but having initials AK instead of IK).<br>Patent no 1664 by Charles Clagget for the telio-chordon (has 39 divisions per octave) a new form of keyboard, mellowing of the harpsichord, modifications to the celestina, tunable tuning fork, et al.<br>Latest date ascertained for Samuel Blumer. | JAK BN 81 2284HLMS(V)<br>JAK BN 82 1284HOMS(V)                                                                                                                                                                                                                   |  |
| 106. 1789  | Kirkman instruments now signed ABRAHAM ET JOSEPHUS KIRCKMAN .... indicating the probable retirement of Jacob Kirkman and the formal partnership of Joseph.<br>Composer Jacob Kirkman mentioned as being at 38 Upper Sackville Street.                                                                                                   | AJK BN 2284HLMS(L)<br>(2 others probably survive)<br>BSJB 1284HOMS(V)                                                                                                                                                                                            |  |
| 107. 1790  | Latest verified Kirkman type B2 rose.<br>There is one harpsichord in this year signed by Jacob and Abraham despite the change mentioned at 106 above. This may indicate that instruments were by now remaining in stock for some time.                                                                                                  | AJK BN 85a 1-----<br>JAK BN 86 12840OMO<br>AJK BN 87 1284-OMS(V)<br>BSJB 1137 2-----<br>BSJB 1145 1284HLMS(V)                                                                                                                                                    |  |

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| 108. 1791 | Abraham Kirkman left 52 Broad Street.                                                                                                                                                                                                                                                            | AJK BN 88 2284HLMS(L)<br>AJK BN 89 1284HOMS(L)<br>BSJB 1148 1284HLMS(V) |                                               |
| 109. 1792 | Death of Jacob Kirkman - buried at St Alphege Church, Greenwich.<br>Death of John Crang.<br>Patent no 1887 by Davies for a combined harpsichord and piano.<br>Patent no 1866 by John Geib for a combined piano and clavichord.<br>Francis Hopkinson carried out further experiments on quilling. | AJK BN                                                                  | Latest surviving harpsichord by Vincenzo Sodi |
| 110. 1793 | The only surviving harpsichord by John Broadwood alone.                                                                                                                                                                                                                                          | ?? BN 91 1284H---<br>JB 1155 1284HLMS(V)                                | Death of Pascal Taskin                        |
| 111. 1794 | Death of Abraham Kirkman - buried at St. Alphege Church, Greenwich.<br>Joseph Kirkman took over the firm.                                                                                                                                                                                        |                                                                         |                                               |
| 112. 1795 | Broadwood took his son, James Shudi Broadwood into partnership.                                                                                                                                                                                                                                  |                                                                         |                                               |
| 113. 1796 | Robert Stodart probably died.<br>Latest surviving nags head swell on a Kirkman.                                                                                                                                                                                                                  | ?K BN 92 1284---S(L)                                                    |                                               |
| 114. 1797 | Patent no 2160 by William Rolfe and Samuel Davies for changing the wooden soundboard for one of vellum, parchment, silk, wool, etc.                                                                                                                                                              |                                                                         |                                               |
| 115. 1798 | Longman and Broderip went bankrupt.<br>Earliest authentic harpsichord signed by Joseph Kirkman. This is the longest known instrument at 98.7" and has the earliest known Kirkman taper leg stand.                                                                                                | JoK BN 93 2284HLMS(V)<br>JoK BN 94 2284HLMS(V)                          |                                               |
| 116. 1799 |                                                                                                                                                                                                                                                                                                  |                                                                         | Silbermann died.                              |
| 117. 1800 | Latest known date for Culliford.<br>Latest known Kirkman harpsichord, and latest instrument to have swell and machine.<br>Patent no 2340 by Litherland for improving tuning stability by means of linkages                                                                                       | JoK BN 95 2284HLMS(V)                                                   |                                               |
|           |                                                                                                                                                                                                                                                                                                  |                                                                         |                                               |

|                                        | 8' length | 8' plucking point | %age of full string | lute plucking pt. | %age of full string | 4' length | 4' plucking pt. | %age of full string | 8' length                | 8' plucking point | %age of full string | lute plucking pt. | %age of full string | 4' length | 4' plucking pt. | %age of full string |
|----------------------------------------|-----------|-------------------|---------------------|-------------------|---------------------|-----------|-----------------|---------------------|--------------------------|-------------------|---------------------|-------------------|---------------------|-----------|-----------------|---------------------|
| Shudi No 529 dated 1766                |           |                   |                     |                   |                     |           |                 |                     | Kirkman BN 32 dated 1766 |                   |                     |                   |                     |           |                 |                     |
| FF                                     | 73.4      | 7.0               | 9.5                 | 2.75              | 3.75                | 40.38     | 4.25            | 10.5                | 68.5                     | 7.25              | 10.6                | 2.88              | 4.2                 | 39.5      | 4.25            | 10.7                |
| F                                      | 60.0      | 5.88              | 9.8                 | 2.25              | 3.75                | 30.0      | 3.5             | 11.7                | 57.75                    | 6.0               | 10.4                | 2.25              | 3.9                 | 30.0      | 3.88            | 12.9                |
| f                                      | 39.75     | 4.75              | 12.0                | 1.5               | 3.8                 | 19.0      | 3.13            | 16.4                | 38.5                     | 4.75              | 12.3                | 1.5               | 3.9                 | 18.75     | 3.5             | 18.7                |
| f <sup>1</sup>                         | 20.6      | 3.75              | 18.2                | 1.25              | 6.0                 | 9.63      | 2.75            | 28.6                | 20.5                     | 3.75              | 18.3                | 1.13              | 5.5                 | 10.25     | 2.88            | 28.1                |
| c <sup>2</sup>                         | 13.63     | 3.25              | 24.6                | 1.0               | 7.3                 | 6.38      |                 |                     | 13.63                    | 3.13              | 23.0                | 0.98              | 7.2                 | 6.63      | 2.38            | 36.0                |
| f <sup>2</sup>                         | 10.0      | 3.0               | 30.0                | 0.88              | 8.75                | 4.63      | 2.5             | 54                  | 10.25                    | 2.75              | 26.8                | 0.75              | 7.35                | 5.0       | 2.25            | 45.0                |
| f <sup>3</sup>                         | 5.13      | 2.13              | 41.5                | 0.55              | 10.7                | 2.38      | 1.88            | 79                  | 5.13                     | 1.88              | 36.5                | 0.5               | 9.8                 | 2.5       | 1.88            | 75.0                |
| Shudi and Broadwood No 1154 dated 1790 |           |                   |                     |                   |                     |           |                 |                     |                          |                   |                     |                   |                     |           |                 |                     |
| FF                                     | 72.5      | 8.75              | 12.0                | 4.75              | 6.6                 | 41.25     | 4.75            | 11.5                |                          |                   |                     |                   |                     |           |                 |                     |
| F                                      | 57.5      | 7.0               | 12.2                | 3.63              | 6.3                 | 30.0      | 4.0             | 13.3                |                          |                   |                     |                   |                     |           |                 |                     |
| f                                      | 38.5      | 5.75              | 15.0                | 2.75              | 7.15                | 19.0      | 3.75            | 19.7                |                          |                   |                     |                   |                     |           |                 |                     |
| f <sup>1</sup>                         | 20.88     | 4.5               | 21.5                | 2.13              | 10.2                | 9.75      | 3.13            | 32.0                |                          |                   |                     |                   |                     |           |                 |                     |
| c <sup>2</sup>                         | 13.75     | 3.75              | 27.2                | 1.75              | 12.75               | 6.5       | 2.75            | 42.3                |                          |                   |                     |                   |                     |           |                 |                     |
| f <sup>2</sup>                         | 10.25     | 3.25              | 31.8                | 1.38              | 13.4                | 4.13      | 2.5             | 6.1                 |                          |                   |                     |                   |                     |           |                 |                     |
| f <sup>3</sup>                         | 5.06      | 1.88              | 37.0                | 0.5               | 9.9                 | 2.5       | 1.88            | 7.5                 |                          |                   |                     |                   |                     |           |                 |                     |

Table No 8

Dimension list of stringing and percentage of full string lengths for three harpsichords: Shudi No 529 of 1766, Kirkman BN 32 of 1766 and Shudi and Broadwood of 1790, No 1154.

## Selective Bibliography

During the course of preparation for this work the majority of the standard reference works on the harpsichord were examined. The bibliographies of Boalch, Russell and Hubbard contain between them the main sources and it would be tautologous to repeat these or to combine them. The list which follows, therefore, contains only those sources which have been of the greatest use.

- Albarda, Jan H. Wood, wire and quill: an introduction to the harpsichord. Toronto, Coach House Press, 1968
- Aldrich, Henry, and Talbot, James: Christ Church Library, Oxford. Music Ms. 1187.
- Baker C.H.C. and M.I. The Life and Circumstances of James Brydges, First Duke of Chandos, Oxford, Clarendon Press, 1949
- Barrow, William: Catalogue of private collection, published privately.
- Benton Fletcher Collection: The Benton Fletcher Collection of early English musical instruments at Fenton House. Raymond Russell, 1955
- Bessaraboff, Nicholas: Ancient European Musical instruments. An organological study of the musical instruments in the Leslie Lindsay Mason collection at the Museum of Fine Arts, Boston, Boston, 1941 Harvard University Press
- Blankenburg, Quirin van: Elementa musica.... 's-Gravenhage, L.Berkoske, 1739, Hague.
- Boalch, Donald Howard: Makers of the Harpsichord and Clavichord 1440-1840 1st Edition, George Ronald, 1956, 2nd edition, OUP, 1974.
- Broadwood, James Shudi: Some notes made by J.S.Broadwood 1838, with observations and elucidations by H.F.Broadwood, 1862. London 1862. (Xerographic reproduction by British Library.)
- Broadwood and Co. A Descriptive Album of Artistic Pianos, London, 1895-6.
- Broadwood, James and Barbara. Three books deposited in the Bodleian Library in 1971 referred to as Journal 1771-1785, Barbara Broadwood's Account Book, and Accounts. See also under Mould.
- Caldwell, John: English Keyboard Music before the Nineteenth Century. Oxford, Blackwells, 1973
- Clemenicic, Rene: Old Musical Instruments, Octopus Books, 1973, (Translation from the original), London, Wiedenfeld and Nicholson 1968.
- Colt Clavier Collection: Catalogue, Bethersden, Kent, Privately published.
- Corrette, Michael: Le maitre de Clavecin, Paris, Chez l'Auteur, 1753.
- Country Life: Dictionary of Furniture, see under Macquoid.
- Crosby Brown Collection, Catalogue of the Crosby Brown Collection of musical instruments of all nations, New York, Metropolitan Museum of Art, 1902.

- Dale, William: Tschudi the Harpsichord Maker, London, Constable, 1913.
- English Harpsichord Magazine - see Harpsichord Magazine.
- Feret, C.J.: Fulham Old and New, Leadenhall Press, London, 1900
- Fetis, Franz Joseph: Biographie universelle des Musiciens, Paris, Firmin Didot, 1860 - 1865
- Galpin, Francis W.: Old English Instruments of Music; their history and character, London, 1910
- Galpin Society: British Musical Instruments, August 7-30, 1951. Ilford, Galpin Society, 1951
- Galpin Society: An exhibition of European musical instruments. Edinburgh International Festival, 1968. Edinburgh University, Reid School of Music, 1968.
- Galpin Society: The Galpin Society Journal I - , Ilford etc., 1948 -
- Gerber, Ernst Ludwig: Historisch-Biographisches Lexicon der Tonkünstler.. 2 vols, Leipzig, Breitkopf, 1790 - 1792.
- Grove, George: Dictionary of Music and Musicians, 9 vols, 5th edition by Eric Blom, London, Macmillan.
- Grassineau, James: A Musical Dictionary, London, 1740
- Greater London Council Record Office: Documents E/HOD/144, OBSP 1784 Ap 64, Document E/FLD/25, Document E/FLD/26.
- Harding, Rosamund: The Pianoforte...., Cambridge University Press, 1933
- Hammersmith Public Library, Documents DD/115/16, PAH/1/1, DD/115/15a
- Harleian Mss - 1419, Folios 201, 202 and 204, British Library.
- Harpsichord: Harpsichord. International Society of Harpsichord Builders, Vol 1, No 1 -, Denver, Feb/March/April, 1968 -.
- Harpsichord Magazine The, First published under this name in September 1973, but changed in April 1974 to The English Harpsichord Magazine. Published by Edgar Hunt, Sept 73-.
- Hubbard, Frank: Three Centuries of Harpsichord Making, Cambridge, Mass, Harvard University Press, 1965.
- Horwood: Plan of Westminster, Southwark and parts adjoining. Publication No 106 of the London Topographical Society, 1792-99.
- International Inventions Exhibition, Catalogue, 1885, William Clowes and Sons Ltd., London, 1885.
- James, Philip: Early Keyboard Instruments from their beginnings to the year 1820. London, P.Davies, 1930. Reprinted 1960, Holland Press.
- Kircher, Athanasius: Musurgia Universalis, Rome, 1650.
- Kimbell, John: Charities of Greenwich, London 1816

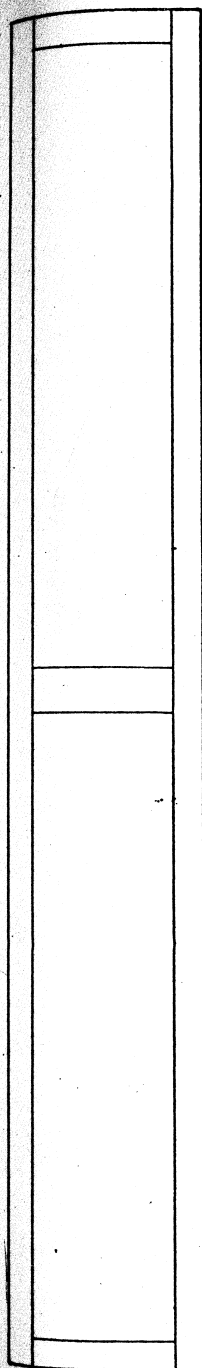
- LaFontaine, H.C.de: The King's Musick..., London, Novello, 1909
- Mace, Thomas: Musick's Monument, London, 1676
- Macquoid, Percy, and Edwards, Ralph: The Dictionary of English Furniture. 2nd Edition, 3 vols, London, Country Life, 1954.
- Macquoid, P.I.: The Age of Satinwood, Medici Society, London, 1938.
- Mortimer: The Universal Director or the Nobleman and Gentleman's True Guide to the Masters and Professors of the Liberal and Polite Arts and Sciences, 1763, London, J.Coote.
- Mould, C.M.: Merlin the Ingenious Mechanician, The Antique Collector, June 1973
- Mould, C.M.: The Tabel Harpsichord, see under Ripin, Keyboard Instruments.
- Mould, C.M.: The Broadwood Books, The English Harpsichord Magazine, Vol 1, Nos 1 and 2.
- Mould, C.M.: An Early-Eighteenth -Century Harpsichord by Thomas Barton, The English Harpsichord Magazine, Vol 1, No 2. April 1974.
- Mould, C.M.: The Talbot Manuscript, Galpin Society Journal XXI. 1968.
- Mersenne, Marin, Harmonie Universelle, Paris, Pierre Ballard. (English Translation of the books on instruments by R.E.Chapman, The Hague, Nijhoff, 1957).
- Nassare, Pablo: Escuela musaic..., 1724, Zaragoza.
- Newman, Sidney and Williams, Peter: The Russell Collection and Other Early Keyboard Instruments in St. Cecilia's Hall, Edinburgh. Edinburgh University Press, 1968.
- Nutting, Wallace: Furniture Treasury, Vol I, London, Macmillan, 1948
- Ordinance Survey of London: Edition 1894-1896.
- Patents for Inventions. Abridgement of Specifications relating to musical instruments, AD 1694-1866, 2nd Edition, London, Eyre and Spottiswoode.
- Pippard, L: The Harpsichord Master Improved, London, 1715
- Praetorius, Michael: Syntagmatis Musici...tomus secundus de organographia, Wolfenbuttel, Elias Holwein, 1619. (Facsimile: Kassel, Barenreiter, 1929)
- Prelleur, Peter: The Modern Musick-Master or the Universal Musician, 1731, Facsimile reprint edited by A. Hyatt-King in the series "Documenta Musicologica", Barenreiter, London, not dated.
- Principal Probate Registry, Somerset House: Wills of Herman Tabel, Jacob Kirkman, Abraham Kirkman et al.
- Pyne, J.K.: Catalogue of Musical Instruments principally illustrative of the history of the pianoforte, the property of Henry Boddington, Manchester, 1888.



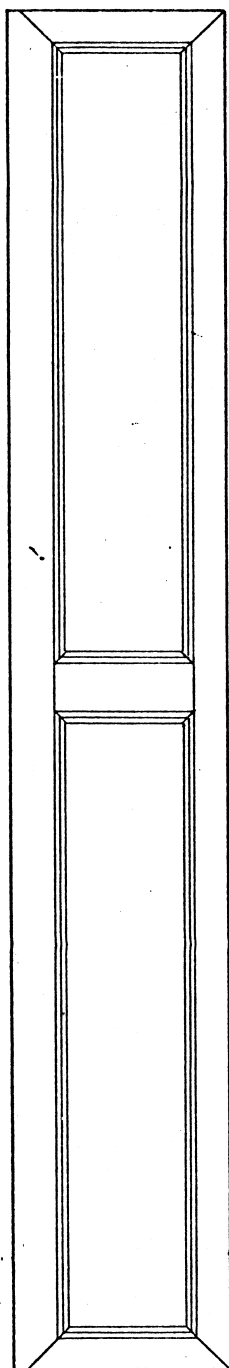
- Rate Books** of the following parishes: St Martin's in the Fields, St James's Piccadilly, (both in the Westminster Public Library), St Alfege Greenwich (still in the church).
- Rees, Abraham: The Cyclopaedia, London, 1819
- Rimbault, Edward F: The History of the Pianoforte, London, 1860
- Rimbault, Edward F: The Pianoforte....with some account of the clavichord, the virginal, the spinet, the harpsichord. R.Cocks, London, 1860.
- Ripin, E.M. Keyboard Instruments. Studies in Keyboard Organology, Edinburgh University Press, 1973.
- Ripin E.M.: Expressive devices applied to the eighteenth century harpsichord, The Organ Yearbook I, 1970
- Rocque, Map of London, 1745
- Royal College of Music, London. Donaldson Collection, Catalogue of Historical musical instruments, London, 1952.
- Rushworth and Dreaper Collection, Liverpool, The Rushworth and Dreaper permanent collection of antique musical instruments. Liverpool, 193-? - two editions.
- Russell, Raymond: The Harpsichord and Clavichord: an introductory study. London, Faber, 1959. 2nd edition revised by Howard Schott, Faber, 1973.
- Russell, Raymond: Victoria and Albert Museum Catalogue of Musical Instruments, Vol I., London, HMSO, 1968
- Sachs, Curt: The History of Musical Instruments. New York, Norton; London, Dent, 1942
- Salmon, Thomas: Vindication of an essay to the advancement of music, 1672
- Scholes, P.H.: The Great Dr. Burney, London, OUP, 1958.
- Smith, Robert: Harmonics or the Philosophy of Musical Sounds. First Edition 1748, 2nd edition 1759 with postscript 1762. (Reprint in facsimile of the first edition by Da Capo, with introduction by J.Murray Barbour, New York 1966.)
- Smithsonian Institution, Washington: A Checklist of Keyboard Instruments, Washington, 1967
- Smithsonian Institution Washington: Harpsichords and Clavichords, by Cynthia A. Hoover, Washington, 1969.
- Survey of London: Volumes VI, XX, XXXII
- Tans'ur, William: The Elements of Musick Display'd, London, 1772.
- Vestry Minutes of the Parish of St. George's Hanover Square, Westminster Public Library.
- Victoria and Albert Museum, Musical Instruments as Works of Art, London, HMSO, 1968
- Victoria and Albert Museum. Picture Book of Keyboard Musical Instruments, London, 1939.
- Vincentino, Nicola: L'antica musica ridotta alla moderna prattica, Rome, 1555.
- Williams, P, ed., The Organ Yearbook, I-, 1970-.

Willcock, John: A Survey and Valuation of all the Lands and buildings within the Hamlet of Hammersmith in the County of Middlesex, 1793, Hammersmith Public Library, PAH/1/157.

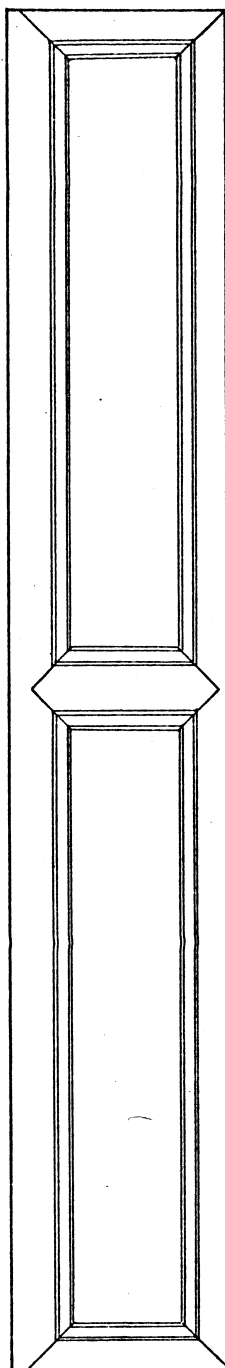
Winternitz, Emanuel: Musical instruments of the Western world, London, Thames and Hudson, 1966.



1721 Herman Tabel



1730 John Wilbrook



1750 onwards- standard cross banding of Kirkman harpsichords

Figure 1

Comparison of the methods of laying cross banded panels on the bent side of the Tabel, Wilbrook and Kirkman harpsichords. The mitreing of the corners should be noted as well as the arrangement of the centre strip.

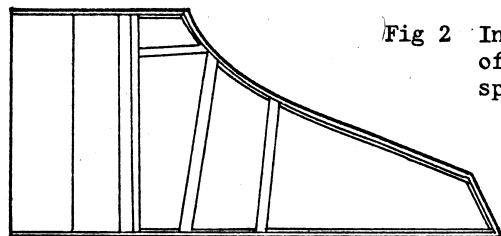
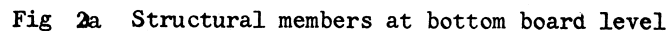


Fig 2b Structural members at liner and wrest plank level

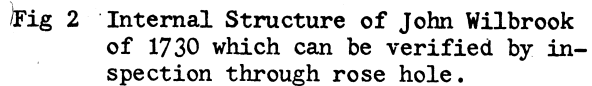


Fig 3 Visible structure at proximal end of spine of John Wilbrook of 1730.

NB As far as possible both diagrams are to scale, but some dimensions of internal members are suspect.

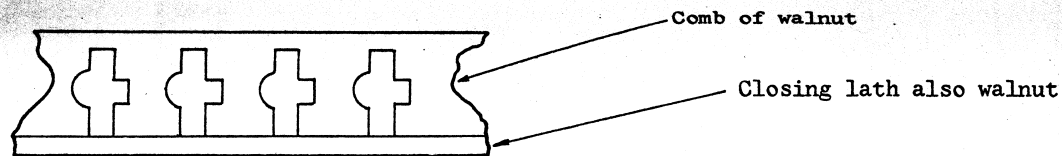


Fig 4a form of jack slide of John Wilbrook.

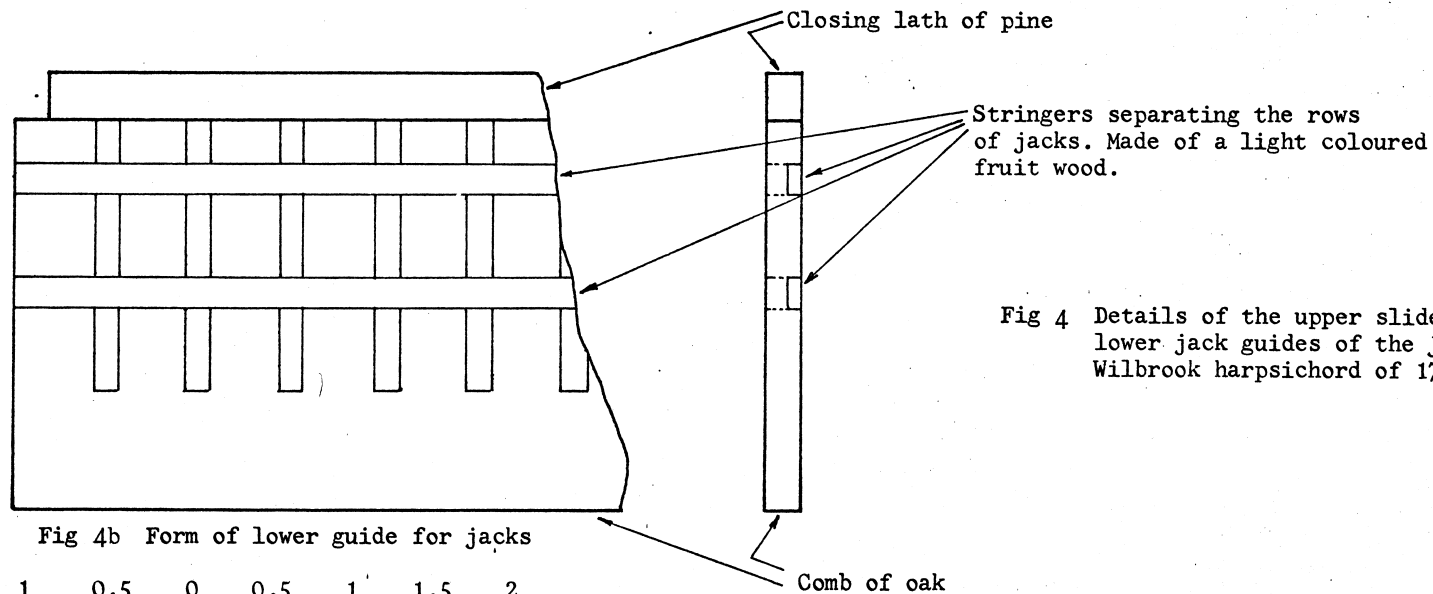
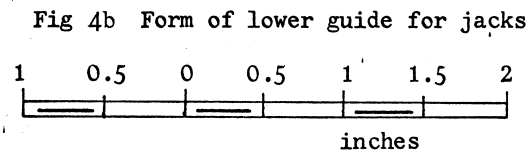
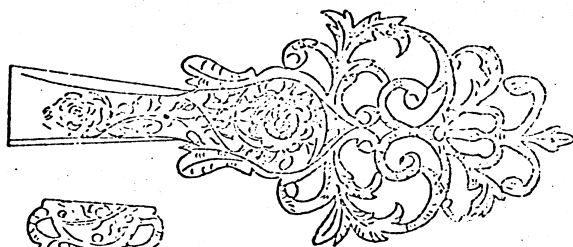


Fig 4 Details of the upper slides and lower jack guides of the John Wilbrook harpsichord of 1730.

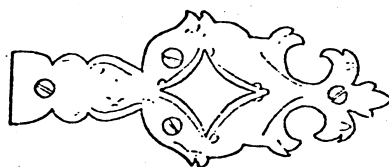




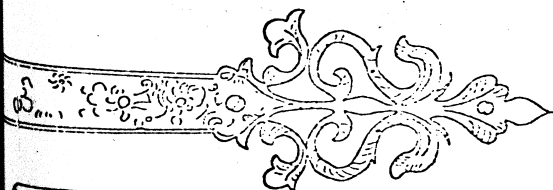
Thomas Barton 1709

Thomas Hitchcock and  
Herman Tabel 1721

William Smith

Unknown Maker  
probably English 1623

Joseph Tisseran



John Wilbrook 1730



Fig 5

STRAP HINGES FROM ENGLISH  
HARPSICHORDS BEFORE 1730

(The hinges of the Slade are much  
like those of the above and  
have the chased patterns of  
the Wilbrook)

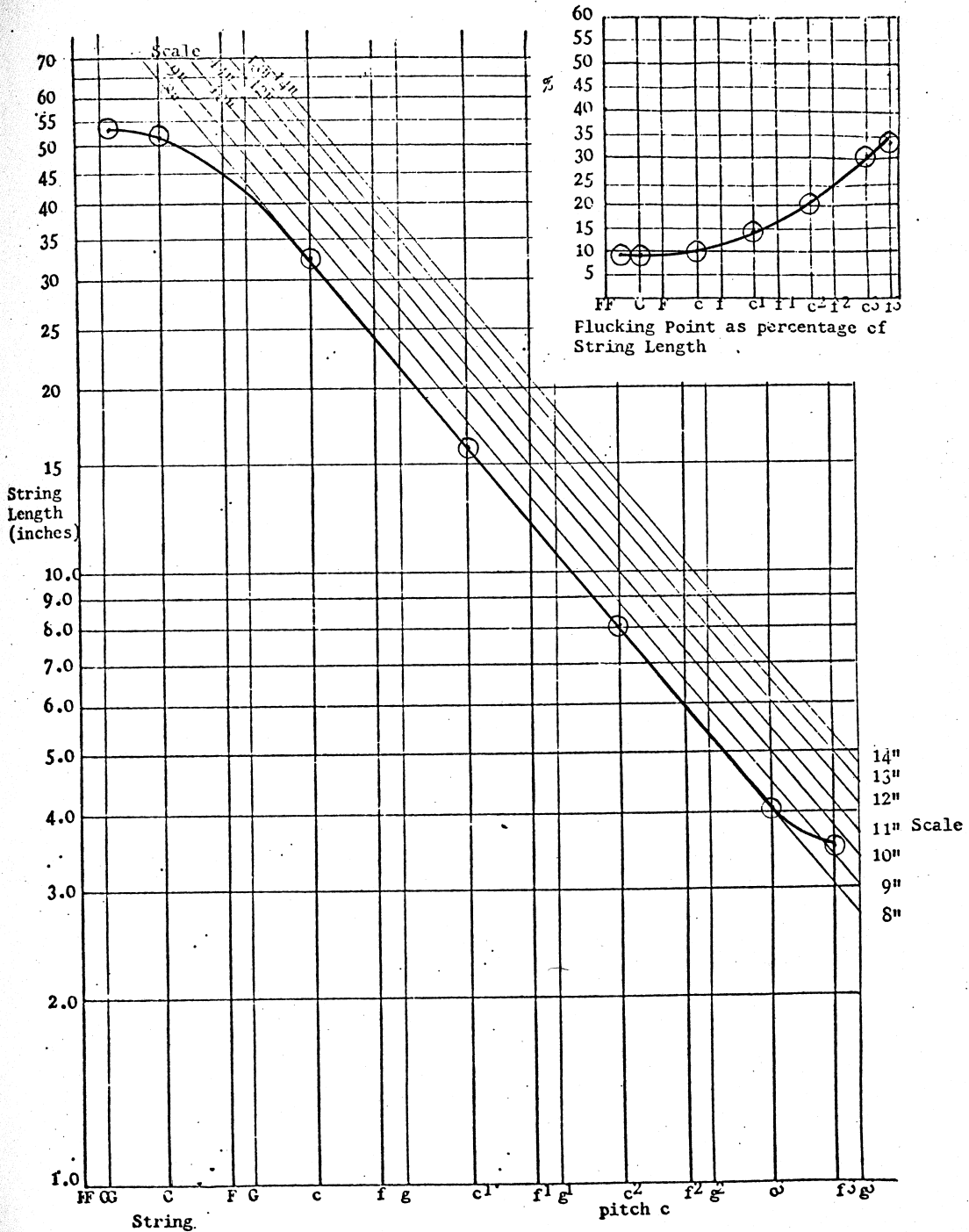


Fig 6 String lengths and Plucking Points for the undated harpsichord known as the Cassus Jesses

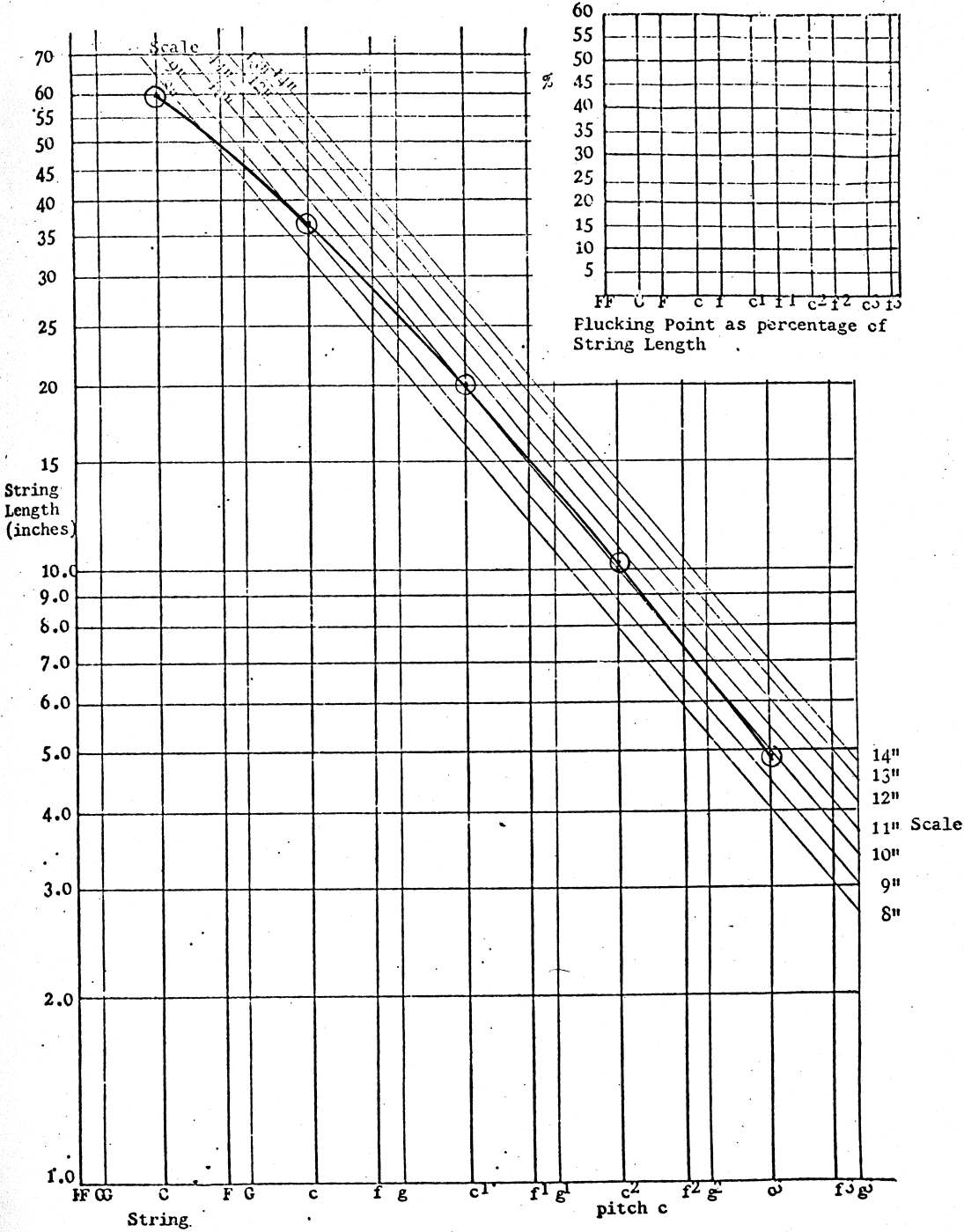


Fig 7 String lengths of Jenny's harpsichord from the Talbot Manuscript



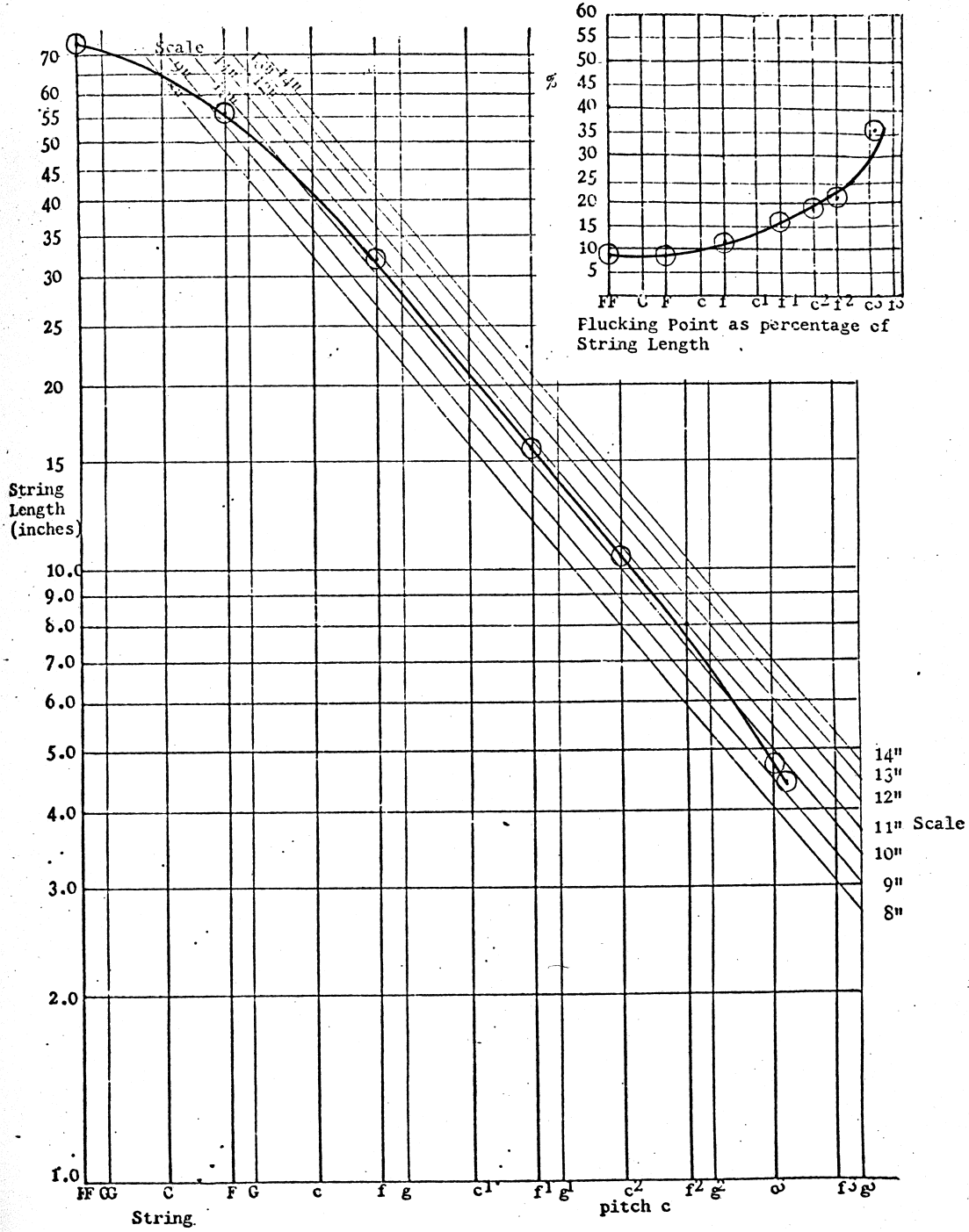


Fig 8 String lengths and Plucking Points for the harpsichord of 1683  
by Charles Haward

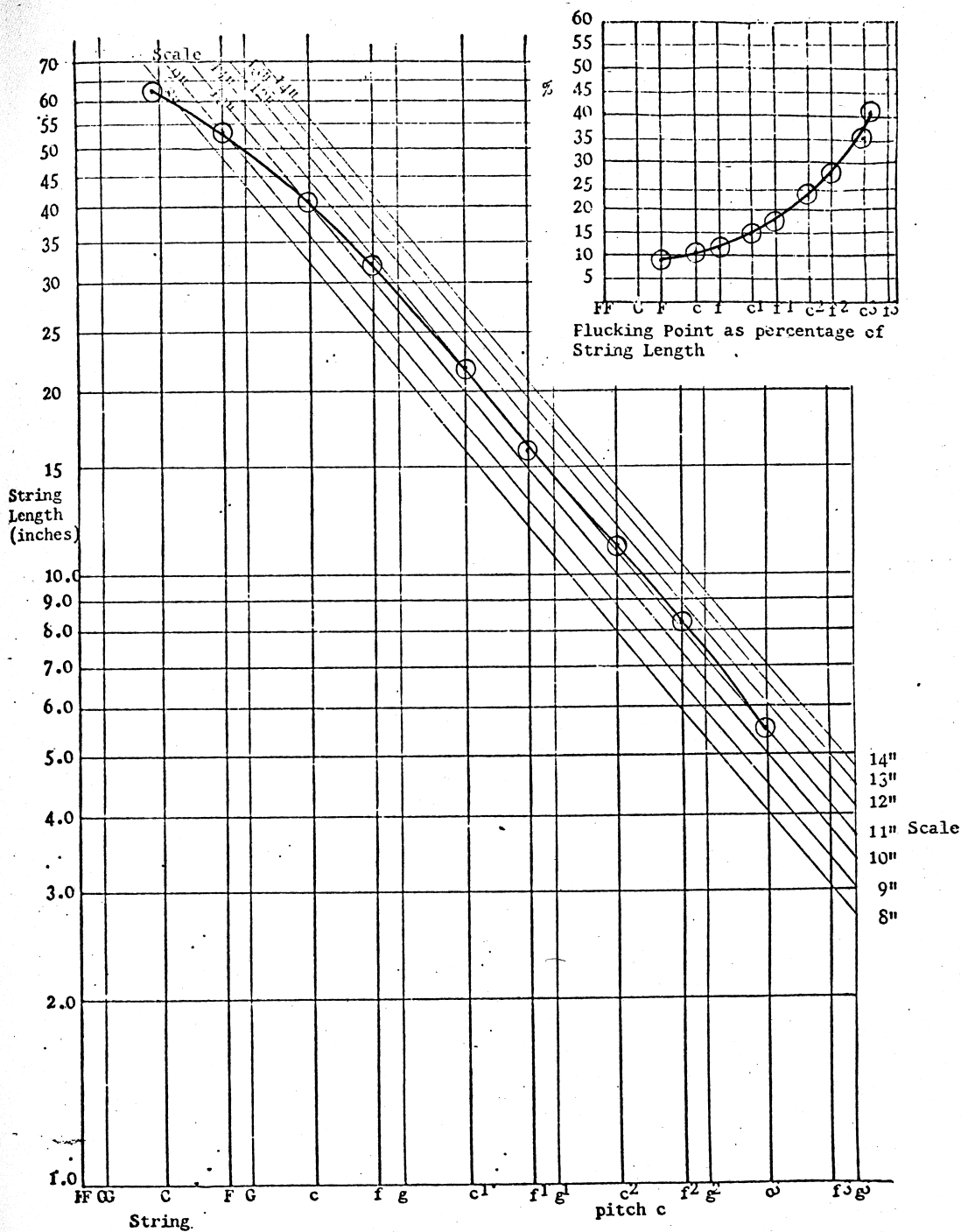


Fig 9 String lengths and Plucking Points for the harpsichord of 1709  
by Thomas Barton

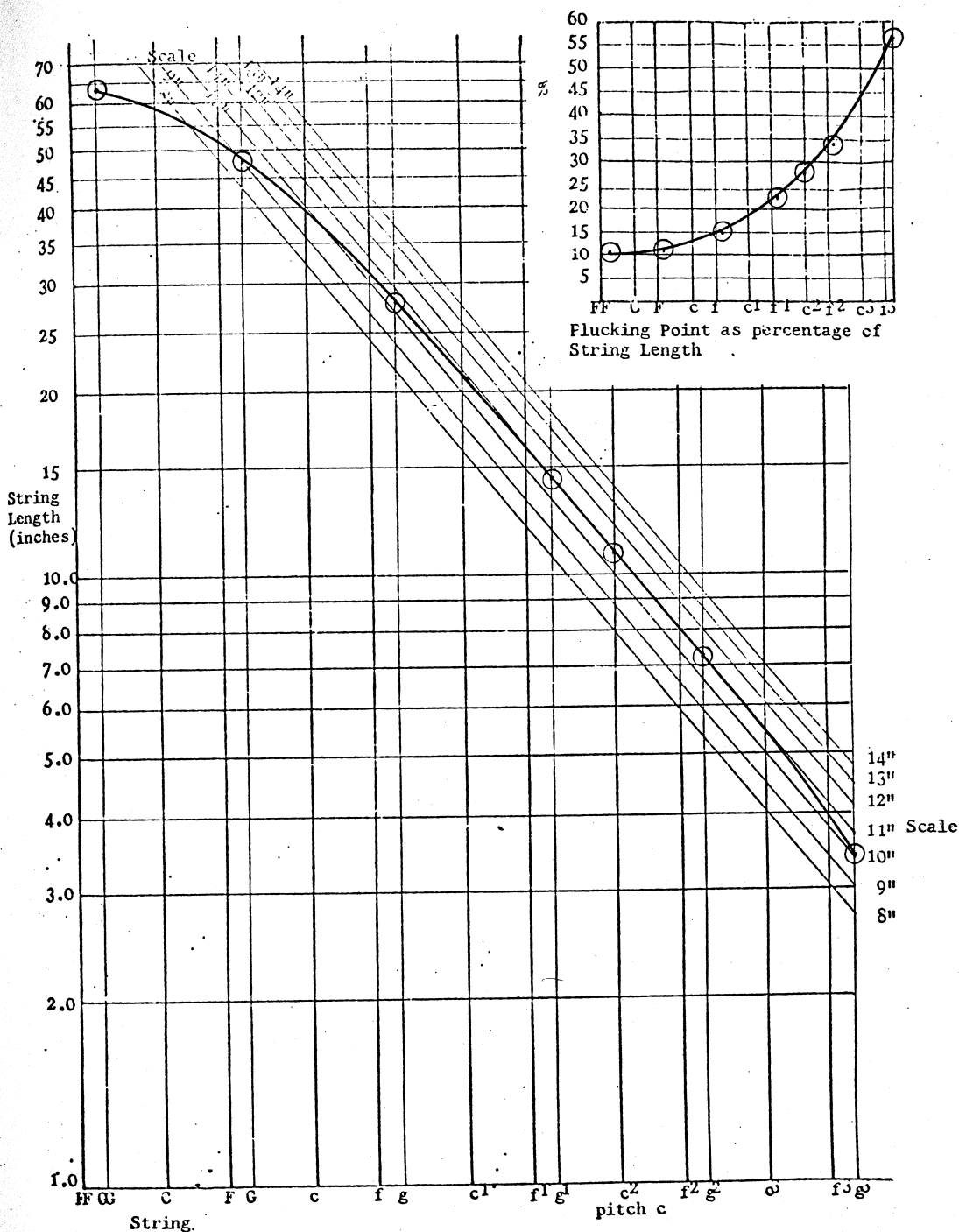


Fig 10 String lengths and Plucking Points for the Benjamin Slade harpsichord

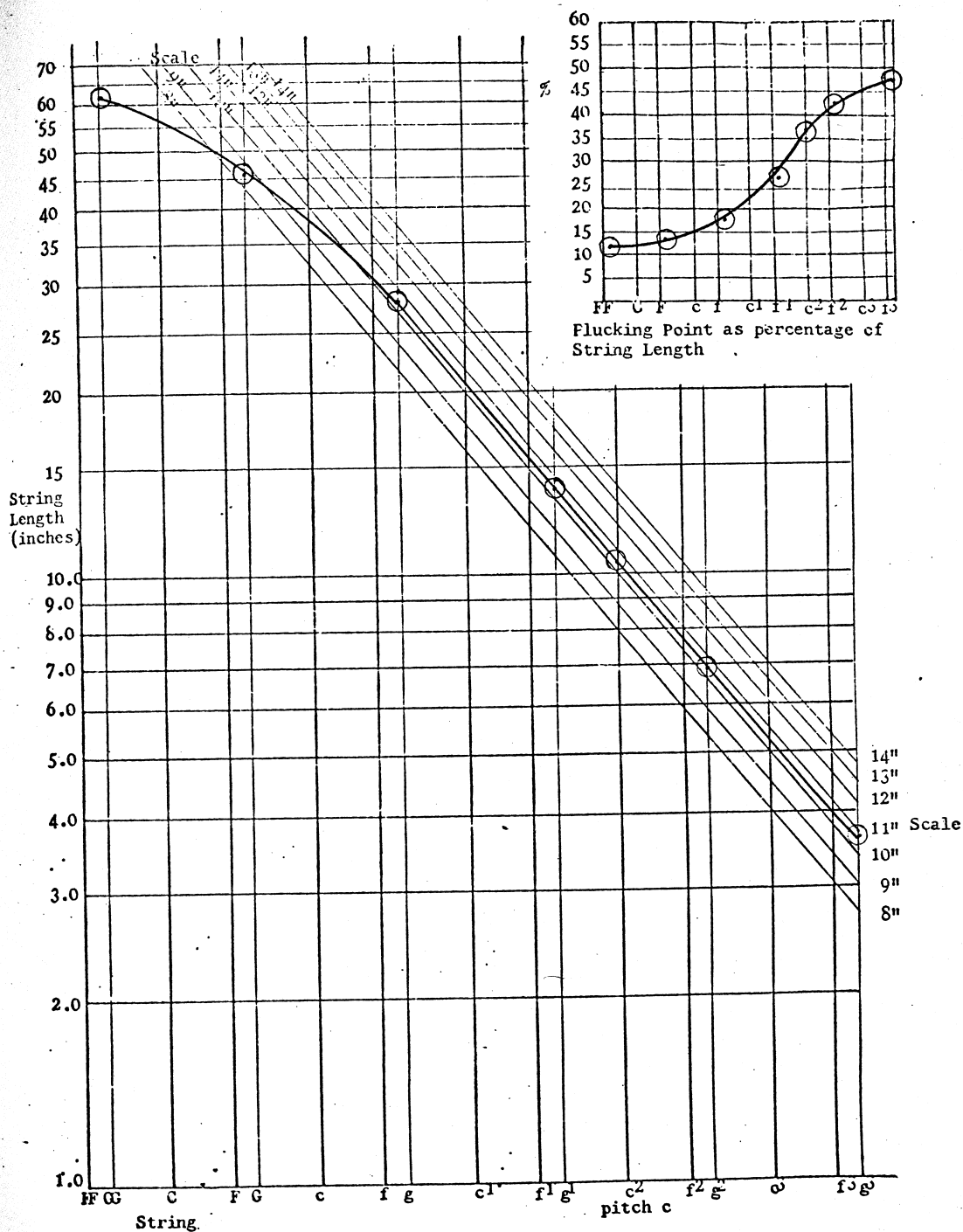


Fig 11 String lengths and Plucking Points for the William Smith harpsichord

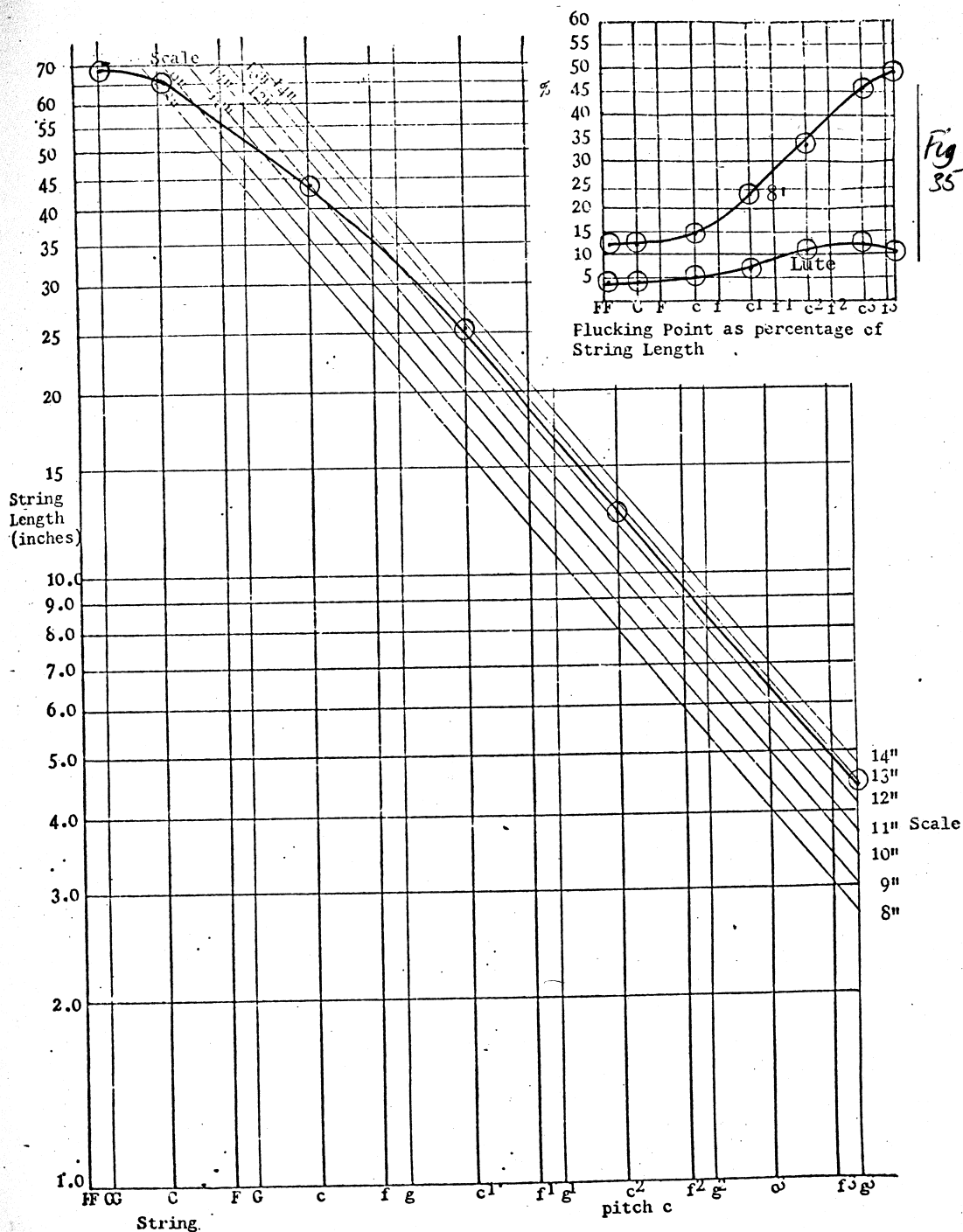


Fig 12 String lengths and plucking points for the harpsichord by Thomas Hitchcock

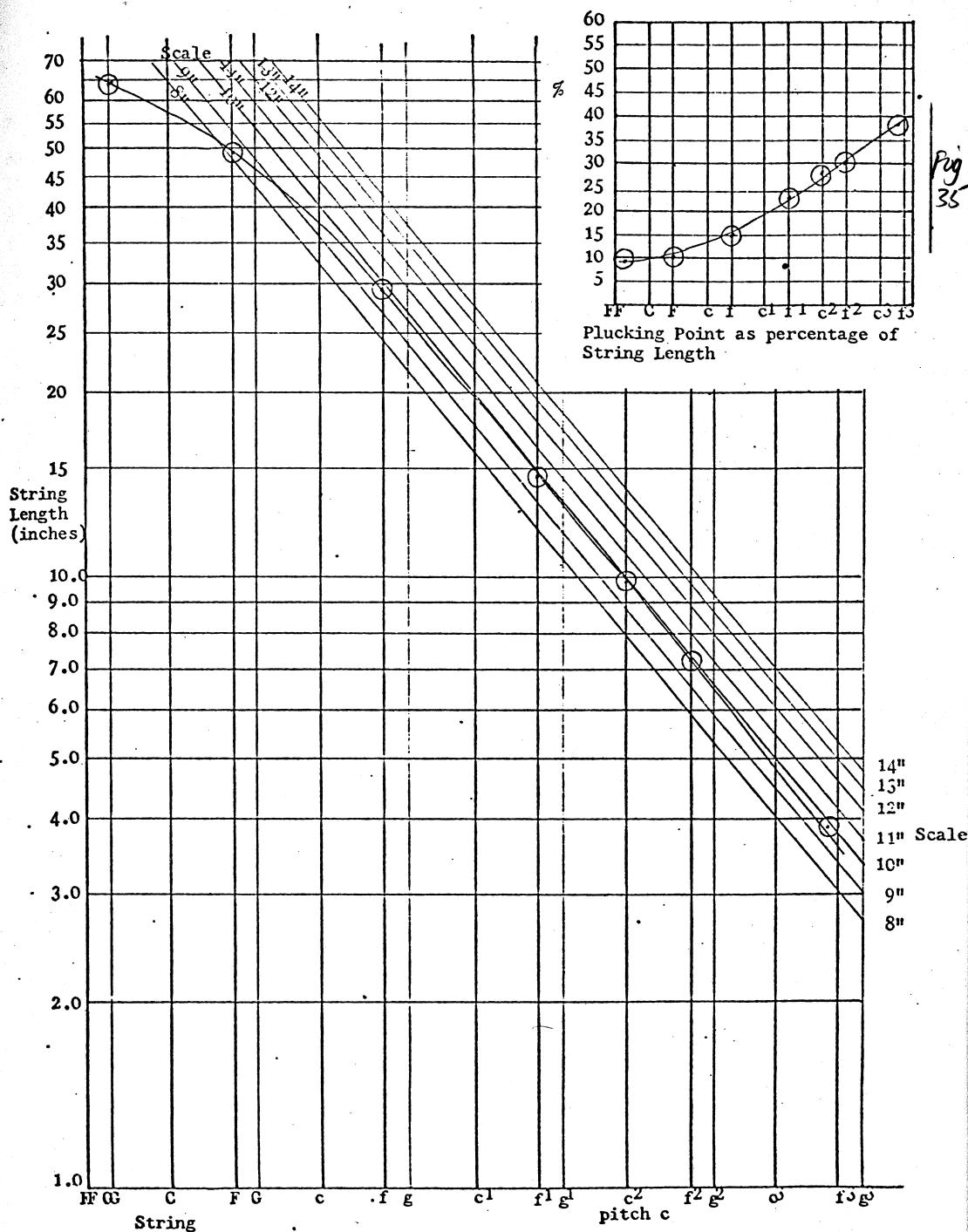


Fig13 String lengths and Plucking points for the harpsichord of 1720  
by Thomas Hancock

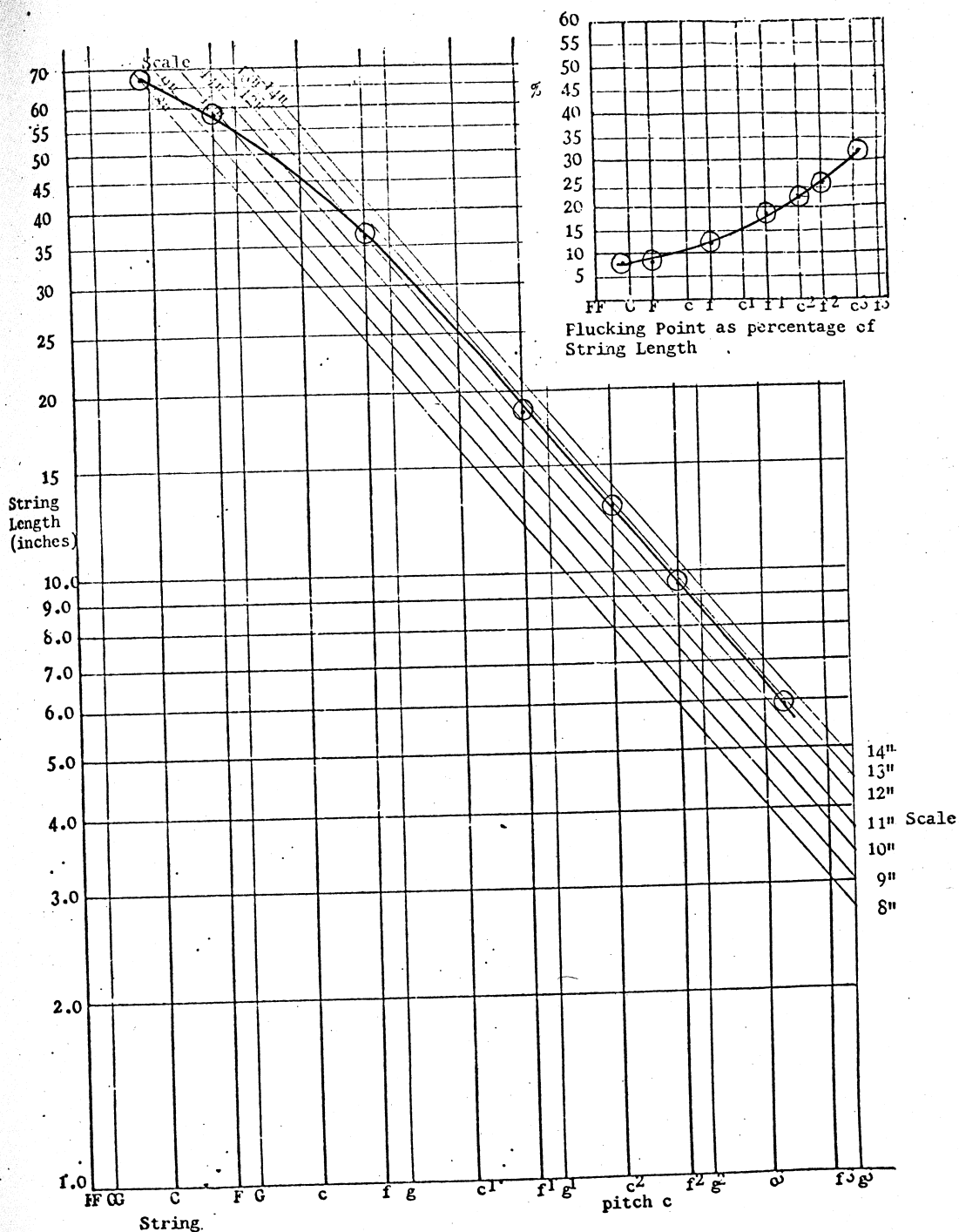


Fig 14 String lengths and Plucking Points for the harpsichord by Joseph Tisseran

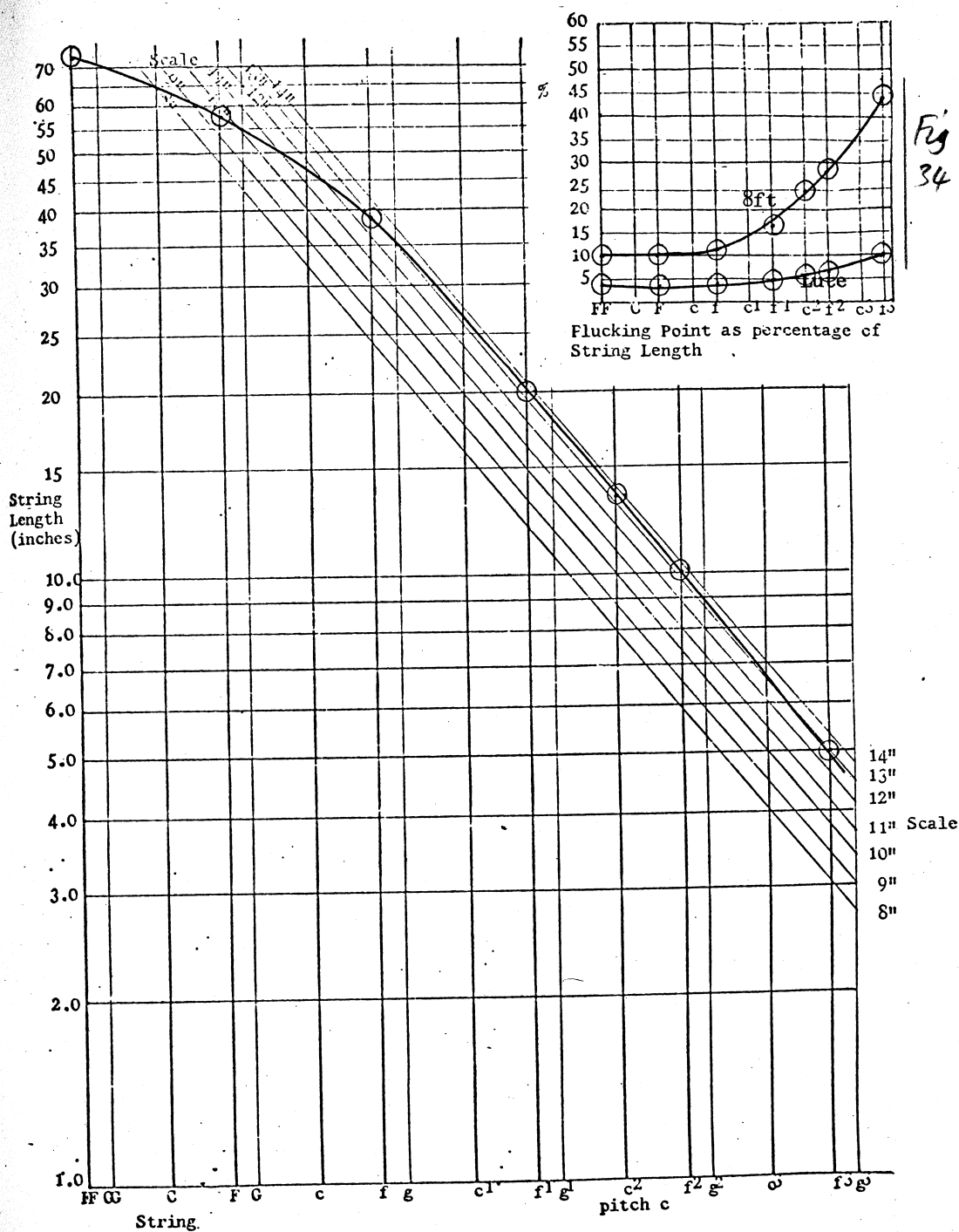


Fig 15 String Lengths and Plucking Points for the 1721 harpsichord by

Herman Tabel



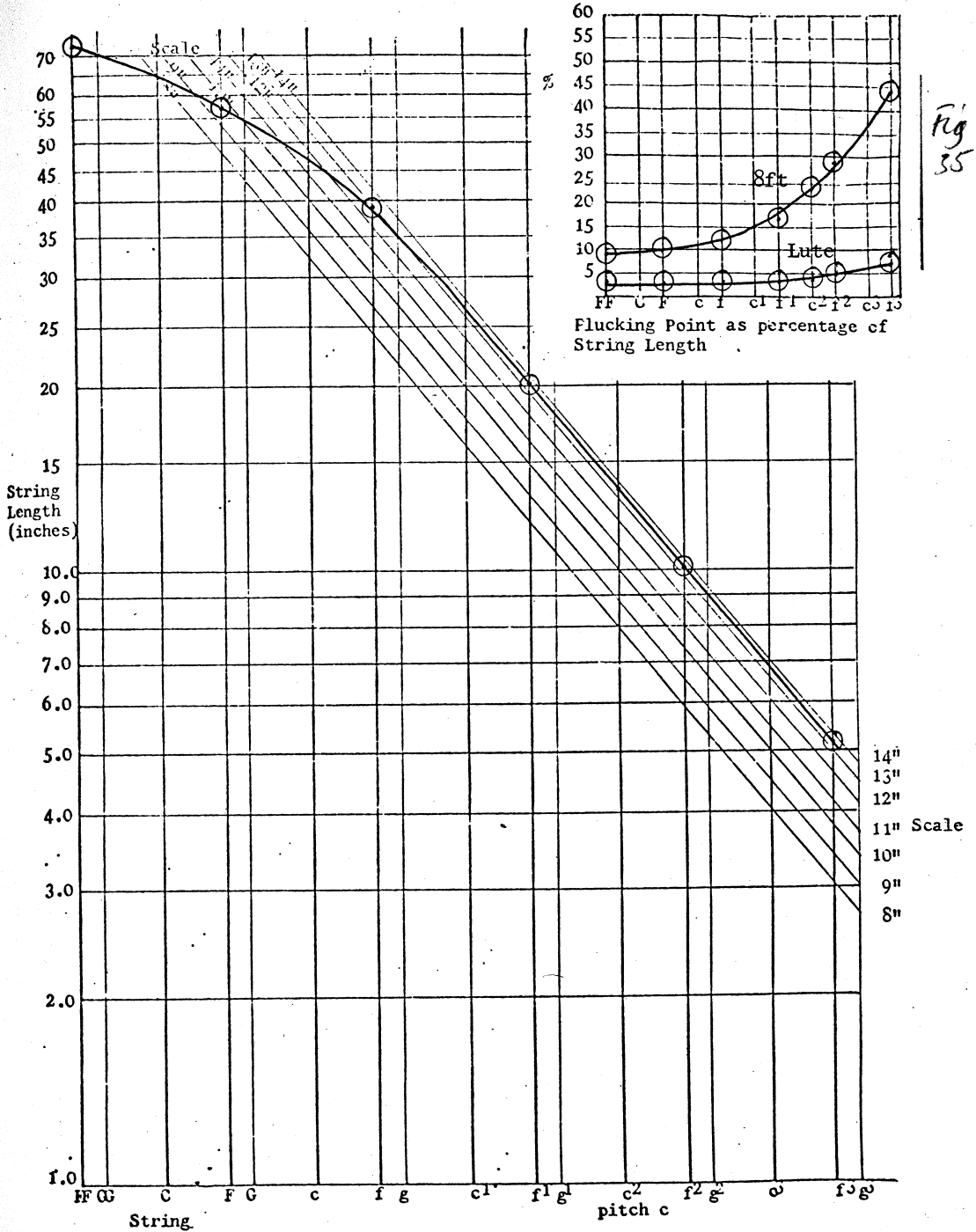


Fig16 String lengths and Plucking Points for the 1730 harpsichord by John Wilbrook

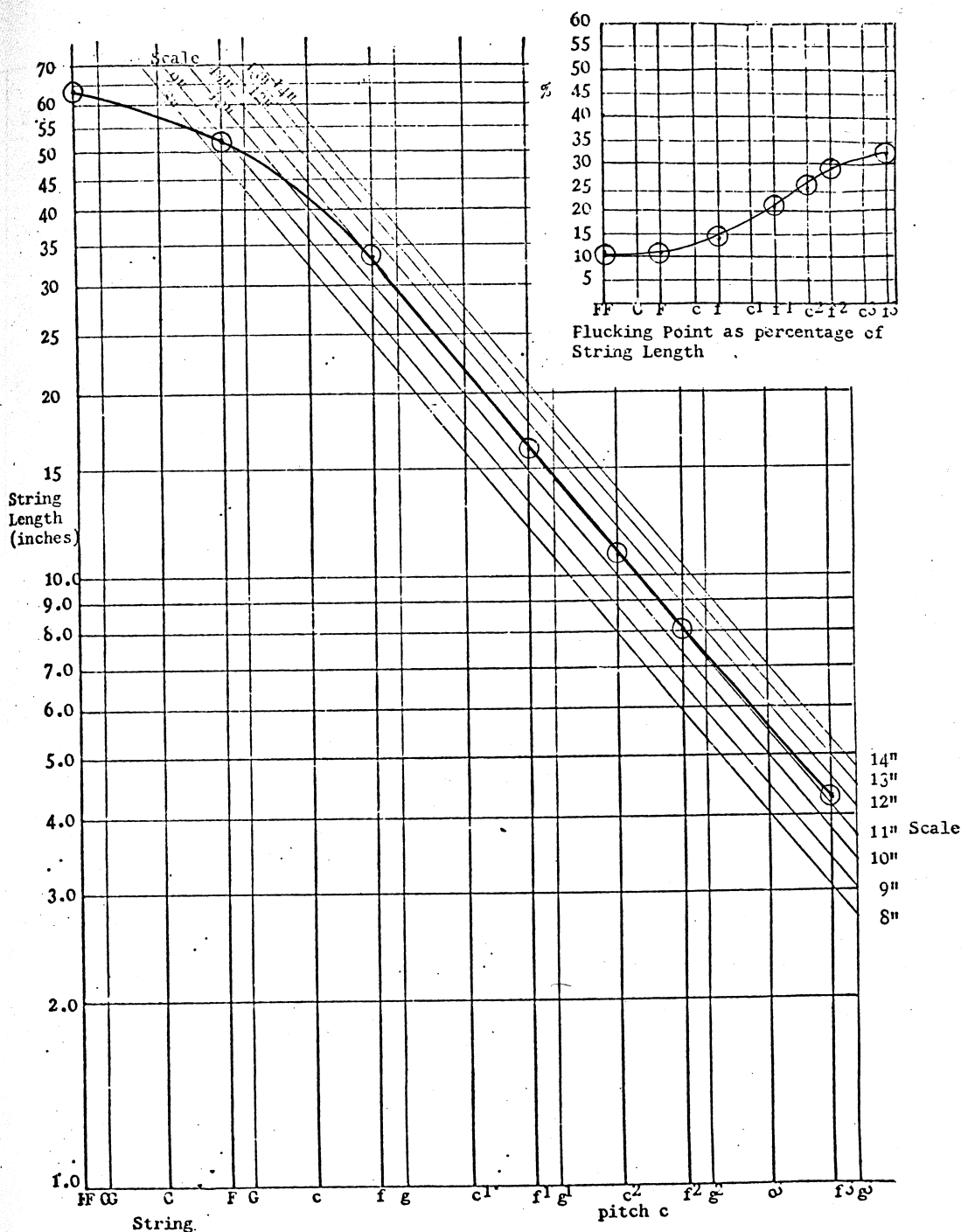


Fig 17 String lengths and plucking points for the unsigned and undated English harpsichord from Blairgowrie Castle now the property of Sir Peter and Lady Orde