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## **The 'harpe organisée', 1720-1840 : rediscovering the lost pedal techniques on harps with a single-action pedal mechanism**

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### **Citation**

Cleary, M. C. (2016, December 14). *The 'harpe organisée', 1720-1840 : rediscovering the lost pedal techniques on harps with a single-action pedal mechanism*. Retrieved from <https://hdl.handle.net/1887/45096>

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**Note:** To cite this publication please use the final published version (if applicable).

Cover Page



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**Issue Date:** 2016-12-14

# Chapter 1

## European harps since 1500

The history of harps is complex due to several factors. Harps have always been fragile instruments due to the total perpendicular tension of the strings on the soundboard. Harps often have a short life span. Few harps have survived from before the dawn of the *harpe organisée* and to the author's knowledge there is no existing harp built before 1760 that is in regular use today.<sup>1</sup>

Harps have always been expensive to build. Size is so often the first consideration when building or commissioning a new harp. Transport is also an important factor, no more so than today when flying with a harp is practically impossible.<sup>2</sup>

The harp is an instrument that can give immediate satisfaction to a player. The strains of a harp are some of the most pleasurable sounds that we know. This attraction to the sound of a harp, by listeners and players alike, has inspired each culture to devise a harp or a series of harps that are suitable for their own music, resulting in numerous models of harps that are specific to one period of history or musical culture.

No one type of harp can play all European art music that was specifically written for "harp", whatever type of harp that meant within a certain musical genre.<sup>3</sup>

Harp making and repertoire go invariably hand-in-hand. Harps are used as much in art music as in traditional music and there has always been a fine line between

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<sup>1</sup>The Hochbrucker harp from 1728 in the collection of the Musée de la Musique in Paris (no. E.2009.1.1) was restored to playing condition by Beat Wolf in 2007. The Dutch harpist Nanja Breedijk recorded an excerpt from the anonymous collection *Musikalische Rüstkammer auf der Harfe* (MS, Stadtbibliothek Leipzig, no III.5.26, c. 1715) on this instrument.

<sup>2</sup>Modern reproductions of historical harps do not respect any historical models with respect to size, but rather are made to fit in an extra-seat on an airplane. This creates a situation where attempts to copy or reproduce the past are actually prevented by the restraints of modern travel limitations.

<sup>3</sup>Examples include seventeenth-century harp pieces written for the *arpa doppia* which cannot be played a pedal harp, due to the rapid chromatic changes in the music. Similarly, Spohr's Op. 115 was written for the single-action harp and is technically impossible to play, as written by Spohr, on the later double-action pedal harp. See Chapter 6. These two examples run contrary to the accepted idea that each new type of harp throughout history is an improvement on the earlier types of harps.

traditional music and art music, and likewise, formally and informally trained players. Certain models of harp have often been modified or simplified for different genres of music. For example, the late eighteenth-century single-action harp was simplified into a diatonic instrument in the nineteenth century in Viggiano, Italy.<sup>4</sup>

Before the invention of the *harpe organisée*, many harps would appear to have been once-off models, with individual structures and tuning systems. The few harps that have survived from before this time are rarely identical to each other. European iconography up to the eighteenth century tells a similar tale: depictions of harps in art are seldom similar to each another. The harp is more often depicted as a symbol rather than as a reproduction of an actual instrument that the artist knew or had actually seen. In religious art the sacred symbolism of the harp, played by King David, was more important than an accurate representation.<sup>5</sup>

Giovanni Lanfranco's<sup>6</sup> depiction of the extant "Barberini" harp is an exception, as the instrument in the painting survives and is part of the collection of instruments at the Museo Strumenti Musicali, Rome, and shown in fig. 1.1. [Giovanni Lanfranco *Venere suona l'arpa* (1634), Gallerie Nazionali di Arte Antica, Rome] There are several paintings of Iberian *arpas de dos ordenes* where the instrument is accurately depicted and is very similar to known surviving instruments.<sup>7</sup>

There are some types of harps that became standardised, implying that the basic form, height and number of strings did not change significantly over time. Examples of standardised harps are the Iberian *arpa de dos ordenes*, a cross-strung instrument used from 1550-1800 in Spain and Portugal and the late seventeenth-century Welsh Triple harp.<sup>8</sup> Other examples of standardised harps include eighteenth-century single-action harps, nineteenth-century double-action pedal harps and twentieth-century neo-Irish harps. It may seem that the latter two types of harps dominate today's harp-building market, but there are constant requests from players and proposals from luthiers, for harps that are smaller and cheaper than the modern double-action pedal harp and with alternative tuning systems to the diatonic tuning of the neo-Irish harp.

To further complicate the history of harps, even when a type of harp is linked to a certain epoch and geographical area, there are several examples where different types of harps co-existed in one geographical area, each type of harp serving a different musical repertoire. In the fourteenth-century Burgundian court of Philip

<sup>4</sup>Roberto Leydi and Febo Guzzi, "Alcune schede su strumenti popolari italiani: Arpa di Viaggiano (Basilicata)," *Culture musicali: quaderni di etnomusicologia; semestrale della Società Italiana di Etnomusicologia* II, no. 4 (1983): 100-153.

<sup>5</sup>See Chapter 7.

<sup>6</sup>Giovanni Lanfranco, *Venere Suona L'arpa (Allegoria Della Musica)*, 1634, <http://galleriabarberini.beniculturali.it/>. Giovanni Lanfranco (1582-1647), Italian Baroque painter.

<sup>7</sup>School of Madrid, *A Vanitas Still Life with a Skull, a Violin, a Pewter Plate, a Vase of Flowers, a Book and a Small Tortoiseshell Inlaid Cabinet with Silver Gilt Wine Cups and Terracotta Vases on Top, Arranged Upon a Table Top Draped with a Carpet, Together with a Harp Leaning Against a Chair, Set Before a Draped Curtain*, circa 1650, <http://www.sothebys.com/content/dam/stb/lots/L08/L08036/L08036-48-lr-1.jpg>.

<sup>8</sup>Joan Rimmer, *The Irish Harp* (Mercier Press, 1977). Joan Rimmer (1919-2015), ethnomusicologist.



Figure 1.1: (clockwise from top left): Viridung (1511); Agricola (1529); “Barberini” harp, Museo Strumenti Musicali, Rome; Lanfranco *Venere suona l’arpa* (1634), Gallerie Nazionali di Arte Antica, Rome.

the Bold, both single- and double-rowed harps co-existed.<sup>9</sup> Another example is the musical circle in Dublin around 1820 where at least six different types of harps co-existed.<sup>10</sup>

For these reasons, it is the author's opinion that it is impossible to write a history of the **harp**, but rather of **harps**.<sup>11</sup>

Harps may be described as instruments, triangular in shape with "three basic structural components: resonator, neck and strings", where the strings are taut between the resonator and the neck, and the plane of the strings is right-angled to the plane of the soundboard. All European harps are frame harps meaning that a column or fore-pillar connects the neck to the resonator.<sup>12</sup> According to the Hornbostel-Sachs classification system of musical instruments, in its most recent revision by MIMO (Musical Instrument Museums Online), frame harps (322.2) are classified into frame harps without tuning action (322.21) and with tuning action (322.22).<sup>13</sup>

## 1.1 Single-rowed harps

The further sub-category, "Diatonic frame harps (322.211)", is cumbersome for the scope of this overview for two reasons. A sub-category described as "diatonic" is limiting and may be misleading because many harps before the eighteenth century used modal tuning systems, rather than tuning systems based on major or minor keys. The second issue is that this sub-category mixes harps of different sizes and cultures in the same category. For this brief overview, the author aims to describe harps within their historical context.

If this sub-category "Diatonic frame harps (322.211)" is applied, a twenty-six-strung single-rowed harp from the sixteenth century with a modal tuning and a nineteenth-century Viggianese diatonic harp, modelled after the late eighteenth-century single-action harp are grouped together, as shown in fig. 1.2. These two types of harps

<sup>9</sup>Craig M. Wright, *Music at the Court of Burgundy, 1364-1419: A Documentary History* (Institute of Medieval Music, 1979), 125. Baude Fresnel, harpist and probable composer Baude Cordier, worked at the Burgundian court of Philip II, Duke of Burgundy (1342-1404). At least seven different harps (single-rowed and triple harps) were purchased for the court from 1389-1394 costing between twenty to sixty francs.

<sup>10</sup>Siobhán Armstrong, "Exploring Irish Harp Traditions," *Journal of Music*, 2015, <http://journalofmusic.com/focus/exploring-irish-harp-traditions>.

<sup>11</sup>Recent studies which continue to perpetuate the idea of a history of a harp, as if describing one single instrument in the title of their publications include: Anna Pasetti, *L'Arpa* (Palermo: L'Epos, 2008); Mary Louise O'Donnell, *Ireland's Harp: The Shaping of Irish Identity c.1770 to 1880* (Dublin: UCD Press, 2014). The classic book on a general history of harps, Roslyn Rensch, *The Harp; Its History, Technique and Repertoire* (New York: Praeger Publishers, 1969) changed its title when revised in 1989 to Roslyn Rensch, *Harps and Harpists* (Bloomington: Indiana University Press, 1989).

<sup>12</sup>Sue Carole DeVale et al., "Harp," *Grove Music Online* (Oxford University Press), accessed September 27, 2015, <http://www.oxfordmusiconline.com/subscriber/article/grove/music/45738pg5#S45738.5>.

<sup>13</sup>"Classification of Musical Instruments 1961," July 8, 2011, <http://network.icom.museum/cimcim/resources/classification-of-musical-instruments/>.



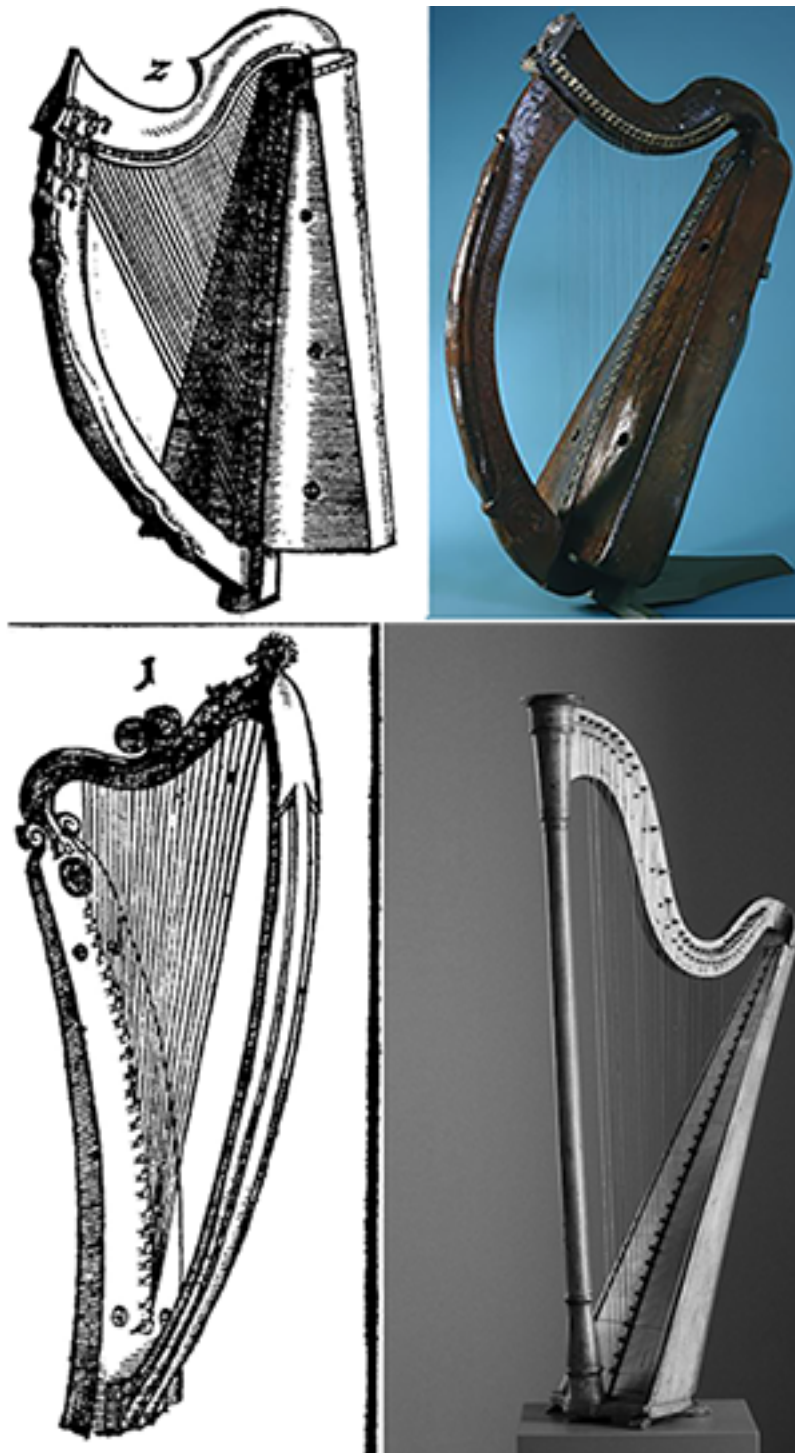


Figure 1.2: (clockwise from top left): Praetorius (1618) "Irlandisch harff"; "Trinity College" harp, (c. 15<sup>th</sup> c), Trinity College Dublin; "Arpa Viggianese" late 19<sup>th</sup> c., Museo dell'arpa Victor Salvi, Piasco; Praetorius, "Gemeine Einfacheharff".

have very little in common with respect to their size, range, geographical origins, repertoire and playing techniques.

This review traces the types of harp that were used in Europe from 1500 up to the current day, according to the geographical origins, string system and repertoire.<sup>14</sup>

### 1.1.1 Single-rowed Renaissance harps

The first category covers harps that were used across Europe from medieval times, with a single row of strings. This includes different models which are often referred to as gothic harps. These harps have gut strings and can be played with or without brays. Brays are wooden pins that hold the string taut at the soundboard which are right-angled. When a string is plucked, the string resonates against the bray, creating a nasal sound. The earliest drawing of a harp with the actual notes written above the strings show an instrument that is not diatonic, but rather a twenty-six-stringed harp (range: F-c3), where one string in each octave can be tuned as the pitch B natural or B-flat.

Martin Agricola's *Musica Instrumentalis Deudsch* of 1529 is the first printed source with a detailed string list, and shown in fig. 1.1. This drawing is similar to an earlier drawing from Virdung's *Musica Getutscht* of 1511, also shown in 1.1. Heinrich Glarean's *Dodekachordon* shows a harp with a differently-curved neck and twenty-four strings (range: F-a2) with brays.<sup>15</sup> Mersenne illustrates a single-rowed harp with twenty-one strings (range: G-g2) with no bray pins.<sup>16</sup>

Single-rowed Renaissance harps come in various sizes, with as few as twelve strings up to thirty gut strings. According to the Groves "harp" article, the earliest extant Renaissance single-rowed harp is the "Wartburg harp", made in Tyrol, possibly in the fifteenth century. It has twenty-six strings, is 104 cm high and has a "delicate inlaid geometrical decoration of a kind found on other 15th-century instruments."<sup>17</sup> A harp with one row of strings on one plane can be tuned in a variety of ways: based on hexachords or modes, diatonic or chromatic, or a mixture of diatonic and chromatic. This is evident from the volumes of iconography where the harp key is included in the image, and also from written testimonies describing a harpist picking up the harp key, putting the harp in tune, in mode, and then playing it.

No specific music of the sixteenth-century has been identified for these harps. They are used today to perform sixteenth-century repertoire based on iconographical and

<sup>14</sup>Droysen-Reber, *Harfen*. The nearly eighty-page introduction of this book remains the most detailed history of European harps as of current research. There is no similar study in English. Hans Joachim Zingel, *Harfenspiel im Barockzeitalter*, Kölner Beiträge zur Musikforschung, Band LXXVII (Regensburg: Bosse, 1974) is a detailed source book regarding instruments and harp repertoire. Hans Joachim Zingel (1904-1978), German harpist and musicologist. Rajka Dobronić-Mazzoni, *Harfa* (Grafički Zavod Hratske, 1989) contains many images of harps throughout European history.

<sup>15</sup>Heinrich Glarean, *Dodecachordon* (Basel: Petri, 1547). Heinrich Glarean (1488-1563), Swiss music theorist, geographer and humanist. Drawing of harp in Droysen-Reber, *Harfen*, 13.

<sup>16</sup>Marin Mersenne, *Harmonie universelle, contenant la théorie et la pratique de la musique*, vol. 3 (Paris, 1636), 171; Droysen-Reber, *Harfen*, 15.

<sup>17</sup>DeVale et al., "Harp."



descriptive evidence. The author plays several single-rowed medieval and gothic harps, using hexachord and modal tunings which result in twelve pitches in the octave.<sup>18</sup>

The renaissance single-rowed harp was played in Wales up to 1700.<sup>19</sup> This harp usually had either thirty-one or thirty-four horsehair strings and bray pins. The *Robert Ap Huw* manuscript (GB-Lbl Add.14905), dated 1613, is a collection of Welsh harp music in tablature and five tuning systems.<sup>20</sup>

### 1.1.2 Single-rowed Baroque harps

Harps with a single row of strings continued to be built and played in the seventeenth century, co-existing with chromatic or multi-rank harps. These harps were taller than the Renaissance instruments and were strung with gut strings. A fine example is the harp by Antonio Stradivarius,<sup>21</sup> shown in fig. 1.3.

Single-rowed harps were also in use on the Iberian peninsula, Germany and Wales. These instruments are structurally similar to the chromatic harps of these geographical areas, and therefore shall be discussed under the fellow chromatic instruments below.

### 1.1.3 Irish and Scottish medieval harps

The early Irish and Highland Scottish harps (sometimes referred to as Gaelic harps) were instruments of the courts, existing from at least the eleventh century up into the early nineteenth century. The resonating chamber is usually carved from a single log and strung with strings of brass, silver or perhaps even gold.<sup>22</sup> These harps are tuned modally, often with a double g tuning.<sup>23</sup> From the existing two Irish and Scottish medieval harps, it can be said that the harps were around 65 cm in height with twenty-nine or thirty strings.

There are eighteen extant Gaelic harps, classified as either “small low-headed”, “large low-headed” or “high-headed” design.<sup>24</sup> The Trinity College Irish harp (fig. 1.2),<sup>25</sup> the Queen Mary and the Lamont harps of Scotland are examples of extant

<sup>18</sup>This sort of harp can be heard on two CDs with Tetraktys 2004, Maria Christina Cleary, harp. “Olive Music,” accessed October 7, 2015, [http://www.o-livemusic.com/olive\\_cd/index.htm](http://www.o-livemusic.com/olive_cd/index.htm).

<sup>19</sup>Christopher Macklin, “Approaches to the Use of Iconography in Historical Reconstruction, and the Curious Case of Renaissance Welsh Harp Technique,” *Early Music* 35, no. 2 (2007): 213–23.

<sup>20</sup>Claire C. J. Polin, *The Ap Huw Manuscript* (Henryville, Pa.: Institute of Mediaeval Music, 1982).

<sup>21</sup>Gianpaolo Gregori, “La harpe et les guitares d’Antonio Stradivari,” in *Nouveaux timbres, nouvelle sensibilité au XVIIIe siècle. Première partie*, ed. Florence Gétreau, vol. 3 (Klincksieck, 1998). Antonio Stradivarius (1644–1737), Cremonese instrument maker. The instrument is found in the Conservatorio di Musica San Pietro a Majella, Naples.

<sup>22</sup>The principal player of these instruments today is Siobhán Armstrong, Ireland.

<sup>23</sup>See “System of pitch notation”, under “Abbreviations”, page x.

<sup>24</sup>Simon Chadwick, “The Early Irish Harp,” *Early Music* 36, no. 4 (2008): 521–31; Rimmer, *The Irish Harp*.

<sup>25</sup>Paul Dooley, “Reconstructing the Medieval Irish Harp,” *The Galpin Society Journal* 67 (2014): 107–42.

fifteenth-century “small Low-headed” instruments. The “high-headed” designed harps which date from the seventeenth century are around 110 cm in height with approximately thirty-five strings. At least one Irish harp, the Cloyne/Dalway harp, would appear to have had a second parallel row of strings in the middle range of the harp.<sup>26</sup> The Gaelic harps were historically played up the late seventeenth century with finger nails.

There are many seventeenth-century Scottish lute manuscripts and English sources which contain Gaelic tunes.<sup>27</sup> Edward Bunting collected hundreds of tunes at the Belfast harp Festival in 1792.<sup>28</sup> Music specifically written for the Irish harp includes William Lawes<sup>29</sup> consorts<sup>30</sup> and Martin Peerson’s *Mottects*.<sup>31</sup>

Irish and Scottish harps were known also outside the British Isles. Michael Praetorius describes three harps, a “Gemeine Einfacheharff” (fig. 1.2.), an “Irlandisch harff mit messinges saiten” (fig. 1.2) and a “Groß Doppel-harff.”<sup>32</sup> Irish harpists also worked in the English, Danish, Polish and German courts.<sup>33</sup>

## 1.2 Chromatic harps

If a Renaissance single-rowed harp with twenty-six strings is tuned diatonically, the harp then has a range of over three octaves. When the harp is tuned chromatically,

<sup>26</sup>Michael Billinge and Bonnie Shaljean, “The Dalway or Fitzgerald Harp (1621),” *Early Music* 15, no. 2 (1987): 175–87.

<sup>27</sup>The Straloch manuscript was written by or for Robert Straloch between 1627 and 1629. The original manuscript is lost, but a handwritten partial copy by George Farquhar Graham in 1847 survives in the National Library of Scotland (Ms adv.5.2.18).

<sup>28</sup>Edward Bunting, *A General Collection of the Ancient Irish Music*, vol. 1, 3 vols. (London: Preston, 1797).

<sup>29</sup>William Lawes (1602–1645), English composer. John Cunningham, “A Tale of Two Harps: Issues Arising from Recordings of William Lawes’s Harp Consorts,” *Early Music Performer*, no. 21 (2007); John Cunningham, “Some Consorts of Instruments Are Sweeter Than Others’: Further Light on the Harp of William Lawes’s Harp Consorts,” *The Galpin Society Journal* 61 (2008): 147–76.

<sup>30</sup>The author performed some of Lawes Consorts in April 2016, using a wire-strung metal harp with a modal tuning system. It is the author’s opinion that Lawes’ Harp consorts were not written for one specific harp, but for at least two, if not three: an Irish wire-strung harp (Harp Consorts 1–6) and either an Italian or Spanish chromatic Baroque harp (Harp Consorts 7–12). The reasons for this are manifold and are beyond the scope of this thesis. The Harp Consorts can not be researched as one entity, as there are several manuscript sources over more than twenty years, the range and accidentals, and compositional styles are different between the Consorts.

<sup>31</sup>Martin Peerson, *Mottects or Graue Chamber Musique: Containing Songs of Fiue Parts of Seuerall Sorts, Some Ful, and Some Verse and Chorus. But All Fit for Voyces and Vials, with an Organ Part Which for Want of May Be Performed on Virginals, Base-Lute, Bandora, or Irish Harpe* (London: William Stansby, 1630). Martin Peerson (c. 1571–1651), English composer and instrumentalist.

<sup>32</sup>Praetorius, *Syntagma Musicum, tomus secundus: De organographia*, 5: “a common harp”, an Irish harp with metal strings” which is a “small low-headed” design of harp, “a big Double-harp”. The term “common harp” here applies to a single-rowed harp, but the term was again used in the early nineteenth century to describe a single-action harp. See Bochsa, *New and Improved Method*, Preface. See Chapter 3, footnote 4 of this thesis.

<sup>33</sup>Cunningham, “Some Consorts of Instruments Are Sweeter Than Others’”: 149. The harpist Cormac Mc Dermott worked in the English court from 1603–1612, Diarmait Albanach was employed by the Danish court from 1621 to 1634.

it would have a range of two octaves. This latter range suffices for playing one- or two-part music. The harp functioned as a melody instrument or as one voice in a consort setting. When chromatics are added to a single-rowed harp, the physical sensation of an interval changes.

On a diatonic harp, an interval of a fifth implies five strings and this interval becomes a defined stretch for the player's hand. If the harp is chromatically tuned, the interval of a fifth could mean eight strings and therefore a larger stretch for the hand.<sup>34</sup>

Several solutions were devised to include more strings. Chromatic harps, all with gut strings, exist with two parallel rows of strings and are found in Italy and Germanic countries<sup>35</sup> Harps with three parallel rows of strings are found in Italy and later in Wales. The two-rowed cross-strung harp, *arpa de dos ordenes*, is an Iberian instrument, found in Spain and Portugal.

### 1.2.1 Iberian harps

The Iberian harps were usually made from walnut with a pine soundboard and a wide resonating box. This structure remained unchanged from the mid-sixteenth century until the eighteenth century and this model was used as either a single-rowed instrument or a two-rowed cross-strung harp. The single-rowed Iberian *arpa* had from twenty to thirty gut strings. The length of a string was shortened to achieve chromatic pitches by blocking the string at the neck or at the base of the string, using the finger of one hand, usually the left hand. Juan Bermudo describes a single-rowed harp with twenty-nine strings (range C-a2).<sup>36</sup> Re-tuning and putting a harp in mode was another way to achieve certain chromatic notes and is described by Bermudo, Luis de Venegas de Henestrosa<sup>37</sup> and Diego Fernández de Huete.<sup>38</sup> The earliest piece specifically written for harp is Alonso Mudarra's *Tiento IX, Cifras para harpa y organo*, published in 1546.<sup>39</sup> This collection also includes

<sup>34</sup>The author plays several single-rowed harps, from eight to twelve strings in the octave. Hexachord and modal tunings are more suitable for any music up to 1600 on a single-rowed harp.

<sup>35</sup>Pasetti, *L'Arpa*, 47–49. There are two known images of small two-rank parallel European medieval harps. The first is part of a triptych located in the Monastery di Pietra, Spain, dated c. 1390. The second is on the cover of *Clarissima plane at[que] choralis musice interpretatio D[omi]ni Balthassar Praspergij Merspurgen[sis]. cu[m] certissimis regulis at[que] Exe[m]plo[rum] Anotacionib[us] et figuris multu[m] sple[n]didis Jn Alma Basileorum vniuersitate exerclata* (Basel: Furter, 1501).

<sup>36</sup>Juan Bermudo, *El libro llamado Declaración de instrumentos musicales* (Osuna, 1555). Juan Bermudo (c. 1510–after 1559), Spanish music theorist.

<sup>37</sup>Luis Venegas de Henestrosa, *Libro de cifra nueva para tecla, harpa, y vihuela* (Alcalá de Henares, 1557). Luis de Venegas de Henestrosa (c. 1510–1570), Spanish composer and compiler.

<sup>38</sup>Diego Fernández de Huete, *Compendio numeroso de zifras armónicas, con theórica, y práctica para arpa de una orden y arpa de dos ordenes, y de órgano* (Madrid, 1702). Diego Fernández de Huete (c. 1633–before 1713), Spanish harpists, theorist, composer and teacher.

<sup>39</sup>Alonso Mudarra, *Tres libros de musica en cifras para vihuela: en el primero ay musica facil y difcil en fantasias y composturas y pauana y gallardas y algunas fantasias para guitarra: el segúdo trata de los ocho tonos (o modos) .... el tercero es de musica para cantada y tañida* (Seville: Leon, 1546). Alonso Mudarra (c. 1510–1580), Spanish vihuelist and composer.



Figure 1.3: (clockwise from top left): Rainer Thureau (2000) *Arpa de dos ordenes*; Stradivari (1681) single-rowed harp, Conservatorio di Musica San Pietro a Majella, Naples; *Davidsharffe* (17<sup>th</sup> c.), Koninklijke Musea voor Kunst en Geschiedenis, Brussels; J. Richards, Welsh Triple (c. 1740), Victoria & Albert Museum London.

the *Fantasia contrahaze la harpa en la manera de Ludovico*, which imitates the playing techniques of a harpist, but is not necessarily a piece for harp.<sup>40</sup>

The two-rowed cross-strung harp, called *arpa de dos ordenes* (fig. 1.3), has from twenty-seven to twenty-nine diatonic strings and from fifteen to nineteen chromatic strings, with an approximate height of 150 cm. There are five chromatic strings in each octave. The *arpa de dos ordenes* has been researched in depth, as so many historical sources have survived including the playing techniques<sup>41</sup> and fingerings. The sources include descriptions of the instrument and a long tradition of harp-making guilds,<sup>42</sup> and the many extant harps which are all similar in construction and size. Frescos, sculptures and paintings also depict the same instrument, that changed very little over two hundred years. There is a wealth of repertoire for this instrument, as the *arpa de dos ordenes* was an essential part of both sacred and secular music in Spain and Portugal. The solo repertoire is often in tablature and fingering solutions are found in de Huete's music. In sacred music, the *arpa de dos ordenes* had its own *basso continuo* line, which was different from the organ part.

The diatonic single-rowed Iberian harp was brought to the New World by the Jesuits and is still widely played, amongst others, in Paraguay, Colombia, and in Vera Cruz, Mexico.

### 1.2.2 Italian harps

Chromatic harps with two or three rows of parallel strings are found in Italy from the sixteenth century. Vincenzo Galilei describes a two-rowed parallel harp,<sup>43</sup> an *arpa doppia*, with fifty-eight strings (range C1-d2) in 1581.<sup>44</sup> In the same year, a highly decorated *arpa doppia* is built in Rome for Laura Peverara<sup>45</sup> who was employed in Alfonso II d'Este, Duke of Ferrara's court.<sup>46</sup>

Two treatises contain detailed information on large triple-rowed parallel Italian

<sup>40</sup>John Griffiths, "La 'Fantasía que contrahaze la Harpa' de Alonso Mudarra: Estudio Histórico-Analítico," *Revista de Musicología* 9, no. 1 (January 1, 1986): 29-40.

<sup>41</sup>Nelly van Ree Bernard, "Ornamentation in Sixteenth-Century Iberian Music for 'Tecla, Harps Y Vihuela': Quiebros, Redobles and Glosas," in *Aspects of the Historical Harp: Proceedings of the International Historical Harp Symposium, Utrecht, 1992*, ed. Martin van Schaik (Utrecht: STIMU, 1994), 53-72.

<sup>42</sup>Cristina Bordas, "Harp Builders in Madrid (1578-1800)," in *Aspects of the Historical Harp: Proceedings of the International Historical Harp Symposium, Utrecht, 1992*, ed. Martin van Schaik (Utrecht: STIMU, 1994), 89-98.

<sup>43</sup>Hannelore Devaere, "The Baroque Double Harp in the Kingdom of Naples," in *Aspects of the Historical Harp: Proceedings of the International Historical Harp Symposium*, ed. Martin van Schaik (Utrecht: STIMU, 1994), 13-30.

<sup>44</sup>Vincenzo Galilei, *Dialogo della musica antica et della moderna* (Florence: G. Marescotti, 1581). Vincenzo Galilei (c. 1530-1591), Italian theorist, composer, lutenist, singer and teacher.

<sup>45</sup>Laura Peverara (c. 1550-1601), Italian singer and harpist.

<sup>46</sup>Elio Durante and Anna Martellotti, *L'arpa di Laura: indagine organologica, artistica e archivistica sull'arpa estense*, Archivum musicum, Collana di studi, C (Florence: SPES, 1982).

harps of up to 180 cm in height. These are Mersenne<sup>47</sup> and Bartolomé Jovernardi.<sup>48</sup> Harps with three parallel rows, have two outer rows which have the same pitches. Each row can be played by one hand. The third inner row has either five or seven strings for the chromatic pitches (C#, E♭, D#, F#, G#, B♭, A#). These chromatic harps were conceived for unequal temperaments, as there are two separate strings for E♭ and D#, and B♭ and A#.<sup>49</sup>

There are two extant large Baroque triple-rowed harps. The “Barberini” has seventy-four strings (range C-e3), and shown in fig. 1.1. The “Bologna” harp has eighty-six strings (C-c3).<sup>50</sup> A third harp, similar to the Bologna harp, used to be part of the collection of instruments of Comtesse Chambure, but has disappeared since the Second World War.<sup>51</sup>

The repertoire for the Italian chromatic harps includes a solo for harp in Claudio Monteverdi’s *Orfeo*.<sup>52</sup> The last solo works published for the *arpa doppia* in Italy are found in Gregorio Strozzi’s *Capriccio* in 1687.<sup>53</sup>

### 1.2.3 Welsh triple harps

Single-rowed harps existed in Wales since the medieval times, but the origin of the Welsh triple harp (fig. 1.3) has still not been fully researched.<sup>54</sup> Charles Evans is the first documented triple harp player at the English court in 1660 to 1684. He is described as playing the “Italian harp.”<sup>55</sup> James Talbot, the English writer on musical instruments, describes three triple harps as “Italian” or “English”.<sup>56</sup>

The first instruments survive from 1736. These two harps have eighty-eight strings (range G-e3). The instrument is high-headed with a steep harmonic curve which is

<sup>47</sup>Marin Mersenne, *Harmonie universelle, contenant la théorie et la pratique de la musique*, vol. 1, 3 vols. (Paris, 1636).

<sup>48</sup>Bartolomé Jovernardi, *Tratado de la música*, (E-Mn, Ms 1634). Bartolomé Jovernardi (ca. 1600-1668), harpist and theorist. Maria Sanhuesa Fonseca, *El doctor Bartolomeo Giovenardi (ca. 1600-1668). Teórico musical entre Italia y España*, Monumentos de la música española (Barcelona: Consejo Superior de Investigaciones Científicas, 2009).

<sup>49</sup>Dinko Fabris, “The harp in Naples 1500-1700,” in *Historische Harfen: Beiträge zur Theorie und Praxis historischer Harfen* (Basel: Schola Cantorum Basiliensis, 1991), 43-59; Mara Galassi, “The ‘arpa a tre registri’ in Seventeenth-Century Rome,” in *Historische Harfen: Beiträge zur Theorie und Praxis historischer Harfen* (Basel: Schola Cantorum Basiliensis, 1991), 76-79.

<sup>50</sup>The author plays a modern copy of the “Bologna” harp (2005), made by Rainer Thureau of Wiesbaden.

<sup>51</sup>Joan Rimmer, “The Morphology of the Triple Harp,” *Galpin Society Journal* XVIII (66 1965): 91.

<sup>52</sup>Claudio Monteverdi, *L’Orfeo. Favola in musica* (Venice, 1609). Claudio Monteverdi (1567-1643), Italian composer.

<sup>53</sup>Gregorio Strozzi, *Capricci da sonare cembali et organi*, vol. Op. 4 (Napoli: Marescotti, 1687).

<sup>54</sup>Peter Holman, “The Harp in Stuart England: New Light on William Lawes’s Harp Consorts,” *Early Music* 15, no. 2 (May 1, 1987): 188-203. There are several theories that are lacking substantial historical evidence.

<sup>55</sup>John Cunningham, “Review: William Lawes, The Harp Consorts (PRB Viol Consort Series, No. 62),” *The Viola Da Gamba Society Journal* 2 (2008): 93: “His Majesty’s harper for the Italian harp”.

<sup>56</sup>Joan Rimmer, “James Talbot’s Manuscript (Christ Church Library Music MS 1187): VI. Harps,” *The Galpin Society Journal* 16 (1963): 63-64, doi:10.2307/841095<sup>57</sup>. James Talbot (1664-1708), English writer on music.

nearly 200 cm in height. This instrument remains structurally unchanged since the Baroque period up to today and is the national instrument of Wales.

The repertoire includes the works by George Fredric Handel<sup>58</sup> which include the *Concerto* Op. 6, No. 4, HWV 294 and harp parts in three Oratorios and one Opera. John Parry published pieces in 1741, 1761 and 1781.<sup>59</sup>

Welsh single-rowed harp existed, which were modelled after the Welsh triple harp.

### 1.2.4 *Davidsharffe*

The *Davidsharffe* (fig. 1.3) is a Baroque harp with two parallel rows of strings, with fifty-three to fifty-eight strings with bray pins (range G-e3); the height is approximately 170 cm. It has a low trapezoid-shaped body and usually a decorated head. The instrument is illustrated and described in Johann Philip Eisel's *Musicus autodidactus*.<sup>60</sup> Instruments that are similar to Eisel's diagram include the double harp built by the German harp maker, Johann Volckmann Rabe of Nordhausen.<sup>61</sup> Several other *Davidsharffen* have survived and are listed in the Droysen-Reber's Catalogue.<sup>62</sup> The *Davidsharffe* model of harp was also used to build single-rowed harp.

Johann Mattheson mentions the *Davids-harffe* twice in his 1713 publication.<sup>63</sup> If he is referring to this specific type of instrument, it places the *Davidsharffe* at the beginning of the eighteenth-century. It could also be possible that the term is simply referring to a harp, that was invariably the harp of King David. Anton Gottlieb Heyse's harp method is partially directed towards players of the *Davidsharffe*.<sup>64</sup>

The author has identified no music that specifically asks for the use of the *Davidsharffe*.

<sup>58</sup>George Fredric Handel (1685-1759), German composer.

<sup>59</sup>John Parry 'of Rhuabon' (c. 1710-82), Welsh harpist and composer.

<sup>60</sup>Johann Philipp Eisel, *Musicus autodidactus oder Der sich selbst informirende Musicus: bestehend sowohl in Vocal- als üblicher Instrumental-Musique, welcher über 24 Sorten sowohl mit Saiten bezogener als blasender und schlagender Instrumente beschreibt, die ein jeder, nach Beschaffenheit seines Naturells, sonder grosse Mühe, in kurtzer Zeit, nach denen Principiis fundamentalibus erlernen kan* (Leipzig, 1738). Johann Philip Eisel (1698-1763), German composer and theorist. It is also called "Doppel oder Davids-harffe" in Walthers, *Musikalisches Lexikon*.

<sup>61</sup>Mette Müller, ed., *The Power of the Harp: Exhibition Catalogue* (Copenhagen: Musikhistorik Museum og Carl Claudius' Samling, 1993), 20-25. A *Davideharffe* is located in the Musikhistorisk Museum, Copenhagen, Denmark, dated 1740.

<sup>62</sup>Droysen-Reber, *Harfen*, 36-40.

<sup>63</sup>Johann Mattheson, *Das neu-eröffnete orchestre, oder Universelle und gründliche anleitung wie ein galant homme einen vollkommenen begriff von der hoheit und wurde der edlen music erlangen seinen gout darnach* (Hamburg, 1713), 280. Johann Mattheson (1681-1764), German composer, critic, music journalist, lexicographer and theorist.

<sup>64</sup>Anton Gottlieb Heyse, *Anweisung die Harfe zu spielen* (Leipzig, 1803); *Anweisung die Harfe zu spielen* (Halle: Handel, 1822). Anton Gottlieb Heyse (flourished early 19<sup>th</sup> century), German harpist and composer from Halle.



### 1.3 Harps with manual actions

If a single-rowed harp is tuned diatonically, there are several ways to create the chromatic pitches that are not available on the harp. A vibrating length of a string can be shortened by a semitone by three main methods. A string can be stopped or pinched near the neck with the thumb<sup>65</sup> or close to the soundboard, using the second finger. A third way to shorten a string is to stop a string with the tuning key. No historical written source document this practice, but it is an essential part of playing the diatonic harps of Central and South America today.

Alternative systems exist, where this operation is done by manually moving hooks, buttons or levers to shorten the vibrating length of a string by one semitone instead of the hand or object.

#### 1.3.1 *Hakenharfe*

The German *Hakenharfe* (fig. 1.4)<sup>66</sup> has a series of J-shaped hooks that are attached to the neck below the tuning-pins.<sup>67</sup> These hooks can be turned by ninety degrees, either clockwise or anti-clockwise, hence shortening the vibrating length of a string by one semitone. The earlier *Hakenharfen* had four hooks, five, and then seven hooks in every octave. The hooks are manually turned by the left hand, meaning that the left hand stops playing for that instant.

Five harpist wrote methods for the *Hakenharfen*.<sup>68</sup> Backofen wrote a significant amount of repertoire for the instrument<sup>69</sup> and Johan Henrik Lorentz (1763-1818), harpist in the court of Copenhagen played and composed sonatas, suites and a concerto for the *Hakenharfe*.<sup>70</sup> It is possible that the concertos and cantatas of the collection of Pius Hanke could be for this harp.<sup>71</sup>

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<sup>65</sup>See section 1.2.1.

<sup>66</sup>Nancy Thym-Hochrein, "Die Hakenharfe: Bauweise, Spieltechnik, Geschichte," in *Zur Baugeschichte der Harfe: vom Mittelalter bis zum 19. Jahrhundert: 13. Musikinstrumentenbau-Symposium in Michaelstein am 6. und 7. November 1992*, ed. Monika Lustig (Michaelstein: Das Institut, 1995), 86–103. This is principal study on the *Hakenharfe* to date.

<sup>67</sup>"Haken" means hooks in English.

<sup>68</sup>Johann Wernich, *Versuch einer richtigen Lehrart die Harfe zu spielen: wobey die Grundsätze nach welchen dieses Instrument erlernt werden muss, mit der grössten Deutlichkeit, und solcher-gestalt vorgetragen* (Berlin: Winter, 1772); Johann Herbst, *Ueber die Harfe, nebst einer Anleitung, sie richtig zu spielen* (Berlin: Rellstabschen, 1792); Joseph Schwanneburg, *Vollständiges theoretisch-praktisches Lehrbuch zur Davids-und Pedalharfe, mit vielen in Kupfer gestochen Figuren, Notenbeispielen und einem Anhang von Tonstücken, mit bezeichnung des Fingersatzes*, 1797; Backofen, *Anleitung*, 1801; Heyse, *Anweisung*.

<sup>69</sup>Heidi Rosenzweig, "Johann Georg Heinrich Backofen: die deutsche Harfe um 1800," in *Historische Harfen: Beiträge zur Theorie und Praxis historischer Harfen* (Basel: Schola Cantorum Basiliensis, 1991), 80–97.

<sup>70</sup>The harpist Helen Davis of Copenhagen, is currently researching and publishing the works of Lorentz.

<sup>71</sup>I thank Ludmiła Sawicka of the Library of the University of Warsaw, Poland for sharing this material with me.

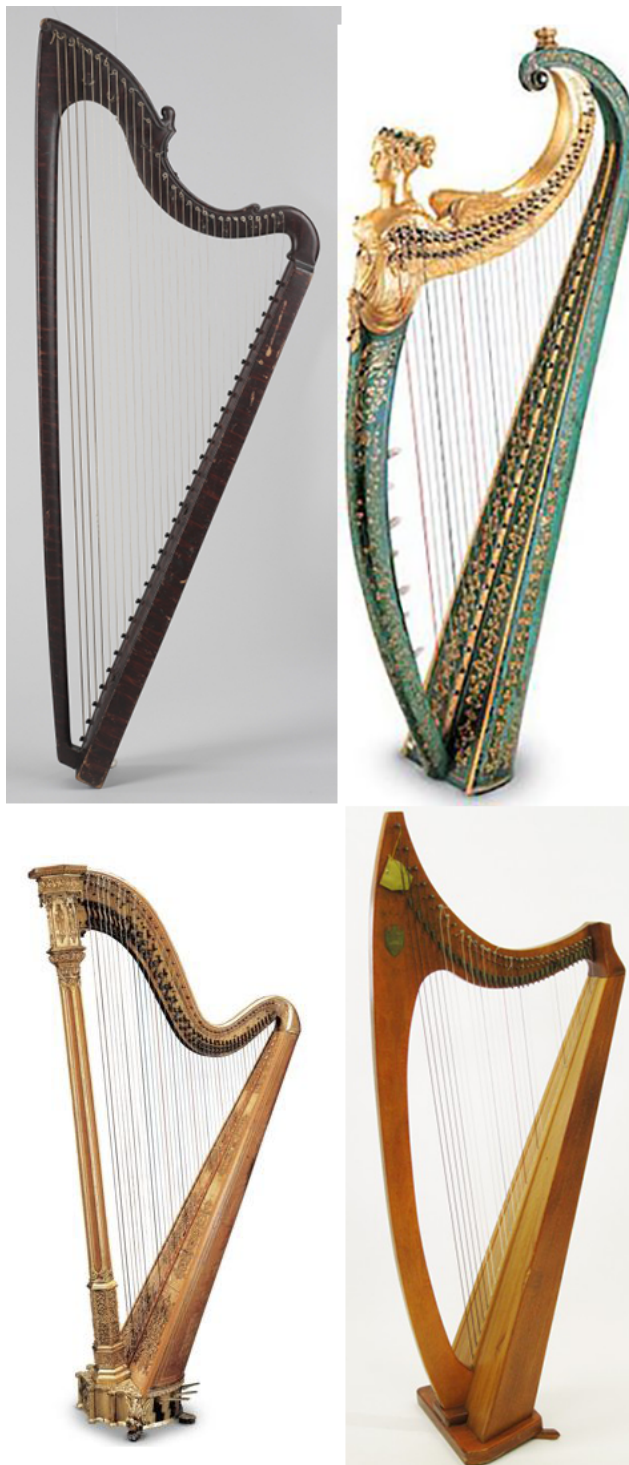


Figure 1.4: (clockwise from top left): Hochbrucker, *Hakenharfe* (1738), Germanisches Nationalmuseum, Nürnberg; Egan, *Dital* harp (c. 1820), Museo dell'arpa Victor Salvi, Piasco; Lyon & Healy, *Troubadour II* lever harp (c. 1962), private collection; Erard double-action pedal harp (1816).

### 1.3.2 *Dital* harp/[Royal] Portable Irish harp

This “dital” harp (fig. 1.4) is a post-single-action harp. From 1809, John Egan,<sup>72</sup> a pedal harp builder based in Dublin, attempted to re-construct harps following the ancient tradition of Irish harps, for the newly founded Irish Harp Society of Dublin.<sup>73</sup> Egan designed various types of harps, including large wire-strung harps with thirty-seven strings. His final design was a small harp, about 100 cm in height, with a shape that reflected the medieval Irish harp but the construction and mechanism of the harp was similar to Erard pedal harps.<sup>74</sup> He designed seven ‘ditals’ buttons the fore-pillar which were attached to the *fourchettes*<sup>75</sup> mechanism. This altered the vibrating length of one string in each octave, like a pedal on a pedal harp. This harp was set-up in E-flat major and its “design and technique of performance” is one of the “European pedal harps and had little to do with the Medieval Irish wire-strung harp”.<sup>76</sup>

This harp is not to be confused with Edward Light’s *dital harp*, which is a harp-lute or similar hybrid instrument.<sup>77</sup>

### 1.3.3 Neo-Irish harp

This is a harp, based on the Portable Irish harp, where the strings are shortened by a series of levers or blades attached to the neck of the harp. The levers were first patented in 1962 by Lyon and Healy harps in Chicago (fig. 1.4). The system is similar to the German *Hakenharfe*. These harps range from 80-110 cm in height with strings ranging from twenty-seven to thirty-four strings. The strings are gut (but now nylon) with some metal-wound strings in the bass, like a modern pedal harp. These harps are always set-up in E-flat major, reflecting the concept of the single-action harp.

## 1.4 Harps with pedal actions

This category includes single-rowed harps with a single-action pedal mechanism and a double-action pedal mechanism. Pedal harps can have from five to fourteen pedals, found at the base of the instrument. The pedals operate with reciprocal arms or a spring mechanism and are linked to seven rods that pass through the column or the soundbox of the harp. These rods are then attached to the mechanism in the neck that alters the length of the strings. The result is that each string produces two or three pitches on the harp.

<sup>72</sup>John Egan (d.1829), harp maker from Ireland.

<sup>73</sup>O'Donnell, *Ireland's Harp*, 87-99.

<sup>74</sup>Nancy Hurrell, “The Royal Portable Harp by John Egan,” *Journal of the Historical Harp Society*, 2003.

<sup>75</sup>After Erard's invention. See Glossary.

<sup>76</sup>O'Donnell, *Ireland's Harp*, 7.

<sup>77</sup>Droysen-Reber, *Harfen*, 76.

### 1.4.1 Single-action pedal mechanism

Harps with a single-action pedal mechanism are the first type of harps with a mechanism system to alter the length of the strings. The earliest harp with pedals dates from 1720. This harp has from thirty-three to forty-three strings and pedals at the base of the instrument. These can be five or seven pedals, corresponding to the diatonic notes of the scale. Each pedal alters the vibrating length of a string in every octave by one semitone. A further eighth and ninth effect pedals were added in the 1780's.<sup>78</sup>

Using the feet, the pedals are pressed down and released to alter the required pitch. There are two positions for the pedals: either up or down. The upper position is the initial position: the mechanism is not in use and the strings are in an open position and the seven strings in the octave are tuned to a diatonic major scale, usually E-flat major.<sup>79</sup> When a pedal is pressed into the lower position, the vibrating length of the string is shortened producing a note a semitone higher than when a pedal was in the initial upper position. An example would be when the C pedal is in the upper position all the C strings sound as C. When a pedal is pressed down the resulting sounding pitch of every C string is C#. A pedal can be held with the foot in the lower position without effort, as the pedals are light and easy to move. Alternatively a pedal can be fixed by sliding the pedal into a side notch to hold it in position. Fixing the pedal into the side notch leaves the foot free to rest on the floor or to move other adjacent pedals.

Chapter 2 is dedicated to harps with a single-action pedal mechanism.

### 1.4.2 Double-action pedal mechanism

Harps with a double-action pedal mechanism were invented by Erard using a “fourchette” mechanism (fig. 1.4).<sup>80</sup> Erard began to make from harps with a single-action pedal mechanism from 1785 and to sell harps in 1790.<sup>81</sup> The first sales of his own harps with a “fourchette” mechanism were in 1797. He began to experiment and design harps with a double-action pedal mechanism from 1801-1810. These harps have seven pedals which can alter the vibrating length of each string in the octave twice, therefore producing three pitches from each string. A further eighth was an effect pedal, the *pédale à renforcement*.<sup>82</sup>

Erard also manufactured hybrid-harps with five single-action pedals and two pedals (D and A) with a double-action mechanism.

Like Cousineau's fourteen-pedal harp, no specific repertoire of the same time as the invention of the double-action pedal mechanism has been identified. The author

<sup>78</sup>See sections 2.3, 3.6, and 4.5.

<sup>79</sup>See sections 3.1, 4.1, and 5.1 for discussions on set-up keys on the harp.

<sup>80</sup>“Fourchette” mean forked disks.

<sup>81</sup>Adelson et al., *History of the Erard Piano and Harp*, 2:26-32.

<sup>82</sup>See Glossary.

has found the first works that fully exploit the new possibilities around twenty years after Erard's invention.<sup>83</sup>

This harp has thirty-seven to forty-three strings. The basic structure and *fourchette* mechanism has remained unaltered to day.

## 1.5 Other harps

This overview of harps is not a complete list of every type of harp that was built in Europe from 1500. Many harps were, and still are, once-off models. Other harps that have not been discussed include the *Arpa Viggianese* (fig. 1.2). This harp from Basilicata, Italy, was developed in the nineteenth century and played on the street. It is modelled after the nineteenth-century pedal harps, but is a diatonic instrument. The *Arpa Viggianese* culture continued into the 20<sup>th</sup> century in the United States and Australia through emigrant Viggianese musical families.<sup>84</sup>

Other nineteenth-century harps include the Bohemian diatonic harp,<sup>85</sup> *Bradl* Tyrolean harps with a single-action pedal mechanism, Dizi's pedal harp and Pleyel's *cross-strung harp* of 1894.<sup>86</sup>

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<sup>83</sup>F. C. Meyer's *Adagio Patetico and Waltz of the Black Forest*, Op. 26. See section 8.2.

<sup>84</sup>Linda Barwick and Marcello Keller Sorce, eds., "Italian Immigrant Harpists from Viggiano in the Early Twentieth Century: Re-Discovering a Little Known Aspect of the Musical History of Melbourne," in *Italy in Australia's Musical Landscape* (Melbourne: Lyrebird Press, 2013).

<sup>85</sup>Jiří Kleňha, *Harfenictví V Čechách: Historie Vandrovnické Muzikantu Z Nechanic* (Prague: Granit, 1998).

<sup>86</sup>Droysen-Reber, *Harfen*, 76.