The Viennese Guitar and its Influence in North America: Form, Use, Stringing, and Social Associations

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Abstract

This thesis evaluates the technological developments of the nineteenth-century guitar that provided the basis for the emergence of the steel-strung instrument. It investigates changing use, cultural significance, and shifts in social association during this period. It maps and characterises Georg Staufer's achievement in Vienna, and traces the progress of his innovations through the work of his immediate successors and of those European guitar makers who migrated to North America, whose designs heralded the emergence of the steel-string guitar. It assesses Staufer's developments, in patents, catalogues and other primary documents, and compares those of his extant guitars, including examples with extra bass strings, which are accessible in museum and private collections. It asks how crucial changes in stringing (number of strings, tension, and material), c1880-c1920, led to profound but hitherto little-studied changes in sound and use; and by examining representation in press reviews and other reception evidence from Vienna and America, it assesses how the societal standing, signification and social associations of the guitar shifted, and demonstrates the basis of this in a complex web of technological and social change in the nineteenth century.

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Conventions and Terminology

Arching	Used to describe the longitudinal and transverse radius of the instrument's back and soundboard
Action	Height of strings above the fingerboard
Bassg(u)itarre	Guitar with extra sub bass strings
Befungis	Permit (authorisation) to trade
Bindings	The protective and decorative strips of wood or other material that bind the edge of the soundboard and back
Bogeng(u)itarre	Guitar with extended sound chamber, in a hollow bowed arm shape
Braces	The supporting bars attached to the back, and soundboard of a stringed instrument. Also alternatively known as bars and struts
Bridge Patch	The internal reinforcing plate (usually wood) underneath the bridge
Bürgereid	Oath of citizenship
Bürgerrecht	Rights of citizenship
Buttress	An internal supporting brace under the area of the fingerboard extension found on some early *Staufer* style Martin guitars
Capotasto	A moveable devise used to stop the strings in a chosen fret position
Centre Bout	The width of the instrument at its waist
Centre strip	Internal strip of wood commonly used to reinforce the centre joint of a two-piece back (sometimes applied to the centre joint of a soundboard)
End Graft	Decorative strip of wood the depth of the sides were they meet at the tail of the instrument
English Guittar	The English Guittar is a six-course instrument that bears more resemblance to the cittern than the six-string guitar. It has approximately half the guitar's string length.

Harp Guitar	Used in this thesis principally for the multi-strung instrument pioneered by Knutsen, and then made by the Larson Brothers for Dyer, in contra distinction to the guitars with extra bass strings emanating from the Staufer workshop. Note various models of harp guitar were made in North America at the end of the nineteenth century and into the next
Ice Cream Cone Heel	Conically shaped heel common to Austrian, German, French and Italian nineteenth-century guitars, and used by Martin on his early guitars, particularly those with adjustable necks
Linings	The internal strips of wood that reinforce attachment of the ribs or sides to the soundboard and back
Lower Bout	The maximum width of the instrument in its lower section
Patent Heads	Mechanical tuners
Peg Head	Traditional term for a peg box, or headstock fitted with friction peg tuners
Persian Slipper Headstock	Staufer-style scroll headstock. Also known as *Vienna head*
Pin Bridge	Bridge where the strings pass through the bridge into the soundboard and are anchored in place with bridge pins
Purfling	Decorative inlay lying inside the outer edge bindings that make up the front and back rims of a stringed instrument
Kontrag(u)itarre	A term used later in the nineteenth century to mean bassgitarre
Rosette	Circular decoration around the sound hole
Schrammelg(u)itarre	Guitar with seven or nine extra sub bass strings, for example either a thirteen or fifteen string guitar
Schraubenmaschine	Concealed mechanical tuners fitted to Viennese Staufer-style guitars
Spanish Foot	The part of the neck block that extends and is attached to the back for greater strength

Spanish Heel	A heel, that traditionally in the Spanish method of making, is constructed from a solid piece, or laminated blocks, of wood from the same stock as the neck. In the Spanish method the heel and internal neck block are commonly the same component. When used by Martin, this style of heel and block were separate
String Length	The distance from the nut on the fingerboard side to the centre of the saddle on the bridge. Also known as scale length
Tailpiece	The component used to secure the strings, after passing over the bridge, to the base of the instrument
Tie-on Bridge	Bridge where the strings are tied directly to the bridge but do not pass into the soundboard itself
Upper Bout	The maximum width of the instrument in its upper section
Wappenform	Shield-shaped
Wappenformg(u)itarre	Guitar with a body that is shield-shaped. This can be a guitar with extra sub-bass strings

List of Abbreviations

AHRC:	Arts and Humanities Research Council
AmZ:	*Allgemeine musikalische Zeitung*
ASTW:	Archiv Stadt Der Wien
BMG:	Banjo, Guitar and Mandolin
EUHCMI:	Edinburgh University Historic Collection of Musical Instruments
FoMRHIQ:	Quarterly of the Fellowship of Makers and Researchers of Historical Instruments
GNM:	Germanisches Nationalmuseum, Nuremberg
GSJ:	Galpin Society Journal
JAMIS:	Journal of the American Musical Instrument Society
KHM:	Kunsthistorisches Museum, Vienna
LOC:	Library of Congress, Washington DC
MFA:	Museum of Fine Arts, Boston
NMM:	National Music Museum
USPTO:	United States Patent and Trademark Office
WZ:	Wiener Zeitung

Instrument Collections Represented

Edinburgh University Historic Collection of Musical Instruments

Gemeentemuseum, The Hague

Germanisches Nationalmuseum, Nuremberg

Kunsthistorisches Museum, Vienna

Martin Museum, Nazareth

Metropolitan Museum of Art, New York

Musée de la Musique, Paris

Museum of Fine Arts, Boston

Musikinstrumenten Museum der Universität Leipzig

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The Viennese Guitar and its Influence in North America: Form, Stringing, Use, and Social Associations

Introduction

This thesis investigates the work of the Viennese string instrument maker Johann Georg Staufer (1778-1853), his influence on guitar design, and the cultures of the instrument's use in North America throughout the 1800s to c1920. It evaluates the extent that Staufer's innovative designs inspired his contemporaries and immediate successors, signalling changes in the instrument's form, use, and repertoire, which appear to have been associated with a shift in prevailing social and gender associations, to extend from the middle class additionally to the poorer classes, and from female to male players. Significantly, the adoption by makers of certain of his structural innovations and then later the emergence of steel as a stringing material (c1880) together, witnessed a new form of the instrument, which, breaking away from the parlour tradition of vocal accompaniment, was used to play dances, marches and light classical music, predominantly though not exclusively by men, in civic halls, clubs, bars, and open spaces.

By tracing the progress of Staufer's innovations through the development of his instrument designs and those of immediate successors, this thesis maps and characterises his achievement. It also asks how changes in stringing, with the introduction of steel as a material in the latter half of the nineteenth century, led to considerable changes in sound and use.

This thesis asks why it was the American steel-string guitar that became associated with folk and popular music in the twentieth century, while the gut-strung (later nylon) Spanish guitar emerged as the primary vehicle for 'classical' guitar music. Previously, in nineteenth-century-Europe, the Viennese, Italian, French and Spanish models of guitars were all used to play essentially the same repertoire. Although later in the twentieth century it was the Spanish form, consolidated by Torres, that was favoured, for this, the innovative designs developed by Staufer and then migrating to North

America through his pupil Martin, were fundamental in paving the way for the development of the American instrument.

In America at the beginning of the nineteenth century, virtuosos and amateurs alike played European guitars. By the end of the century, the instrument had (with the further development of steel strings) divided into two forms, each with its associated traditions of use. On the one hand there was the gut-strung instrument, favoured by the highbrow elite and aspired to by amateur parlour guitar players, while on the other, the steel-strung instrument found a new accompanimental role in the mandolin orchestras and clubs popular with the middle and lower social classes. The American form of instrument, previously in use in the parlour, increased in size and was strengthened to withstand higher-tension steel strings; thereby acquiring a louder voice, embodying the spirit of amateur ensemble music making, and finding a place in the group and solo popular music performed publicly in halls, clubs and bars. Conversely the players of canonical guitar music (established earlier in the century by its player-composers) remained loyal to and favoured the purity of the gut-strung instrument. Furthermore, by the 1920s, the impact of Segovia in particular led to his preferred Spanish form of guitar becoming the musical elite's instrument of choice, while the new forms of steel-string instrument flourished in country and urban popular music.

Staufer's innovations reflect the technological developments of his day, introducing new design elements made possible by advances in materials and manufacturing methods. By the early 1820s he had developed an instrument of increased compass, its fingerboard elevated above the soundboard and mounted on an adjustable neck, featuring the distinctive Persian-Slipper-shaped headstock with beautifully engraved mechanical tuners. These instruments, more restrained in decorative appointments than hitherto, with elegantly-waisted bodies mirroring the contemporary Biedermeier visual aesthetic in art and furniture, were introduced by Staufer's pupil, Martin, to America in 1833. Even though, unlike Martin's, no business accounts of Staufer's enterprise have come to light, the number of instruments produced (90-250 guitars a year) suggests an operation employing a sizeable group of workers including and extending beyond his own family, and as such must have been Martin's own company model. Although still prevalent in Staufer's time (and the cause of many of Martin's problems before his migration to America), the restrictive control the guilds exercised over their members

was beginning to relax, and both Staufer's and Martin's business ambitions evidently move away from eighteenth-century guild practice to small, craft-based factory commerce that had yet to be further mechanised. That Staufer nonetheless embraced technological change – apparent in his inventions and designs, some of which continue in the American guitar at the beginning of the twentieth century – shows that his influence, evident in the work of his European contemporaries and immediate successors, did not wane.

This thesis is largely based on biographical and archival records (the Staufer and Martin families, their colleagues and contemporaries), nineteenth-century musical merchandise catalogues (Lyon & Healy and others), journals of the BMG *(Banjo-Mandolin-Guitar)* movement and other associated guitar literature, and extant musical instruments in Vienna and North America. It firstly reviews the primary and secondary source materials for Staufer and his workshop and reappraises earlier research into mid and late-nineteenth-century American guitar culture. Staufer's bibliographical details and an explanation of the workings of the guild system provide the background to his workshop practice, in which his role as a guitar maker, innovator and inventor, violin and cello maker, and master of a workshop that spawned other significant nineteenth-century string instrument makers, is considered. A catalogued comparison of extant Staufer guitars, accessible in museum and private collections, together with an examination of the patents and *privileges* for instrument improvement presents evidence of design change and measures his influence upon his colleagues, pupils and immediate successors. A survey is made of those Viennese guitars with extra bass strings, appearing in the mid-nineteenth-century, that anticipate crucial changes in stringing (number of strings, tension, and material), which led to profound but little-studied changes in sound and use, of the guitar in North America c1880-1920. An assessment is made of materials, form and design change, as well as the aesthetic influence, stemming from Staufer's workshop and continuing through the work of the migrant European guitar makers to the development of the steel-string guitar in North America and its impact on guitar culture at the beginning of the twentieth century.

While there is no indication of the guitar being strung with steel in Europe or America during the first half of the nineteenth century, the practice of Pasquale Vinaccia, who used steel for the first and second courses of the Neapolitan mandolin c1835,[1] shows that it was physically possible to have done so by that date. New evidence of the North American manufacture and use of steel guitar strings from the mid-nineteenth century is revealed in Virginia Penny's entry for 'Musical String Makers' in her *Cyclopaedia* in 1863. Her account of factory-women winding strings further supports Philip Gura's findings from the examination of the accounts and business records of James Ashborn's Connecticut guitar factory, which reveal increased use of mechanization and the inclusion of a string winding division in 1851. Through examining the types of strings offered in North-American musical merchandise catalogues and their representation in periodicals of the Banjo-Mandolin-Guitar movement, this thesis traces the gradual emergence of steel as a string material, its use on the guitar further supported by contemporaneous American patents for bridges and tailpieces that indicate rising string tension.

Although guitars with factory-installed steel strings did not become available until the middle of the 1890s, steel, for plain trebles and (in combination with silk) for the core of overwound basses, had already appeared in J. Howard Foote's musical merchandise catalogue of 1882-3. Gura's record of Ashborn's string winding division (1851), and Penny's account of winding guitar strings in Connecticut (1863), together with the reference to metal strings in George D. Reed's patent (1873),[2] suggest that steel strings were used by some North American guitarists from early in the second half of the nineteenth century, and some three decades before they became a factory option on commercially manufactured guitars.

The cultural context of the guitar in Vienna and North America during the nineteenth century: its social standing, the class and gender of both consumers and performers

[1] James Tyler and Paul Sparks, *The Guitar and Its Music : From the Renaissance to the Classical Era* (Oxford ; New York: Oxford University Press, 2002); Konrad Wölki, *History of the Mandolin : The Instrument, Its Exponents, and Its Literature, from the Seventeenth until the Early Twentieth Century*, English ed. (Arlington, Va. (P.O. Box 11125, Arlington 22210): Plucked String, 1984).
[2] George D. Reed. 1873 Guitars. US Patent 145,241, filed 4 November 1873, and issued 2 December 1873. USPTO, http://www.uspto.gov/index.jsp. Patent No. 145241. This patent was originally applied for on 4 November 1872.

(professional and amateur), together with its popular rise and emerging musical canon through repertoire is examined. An appraisal of its status and societal use, reveals first its associations of gentility with the gut-strung parlour instrument, and then shows how when strung with steel the instrument's inclusion, in string bands that included mandolins and banjos, took it out of the parlour and into public places, with a changing repertoire of dance music that was attractive to a new burgeoning lower middle class.

Chapter 1 Literature Review

Existing research into the recorded life and working practices of Georg Staufer is principally based on secondary and tertiary sources. Primary source materials do survive, namely in the extant instruments that exist in public museum and private collections, and in archival records such as birth and death registers, recorded design patents, registers of instrument makers and business trading records. Prochart (1979)[1] and Ottner (1977)[2] cite these archival primary sources in their respective bibliographies of Viennese musical instrument makers and their work. Some of the other secondary sources also reference these primary sources, but many do not, relying on information already in print from preceding music historians. While this makes up an overall picture of the work Staufer produced in early nineteenth-century Vienna, it does not provide an accurate account of how his instrument making responded to developments in musical repertoire or consumer demand. Nor does it give an elucidated analysis of the background to his quest for innovation, the success of his workshop, or the maintenance of his business. Timmerman has investigated many of the innovations emanating from Staufer's workshop regarding the development of the guitar with extra bass strings,[3] but the migration of this instrument to North America has been little considered. Primary source material relating to Staufer's identified students and successors exists in the form of some extant instruments and archival registry documents, but other information regarding the use this type of instrument must be gleaned from the music press. In the last quarter of the nineteenth century the development of this type of guitar into the *Kontragitarre,* which, then with addition of further bass strings expanded into the *Schrammelgitarre*, proved to be very popular in Austria and Germany. This resulted in existing musical compositions, as well as new pieces, being transcribed for *Schrammel* quartets and quintets.[4]

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[1] Ferdinand Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert* (Tutzing: Schneider, 1979).
[2] Helmut Ottner, *Der Wiener Instrumentenbau 1815-1833* (Tutzing: Schneider, 1977).
[3] Alex Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age* ed. Vjera Katalinić and Majer-Bobetko (Zagreb: Croation Musicological Society, 2006).
[4] This music illuminates a style of playing and performance practice that is explored in chapter 10.1 of this thesis.

Published in 2011, *Stauffer & Co.* by Hofmann, Mougin and Heckl,[5] has done much to redress this balance by presenting Staufer archival records that include birth, travel and tax documents, as well as his recorded patents. These have been presented alongside some sixty instruments from the Staufer workshop and contemporary Viennese makers in private collections. The aim of their research has been to illustrate Georg Staufer's importance as the leading guitar maker of his time in Vienna, while this thesis expands upon that position to assess his inspiration abroad.

Michael Lorenz has shared much of his archival research into the family life of the Staufers that includes their business arrangements and associations with their pupils and other Viennese makers. Using his platform of *Stauffer Miscellanea*[6] he has made available documents he has scrutinized from the *Archiv Stadt der Wien* and other archival sources that include, birth, death and marriage certificates, baptismal and conscription records, and financial business arrangements. From these it is possible to piece together a picture of Georg Staufer as a highly gifted maker, whose successful guitar making operation got into financial difficulty when he could no longer contain the size of the debts he incurred in his ceaseless quest for innovation and invention. Lorenz unearths the details of Staufer's financial arrangements with his backer Franz von Lacasse (starting from 1825 with the creation of Johann Georg Staufer & Comp.), and subsequent documents that show attempts to redress the debts incurred by Staufer's experiments. Despite what appears on Georg Staufer's part to be a lack of business acumen, from the beginning of the nineteenth century for a period of fifty years, the Staufer workshop was perhaps the most influential and productive guitar making operation in Vienna. To date no archival records have been found proving that Staufer employed Christian Friedrich Martin, however Lorenz's research has provided documental evidence of an association between the two in Vienna: Martin and Andreas Jeremias are witnesses to an agreement in 1826 between Georg Staufer and his close colleague Johann Ertl. That both Staufer and Martin shared the same best man, Franz Rzehaczek,[7] at their respective weddings

[5] Erik Pierre Hofmann, & Pascal Mougin, Stephan Hackl, *Stauffer & Co., the Viennese Guitar of the 19th Century* (Germolles-sur-Grosne: Éditions des Robins, 2011).
[6] Michael Lorenz, *Stauffer Miscellanea.*
[7] Michael Lorenz, 'Franz Rzehaczek', *Stauffer Miscellanea.* Rzehaczek was considered at the time to be an expert in the violin and had an important collection of over one hundred stringed-instruments: he was

suggests they were part same milieu of string instrument makers. Lorenz also shows that Martin was in Vienna in 1827 (later than previously thought) at the time of his daughter's baptism, and that as his close friend and fellow maker Heinrich Schatz's name appears on the baptismal record, it proves that he too was in Vienna then.

Whilst Staufer's influence on guitar making can be seen continued in the work of his colleagues and successors in Vienna, its impact on the work of his pupil [Christian Friedrich] Martin highlights its migration to North America too. The history of the guitar making family of Martin has been well documented, both by senior employees of the company, and others recording the historical development of the acoustic guitar. To name but a few: Mike Longworth with Richard Johnston and Dick Boak,[8] Walter Carter[9] and Jim Washburn[10] have all provided invaluable historical information regarding the Martin story. Philip Gura, by examining and organising the extensive extant ledgers and daybooks in the Martin Company archive, has thoroughly examined the life and working practices of its founder from the time of his migration to North America in 1833.[11] Gura's published work on Martin not only recounts the business affairs of the entrepreneurial instrument maker, but contextualises the migration of the European guitar to North America in the mid-nineteenth century.

Crucial to an investigation of the American guitar in the nineteenth century is the development of the steel-strung from the gut-strung instrument. Jeffrey Noonan's research in this area is primarily of performance practice: the quieter gut-strung instrument of the parlour evolved to the louder steel-strung ensemble instrument, and found its use in a more public sphere as part of the mandolin string band. There is though a need to thoroughly re-examine the history of the early American

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the best man of Ignaz Schuppanzigh, the luthiers Johann Georg Stauffer, Peter Teufelsdorfer, Christian Friedrich Martin, Ludwig Deák, the piano builder Franz Karl Schneider and Beethoven's copyist Wenzel Schlemmer. He also was the godfather of many children of other musicians and violinmakers.

[8] Richard Johnston, Dick Boak, and Mike Longworth, *Martin Guitars: A History*, 1st ed. (New York: Hal Leonard, 2008).

[9] Walter Carter, *The Martin Book* (San Francisco: GPI Books, 1995).

[10] Jim Washburn and Richard Johnston, *Martin Guitars: An Illustrated Celebration of America's Premier Guitarmaker* (Emmaus, Pa: Rodale Press, 1997).

[11] Philip F Gura, *C.F. Martin and His Guitars, 1796-1873* (Chapel Hill: University of North Carolina Press, 2003).

guitar and to investigate fully the constructional designs involved its development, thus to provide a material musicology that is integrated with a cultural musicology. Organological research of musical instruments is not limited to the measuring of dimensions solely - valued type of investigation though this is - but rather by expanding upon this discipline to factor in how, for instance, certain circumstances may have led to the use of different materials, or making practice. Archival documents, instrument plans and workshop tools are immediate areas of material evidence that reveal methods of making, but may these not be considered in relation to for example, geographical availability and suitability of material, together with current issues of sustainability. The synthesis of these elements and how a maker adapts to them helps to inform a study of how an instrument is made. At the same time a changing or differing use of a musical instrument in society, or a change in musical taste, can have an impact on its design, thus influence its musical role. Its representation within a given society or group establishes how and by whom it is used.[12] If the former, *material musicology*, provides a framework for its materialism then the latter, *cultural musicology*, provides the framework with which to view its social standing.

Information regarding the guitar's use and development, throughout the timeline of this research, is received from audience and critics reporting in the music press, and in some cases daily newspapers. Staufer's innovations, such as the *Arpeggione*, were at times reported in both the *Wiener Zeitung* and the *Allgemeine Musikalische Zeitung*. These papers covered concerts by luminaries such as the guitar virtuosi, Mauro Giuliani, Alois Wolf and Luigi Legnani, as well as reporting on the social life of the most celebrated composers in Vienna. During the second half of the nineteenth century *Der Guitarfriende* augmented the *Allgemeine Musikalische Zeitung* as a journal aimed specifically at guitarists, the large majority of whom were amateurs. Its pages reveal the popularity of the developing guitar with extra bass strings during the second half of the nineteenth century. In North America, from the 1880s, numerous guitar related journals sprang up in major cities under the umbrella of the *Banjo-Mandolin-Guitar* (BMG) movement. Noonan has identified the principals of these: *Allegro, American Music Journal, Gatcomb's Banjo & Guitar Gazette* (by 1892: *Gatcomb's Musical*

[12] Kevin Dawe & Andy Bennett (eds), *Guitar Cultures* (Oxford: Berg, 2001).

Gazette), *The Cadenza, The Crescendo, The Chicago Trio, The Enterprise* (renamed *Philadelphia Musical Enterprise* by 1897*), S. S. Stewart's Banjo & Guitar Journal, The F.O.G. Journal, The Musical Tempo, The Major, The Reveille, The Studio Journal, Serenader* and *The New York Musical Era*.[13] Noonan, aided by these journals, traces the use of the guitar in North America from the last quarter of the nineteenth century to the end of the first quarter of the twentieth. That is, from the Victorian middle-class salon to the beginnings of the *Blues of the Deep South*.[14] During this forty-year time period the instrument changed in its use as an accompaniment to romantic and sentimental singing and the execution of light classical pieces. With the introduction of steel strings it took on the role of a rhythm instrument in plectral string bands, and of a lead instrument when played with a slide in Hawaiian music. As the guitar became more affordable with cheaper factory-made instruments, readily available from the mail order companies Montgomery Ward and Sears Roebuck as well local music stores, poor African American sharecroppers in the Deep South adopted it. Dave Evans describes this area of the southern states as 'a vast region of lowlands and gentle hills stretching from Georgia westward to East Texas and up the Mississippi River to approximately where it joins the Ohio River'.[15] Immigrants from Italy and Mexico, both whose culture feature the guitar, added a musical influence to the melting pot alongside the rural string band music that helped spawn the Blues. Indeed as the guitar took a dominant place alongside the fiddle in the ad hoc bands that were at the centre of poor African American sharecroppers' leisure time, it also found its voice as a solo instrument, often when played with a 'knife' [or slide], as well as the vehicle of the lone Blues singer. Many of the early Blues players of the twentieth century, display influences of the sentimental songs of the American parlour together with a Ragtime feel that was emerging in dance music. Their repertoire became a synthesis of regional musical

[13] Jeffrey Noonan, *The Guitar in America: Victorian Era to Jazz Age* (Jackson: University Press of Mississippi, 2008). Noonan includes the following titles as part of the BMG movement: *Allegro* (Dwight, IL: C. C. Adams, c. mid-1899 to early 1900), *American Music Journal* (Cleveland: National Qualified Teachers' League, 1905-1907), *Gatcomb's Banjo & Guitar Gazette* (Boston: Lincoln B. Gatcomb, 1887-1899); by 1892: *Gatcomb's Musical Gazette*), *The Cadenza* ((Kansas City, MO, and New York: Clarence C. Partee, 1894-1924); and, from 1908 (Boston: Walter Jacobs, 1908-1924), *The Crescendo* (Boston: Crescendo Pub. Co., 1908-1933), *The Chicago Trio* (Chicago: John E. Henning, 1897-1898), *The Enterprise* (Philadelphia: Otto D. Albrecht, 1895-1901); renamed *Philadelphia Musical Enterprise* by 1897), *S. S. Stewart's Banjo & Guitar Journal* (Philadelphia: Samuel Swaim Stewart, 1882-1898, Charles Morris, 1898-1903), *The New York Musical Era* (New York: C. Edgar Dobson, 1890-1893), *The F.O.G. Journal* (Cleveland: 1899-1904), *The Musical Tempo* (Philadelphia), *The Major* (Saginaw, Michigan), *The Reveille* (San Francisco), *The Studio Journal* (Philadelphia), *Serenader* (Sioux City, Iowa).
[14] Dave Evans, 'The Guitar in Blues Music of the Deep South', in *Guitar Cultures* (Oxford: Berg, 2001).
[15] Evans, 'The Guitar in Blues Music of the Deep South', in *Guitar Cultures*, p. 12.

forms originating in West and Central Africa and then synthesized with these seemingly disparate playing styles. With this change in use, the social values represented by those playing the guitar became divided. On the one hand, in the middle-class parlour a tradition of gentility (both in repertoire as well as association) was encouraged, while on the other, when used as part of a plectral string band, or in rural folk ensembles, the instrument became more representative of a society whose social values were moving away from the parochial.

Aimed at the social grouping of the musical elite and aspiring middle class, the BMG movement strove to promote the banjo, mandolin and guitar on to the same level as orchestral string instruments, suitable as vehicles to express good musical taste. Sheet music printed in the journals illuminates a repertoire that included jigs, waltzes, polkas and European operatic themes. Songs about black plantation workers were sentimental and in the tradition of blackface minstrelsy, and the folk music and the musical cross-fertilisation between migrant communities that would lead to folk, country and blues, is not addressed in their journals. As a primary source material, exploring the information contained in the BMG music press - editorials, letters and levels of advertising - provides a window into the signification and use of the guitar in that section of society. As an introduction to this era of guitar performance, Noonan suggests that in the eighteenth century the Spanish guitar (which symbolically represented a Southern European sensuality) remained on the periphery of American musical taste, which took its musical direction from Great Britain and Germany.[16] In the nineteenth century, now more firmly established in America, the six-single-string guitar (from wherever in Europe or America it came) became known as the Spanish guitar, in contra distinction to the English guittar. The English guittar, although too a plucked chordophone, is a very different instrument to the Spanish, Italian, German or French guitar, whether they be six-single-string, or double-course as in their baroque predecessors. The wire-strung English guittar, resembling visually the earlier cittern but with different tunings and repertoire, was popular with amateur players of the English and American upper classes. It shares no method of instruction or performance with the gut-strung guitar. Early concert notes for American inaugural federal events reference Henri Capron, as a multi-instrumentalist in the eighteenth century, offering lessons on the guitar. Known

[16] Noonan, *The Guitar in America*, pp. 8-9.

as a cellist, Capron also played both the Spanish and English guittar.[17]

Outside of the concert hall too, and in parallel to gentile society, the cultural multi-diversity of immigrant populations settling in America must have been a rich source of folk music that had travelled with them from all over Europe, passed on in oral traditions.

Information regarding a pedagogical approach to guitar instruction in the European manner later becomes defined with Ballard's *Elements Of Guitar Playing* (1838).[18] Gura considers that Ballard's is the first 'substantial' guitar method published in America. Gura notes the earlier method, *New Instructions for the Spanish Guitar…. By a Professor* (anonymous), published in Philadelphia (c1816), in which the instrument is praised for its suitability for vocal accompaniment in the parlour, and as an ensemble instrument at 'country dances'.[19] The anonymous professor notes that the guitar is not yet as fashionable in North America as it is abroad, 'particularly amongst ladies', whom he considers, in terms of the instrument's gracefulness, ideally suited to playing it. By 1829 Otto Torp had his first version of his tutor, *New and Improved Method for the Spanish Guitar,* published in which he stated that the guitar had become regarded as, 'an accompaniment to the voice… and … a means of enhancing its perfection and concealing its defects'.[20] Ballard's method, *Elements of Guitar Playing*, with its instructions, examples and chord charts, was fashioned after the nineteenth-century tutors of European player composers such as Sor, Carulli and Giuliani. Indeed, Ballard quotes directly from Sor's method and acknowledges his debt to him. Significantly, Ballard's tutor is wholly written for an American reception and although written in a European style, is not a direct translation. Peter Danner illustrates this by pointing out that the pieces contained in the method were representative of American musical taste at the time.[21] Gura positions this work as being a 'benchmark of guitar culture at the same

[17] See Poulopoulus, Pangiotis. 'The Guittar in the British Isles, 1750-1810'. Edinburgh, 2011.
[18] Gura, *C.F. Martin and His Guitars, 1796-1873*, pp. 24-34.
[19] Gura, *C.F. Martin and His Guitars,* p. 24. Gura gives George Willig as the publisher of *New Instructions for the Spanish Guitar*. The music historian and bibliographer Richard Wolfe dated the copy in the possession of the American Antiquarian Society.
[20] Otto Torp, *New and Improved Method for the Spanish Guitar* (New York: Torp & Unger, 1834).; Otto Torp, *Instruction Book for the Spanish Guitar, Selected from the Works of F. Carulli, F. Molini & M. Giuliani, Professors to the Conservatory of Paris* (New York: E. Riley, 1829).
[21] Peter Danner, 'The Guitar in Nineteenth Century America: A Lost Social Tradition', *Soundboard* 7, no. 1 (1985), pp. 292-298.

time that the guitar maker C. F. Martin (Staufer's pupil) moved from New York to Nazareth, Pennsylvania'.[22]

Noonan suggests that Matteo Carcassi's was the European method (1836) that dominated the American market during the second half of the nineteenth century, and that the next American method of the same substance as Ballard's was Justin Holland's *Comprehensive Method for the Guitar* (1874).[23] Gura mentions three other American methods of note published in the period between that of Ballard and Holland. The first and second, by Howe and Culver respectively, offer a limited or scaled-down form of instruction. The third, by Converse, is aimed at the amateur who is self-taught.[24] To a large extent all musical instrument methods are aimed at a market of self-tuition. Gura points out that Converse, quoting from his preface, claims to have written in, 'catechetical form, not so much to aid the teacher, as to impress those who pursue a course of self-instruction with that which they most need to know'. In his tutor, rather than providing instruction aimed at those who wished to develop their playing skills to perform solo instrumental work, Converse provides study for use of the instrument as a vocal accompaniment. Not only did this increase the market potential of the method, but as Gura suggests, it was also a form of democratisation for the instrument, which by the time of the American Civil War, was witnessed in its acceptance and employment across all strata of society.

In discussing the popularity of the guitar with amateur American middle-class players Peter Danner states:

> 'The place of the guitar in nineteenth-century American life was not among the itinerant workers or rural poor; nor was it an instrument of upper-class society. Rather the guitar was to be found within the middle class, particularly among those who could not afford a piano (the true symbol of Victorian propriety), or who were just beyond the pioneer

[22] Gura, *C.F. Martin and His Guitars, 1796-1873*, p. 26.
[23] Noonan, *The Guitar in America: Victorian Era to Jazz Age*, pp. 13-14. Several American publishers published Carcassi's method in a variety of editions. Many American tutors of this period include aspects of Carcassi's method.
[24] Gura, *C.F. Martin and His Guitars, 1796-1873*, p. 29. Gura cites: Elias Howe, *Howe's Instructor for the Guitar* (Boston:: E. Howe, 1846). ; Richard Culver, *Guitar Instructor: An Easy Method Containing the Elementary Principals of Music with Examples & Lessons Requisite to Facilitate Progress of the Pupil* (Boston:: Oliver Ditson, 1846); Charles C. Converse, *New Method for the Guitar, Containing Elementary Instructions in Music, Designed for Those Who Study without a Master* (New York: William Hall & Son, 1855).

> stage and not yet settled enough to make one practical'.[25]

Danner adds that not only was it women, at least as much as men, from the lower middle-classes aspiring to better things, who played the guitar in the parlour setting, but that young freed African American women also used the guitar in social situations at home. Noonan argues that while the guitar was taught and played by ear, and that many tutors offered simplified instruction through the use of tablature, standard musical notation appears to have been the principal means of transmitting repertoire and instruction, suggesting that it could not be classed as a 'folk' instrument. He further points out that it is only after the distribution of printed music that the guitar joined the 'oral' chain of pedagogy and became part of rural dance ensembles at the end of the nineteenth century and beginning of the twentieth.[26]

In examining the repertoire favoured by North American society (both in the concert hall and parlour) Nicholas Tawa highlights a division in the nineteenth century between those who preferred the Scottish and English folk melodies that had been popular at the end of the previous century, and a new fashion for Italian and German opera. Critics of the fashionable socialites who attended opera, and entertained at home with elaborate arias, suggested that this was an affectation and that such fashionable people had no musical opinions of their own.[27] To illustrate this he quotes Josh Billings comment on 'musically modish people':

> 'Let some Prime Donner, or Mezzer Soapraner, or Barrytown Base, or some sich Latin individual, come into this village, and histe their flag, and have a programmy ov singing as long as a search warrant, and as hard to spell out as a chinese proklamashun ritten upside down, and taxed seventy-five cents for a preserved seat, and moste evrybody will go tu hear it, bekause moste evrybody else dus, and will say, evry now and then (out loud) "how betwitching! how delishus! how egstatick!", and nineteen out ov evry twenty-one ov them wouldn't kno it if the performance was a burlesk on their grandmother'.[28]

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[25] Peter Danner, *The Guitar in America. A Historical Collection of Classical Guitar Music in Facsimile* ed. Peter Danner, Soundboard (Melville, New York: Belwin Mills, 1978).
[26] Noonan, *The Guitar in America*, p. 14.
[27] Nicholas E. Tawa, *High-Minded and Low-Down: Music in the Lives of Americans, 1800-1861* (Boston: North-eastern University Press, 2000).
[28] Tawa, *High-Minded and Low-Down: Music in the Lives of Americans, 1800-1861*, p. 39. Tawa cites, H. W. Shaw, *Josh Billings: His Sayings* (New York: Carleton, 1866).

Proper dress codes were strictly adhered to when attending the opera with the aim of presenting wealth and status through the exhibition of fashion. This was considered frivolous with those whose religious precepts were previously considered the bedrock of society, and also with serious lovers of music performance who viewed their attendance as a desire to be noticed, with the music as secondary. According to Tawa, there was a desire amongst the burgeoning middle-classes of North America to be seen as cultured and educated in European tastes for music, while at the same time wanting to establish their American identity through the simple yet charming songs by the likes of Stephen Foster or George Root. Stephen Foster (1826-1854) wrote some two hundred and eighty-seven authenticated works that included pieces for piano, arrangements for guitar, accompaniments of both for vocal, hymns, duets and quartets. The majority of these were sentimental songs aimed at women making music in the parlour. Only twenty-three of his songs have a 'southern' theme that embrace the image of the black negro slave so popular in musical hall minstrelsy of the period. However these *Ethiopian* songs provided Foster with ninety percent of his income. Foster himself preferred performance of his minstrel songs to show the dignity and pathos of the African American slave rather than the comic caricature so often featured in black-faced minstrelsy concerts. Many tunes he wrote, such as, *Camp town Races* entered the oral tradition and became popular instrumental pieces. Two months after he died *Harper's New Monthly Magazine* claimed that his melodies were the national music of North America.[29] Foster's work was enormously popular and influential on American musical taste both inside and outside the parlour. George Root (1820-1895) only started a formal musical education aged eighteen. However after two years he was engaged as a teaching assistant to the successful vocal coach Lowell Mason. He went on to teach Mason's methods in several New York institutions and directed the Mercer Street Church choir. After studying in Paris between 1850 and 1851 he returned to New York where, in 1853 together with Mason, he formed the first Normal Musical Institute for training teachers. His, *The Flower Queen* (1852) is possibly the first American secular cantata and his success in this field continued, with *The Haymakers* (1857) being the most successful. He started publishing parlour songs from 1850 and wrote more than two hundred. Two days after the outbreak of the American Civil War, Root wrote *The first gun is fired! May God protect the right!* (15 April 1861). He also wrote the war

[29] Deane L. Root, 'Foster, Stephen, C.', in *Grove Music Online* (http://www.oxfordmusiconline.com). [Accessed July 27, 2010].

songs, *Tramp! Tramp! Tramp!* and *The Battle-Cry of Freedom.* Root saw himself as a teacher of music.[30] Nonetheless his compositions were as popular as Foster's with the American middle classes of the period

As Tawa points out, middle-class men were expected to work hard in trade and industry, and it was the women from this class background that could afford to pursue a genteel education and be more likely to embrace the arts. This would include the playing of a musical instrument, used for evening entertainment in the home; the repertoire being a mixture of the sentiments of the likes of Foster and Root combined with popular themes drawn from operatic pieces and light classical works. It was common practice for neighbouring visitors, and those travelling further afield, to take with them to social gatherings, sheet music or portable instruments like the violin or guitar. In this way they would evade loneliness and share in a communal activity.[31]

Other writers besides Danner and Tawa, addressing sociological aspects in the promotion of American music making include; Eileen Southern (1997),[32] William Mahar (1999),[33] Dale Cockerell (1998) & (1997),[34] Karen Linn (1994),[35] Eric Lott (1995),[36] who discuss the relationship of the banjo, and its cultural origins, to the American middle-classes and Richard Ohmann (1987),[37] Katherine Grier (1998),[38] and Ellen Gruber Garvey (1996)[39] who explore themes of popular music making in the parlour.

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[30] Polly Carder Dena J. Epstein, 'Root, George Frederick', in *Grove Music Online* (http://www.oxfordmusiconline.com). [Accessed July 27, 2010].
[31] Tawa, *High-Minded and Low-Down: Music in the Lives of Americans, 1800-1861*.
[32] Eileen Southern, *The Music of Black Americans* (New York: Norton, 1997). See Joseph Wilson, *Sketches of the Higher Class of Colored Society in Philadelphia* (1841).
[33] William J. Mahar, *William J. Mahar, Behind the Burnt Cork Mask: Early Blackface Minstrelsy and Antebellum American Popular Culture* (Urbana: University of Illinois Press, 1999).
[34] 'Nineteenth-century popular music' Dale Cockerell, in The Cambridge History of American Music, ed. David Nicholls (Cambridge: Cambridge University Press, 1998); , "Nineteenth-Century Popular Music," in *The Cambridge History of American Music*, ed. David Nicholls (Cambridge: Cambridge University Press, 1998). ; Dale Cockerell, "Nineteenth-Century Popular Music."; Dale Cockerell, *Demons of Disorder: The Early Blackface Minstrels and Their World* (Cambridge: Cambridge University Press, 1997).
[35] Karen Linn, *That Half-Barbaric Twang : The Banjo in American Popular Culture* (Urbana: University of Illinois Press, 1991).
[36] Eric Lott, *Love and Theft : Blackface Minstrelsy and the American Working Class* (New York; Oxford: Oxford University Press, 1993).
[37] Richard Ohmann, *Politics of Letters*, 1st ed. ed. (Middletown, CT: Wesleyan University Press, 1987).
[38] Katherine C. Grier, *Culture & Comfort : Parlor Making and Middle-Class Identity, 1850-1930*, [New ed.] ed. (Washington, DC ; London: Smithsonian Institution Press, 1997).
[39] Ellen Gruber Garvey, *The Adman in the Parlour: Magazines and the Gendering of Consumer Culture, 1880s to 1910s* (New York & Oxford: Oxford University Press, 1996).

Justin Holland (1819-1887) was born in Virginia as a free African American. He was highly regarded as an influential guitar pedagogue, teaching in Cleveland from where he was based, and publishing hundreds of arrangements for solo guitar, duo guitar, and guitar and voice, as well two popular methods. Danner describes these, *Comprehensive Method for the Guitar* (1874), and *Modern Method for the Guitar* (1876), as 'works by a black man who had completely assimilated the tastes of a white middle-class audience'. He considers the tutor to be based on that of Carcassi, while noting the foreword, in which Holland states, 'the common-place and trivial compositions of the day have been entirely ignored, as being unsuitable for the promotion of either skill or taste'. In conclusion a list of wholly European musical works, including those by Carcassi, Giuliani, de Fossa and Mertz, are suggested as suitable repertoire.[40] Noonan cites Holland's inclusion in James Trotter's contemporaneous compendium of African American musicians, *Music and Some Highly Musical People*, to illustrate his regard from outside the guitar community.[41] He considers Holland's loyalty to the techniques of European guitar masters as indicative of the conservative approach prevalent at the time in the BMG community.[42] Gura also examines Holland's relationship with the guitar maker C. F. Martin, which started with the purchase a guitar in 1861 and continued with orders for instruments, after Martin's death, from his son.[43] In 1884 he reported to Frederick Martin that every member of the Cleveland Guitar Club that he had formed, played a Martin guitar.[44]

In the early 1880s the guitar found a new setting in the BMG movement, though the early periodicals published its entrepreneurs promote the status of the banjo above the guitar: the guitar is presented as less refined than the banjo, whose power was considered more suitable to articulate melodic lines.

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[40] Danner, *The Guitar in America. A Historical Collection of Classical Guitar Music in Facsimile*; Danner, 'The Guitar in Nineteenth Century America: A Lost Social Tradition', p. 295.
[41] James F. Trotter, *Music and Some Highly Musical People…. [with] Sketches of the Lives of Remarkable Musicians of the Colored Race. With Portraits and an Appendix Containing Copies of Music Composed by Colored Men* (Boston & New York: Lee & Shephard, C. T. Dillingham, 1885).
[42] Noonan, *The Guitar in America: Victorian Era to Jazz Age*, p. 62.
[43] Gura, *C.F. Martin and His Guitars, 1796-1873*, p. 26. Gura refers to an order in Martin's daybook on 25 November 1861 for a 2 ½ - 24.
[44] Washburn and Johnston, *Martin Guitars: An Illustrated Celebration of America's Premier Guitarmaker*, p. 75.

The banjo came to prominence in the public arena of mid-nineteenth-century America through its use in the popular minstrel shows of the day. Gura and Jim Bollman, together, have published an in-depth work on the role, history and manufacture of the banjo in America.[45] Evidence found in early BMG periodicals, shows that at first editors influenced readers in a campaign to promote the use of the banjo, over the guitar. This was done in a variety of ways. Namely: claiming that guitar instruction was overly complicated; that the banjo had developed to its sophisticated apogee at the hands of white workers' manufacturing skills, thereby re-writing its historical background in denying its migration to America with the black slave trade; denigrating the guitar's use by poor African Americans; claiming that the guitar conjured up an image of foreign 'Latin' sensuality and was not suitable for American polite society; and that the position of holding the instrument between the legs was not appropriate for female sensibilities. It was however conceded that the guitar was useful for vocal accompaniment, with the reservation that it would never have the banjo's potential as a leading and solo virtuoso instrument. The motivation was often political for presenting the guitar this way. *S. S. Stewart's Banjo and Guitar Journal* (1882-1903) was the first to be published and dominated the BMG publishing world during this period. For Stewart it was a means to self-promotion, wherein he advertised his own line of banjos, banjo music and accessories, while fostering opinion in order to improve his own business interests. Never the less, as the 1880s progressed into the 1890s, it seems that the popularity of the guitar in North America as a parlour instrument, remained undiminished. Later publications such as *The Cadenza* (1894-1924) and *The Chicago Trio* (1897-1898) give more space to the guitar, and in light of its continuing popularity, even Stewart starts to give over more column inches to guitar-related topics.

The guitar found an accompanying role as an ensemble instrument in the developing banjo and mandolin clubs. In the mandolin orchestra (which grew in size to fill the role of the different voices of a 'Western Art Music' string section: Alto, Tenor and Bass), the guitar's three-octave range could serve as a harmonic base while at the same time provide a rhythmic accompaniment.[46]

[45] Philip F Gura and James F Bollman, *America's Instrument: The Banjo in the Nineteenth-Century* (Chapel Hill: The University of North Carolina Press, 1999).
[46] This role was sometimes provided by the harp and more often, harp guitar.

Scott Hambly pinpoints the rise of the mandolin orchestra to,[47] when in1880 the Figaro Spanish Students arrived in New York (from Madrid) concertizing there and then subsequently touring major North American cities to great acclaim. Their ensemble featured the bandurria, which, while differing from the Neapolitan mandolin in shape and tuning, was comparable in size and with its double courses of wire strings. Within its own regional musical form, its instrumental role was as a lead in ensemble playing. The success of the Figaros inspired the formation of the second ensemble of Spanish Students, this time formed in New York by Carlos Curti, using local Italian immigrant talent. These Italian musicians, formerly violinists, were now using an instrument that was not only culturally familiar, but also had the same tuning, albeit played with a plectrum and not bowed. Even though the second Spanish Students disbanded in 1885 their influence on public musical taste and amateur players was such that mandolin clubs emerged as a popular part of American social life.[48]

Paul Ruppa presents *The Boston Ideals* as the first Banjo Mandolin and Guitar group to have a uniquely American identity, pointing out that the previous ensembles played on their European ancestry. *The Ideal Banjo Quartette* was formed in 1883 but expanded its line-up to include guitars and mandolins, thus becoming known in 1887 as *The Boston Ideal Banjo Mandolin and Guitar Club.* Albert D. Grover, a founding member, gave two banjos, one banjeaurine[49] and two guitars as one group combination; another as: first and second mandolin, octave mandola and two guitars - banjos and mandolins were not used together in *The Ideals.*[50] Ruppa believes that the success *The Ideals* achieved throughout their career was in part due to the compositional talent of George L. Lansing, their other founding member. Lansing wrote *Darkey's Dream* (1891), an instantaneous hit whose title appealed to the sentimental notions associated with 'southern' themes.[51]

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[47] Scott Hambly, 'Mandolins in the United States since 1880: An Industrial and Sociocultural History of Form ' (University of Pennsylvania, 1997), p. 8.
[48] Hambly, 'Mandolins in the United States since 1880: An Industrial and Sociocultural History of Form', pp. 100-103. Hambly points to the inclusion of the mandolin in the University Orchestra at Pennsylvania and the Glee Club in 1887.
[49] The *banjeaurine* is essentially a soprano banjo, invented by S. S. Stewart.
[50] Paul Ruppa, 'The Mandolin in America after 1880 and the History of Mandolin Orchestras in Milwaulkee, Wisconsin' (The University of Wisconsin-Milwaulkee, 1988). p. 29.
[51] Ruppa, 'The Mandolin in America after 1880 and the History of Mandolin Orchestras in Milwaulkee, Wisconsin', p. 30.

The role of the guitar in these BMG ensembles can be identified in the music published in the periodicals. One version of *Darkey's Dream* in *Cadenza* (later in 1912) shows the guitar part as that essentially of rhythm, playing alternate bass notes and chords. However, other transcriptions for the guitar that appear in *S. S. Stewart's Banjo and Guitar Journal* of April-May 1889, are written as if for a solo instrument. In these topical periodicals, the guitar is referred to as one of the three Plectral instruments, along with the mandolin and banjo. The method of striking the strings with a plectrum when playing is indicative of style. While it is usual for the mandolin to be played with a plectrum, both the banjo and guitar are equally played in finger style. Stroke banjo playing, as evident in minstrelsy, was practised with the use of a plectrum, as was rhythmic guitar accompaniment. The use of the thumb-index-middle fingers when plucking strings, as employed by early nineteenth-century European virtuosi, such as Giuliani, was already well established with the guitar. The subsequent adoption of this right-hand technique to the banjo led to the development of the 'banjo-roll' finger style associated with Bluegrass playing. The multiple functions in use of the guitar are highlighted at this time: as accompaniment to the voice, as rhythm within a group of instruments, as a harmonic solo instrument.

J. E. Henning and F. O. Gutman were editors whose journals feature a higher proportion of guitar related information. Henning, a multi-instrumentalist, performer and teacher, was originally an endorser and distributer of Stewart's instruments, who, together with his wife, the guitarist Meta Bischoff-Henning, regularly appeared in Stewart's journal throughout the second half of the eighties. In 1890 he started to market his own line of instruments and sheet music, following shortly after with the publication, *The Elite Banjoist* (1890-1891) and then later, *The Chicago trio* (1897-1898). By the time of his second publication, Henning was marketing a line of his own guitars and mandolins, as well as banjos, but emphasising less on the banjo allowed more copy to be devoted to the guitar. Noonan wryly suggests that his marriage to Meta Bischoff-Henning, who was highly regarded as a virtuoso guitarist by concertgoers, may have been an influence on that decision.[52] Gutman was primarily a mandolin player and as such, was involved in its pedagogy: directing BMG ensembles, that included several all-women groups; and publishing the *FOG Journal* (1899-1904) as a means to promote his interests. The

[52] Noonan, *The Guitar in America: Victorian Era to Jazz Age*, p. 32.

journal features the mandolin and guitar to a greater extent than previously banjo biased BMG publications.[53]

Noonan suggests that the successful longevity of *Cadenza* (1894-1924) [originally created by Clarence Partee] lay in its promotion of sheet music, rather than being limited to a marketing vehicle for a particular line of instruments. According to Noonan *Cadenza*, as a periodical, 'quickly became as significant a presence as *Stewart's*'[54] (which by the end of the nineteenth century was being published at almost fifty pages in length). In 1900 Partee relocated from Kansas City to New York placing his operation at the heart of the BMG movement, which was centred was centred on Philadelphia, Boston and New York. This resulted in *Cadenza* becoming more cosmopolitan and culturally modish, with columns featuring the violin and piano, aimed at an eastern audience and New York's concertgoers.[55] In 1907 *Cadenza* was sold to Walter Jacobs, a composer, teacher, publisher and guitarist, who then relocated the magazine to Boston in 1908. At the same time, Herbert Forrest Odell launched *Crescendo* (1908-1934) in direct competition, claiming the moniker of "Official Organ of the American Guild of Banjoists, Mandolinists and Guitarists" from the Jacob's run era of *Cadenza*, which had previously acquired the endorsement under Partee's leadership. Noonan considers that *Crescendo* appeared even in its early issues as a fully matured publication, offering its readership a wide ranging approach to the BMG industry through articles, musical pieces for mandolin and guitar, probing editorials and advertising from influential firms such as the Gibson Mandolin-Guitar company and Oliver Ditson Publishing.[56]

Beside the content of the guitar-related matters in the BMG journals, the status of the instrument lies with the popularity of its most celebrated exponents in America during this period. Gura highlights the relationship in May 1837 between the guitarmaker, C. F. Martin, and the professional guitarist and teacher John Coupa, citing a reference from Martin's ledgers of Coupa being sold a guitar. Coupa brought in a lot of custom for

[53] Noonan, *The Guitar in America: Victorian Era to Jazz Age*, p. 34.
[54] Noonan, *The Guitar in America: Victorian Era to Jazz Age*, p. 32.
[55] Noonan, *The Guitar in America: Victorian Era to Jazz Age*, pp. 32-33.
[56] Noonan, *The Guitar in America: Victorian Era to Jazz Age*, pp. 37-39. Noonan further suggests that its *Crescendo's* continued success owed much to the musicianship and business acumen of its founder, Odell, whom he characterises as, 'the ideal American BMG figure, with musical training in the United States and abroad as well as significant experience in the music business as a performer, director, arranger and publisher'.

Martin, and when he left New York to relocate to Pennsylvania he took on Coupa as his New York agent.[57] After Coupa's death in 1850, Charles de Janon was appointed as agent.[58] Gura mentions William Schubert and Edward Pique, both guitarists and teachers from Philadelphia, who endorsed Martin's instruments.[59] He goes on to give Lewin G. Hartze, Francis Funck, D. Drucke, Anson Tucker, H. Worrall, S. de la Cova and Ossian Dodge as all teachers and performers doing business with Martin in the fifties.[60] According to Noonan four guitarists were the regular subject of late-century BMG periodicals, the oldest being Justin Holland (1819-1897), an African-American, and endorser of Martin guitars, who had previously taken lessons from William Schubert. The others were: Luis T. Romero (1854-1893), a Spaniard who came to California while still a teenager, Manuel Y. Ferrer (1828-1904), an American born to Spanish parents, and Charles de Janon (1834-1911), a Colombian who came to New York in 1840. Noonan points to the ironic fact that although the BMG movement claimed them as exponents of the "American" guitar, they 'stood outside the racial boundaries promoted by the BMG community'. In the *Cadenza 20/7* (January 1914) the American Guild of Banjoists, Mandolinists and Guitarists created their *Standards of Attainment*, listing a repertoire for professional guitarists that included pieces by de Janon, Ferrer and Romero alongside those of Mertz and Legnani.[61]

Noonan suggests that guitar culture in American society,[62] influenced by the opinion of leading figures in the BMG community, was linked to a sensuality associated with a Latin temperament and that women also shared this inborn sensibility.[63] Having previously claimed that the guitar was 'decidedly vulgar' as a ladies' instrument in comparison to the banjo, Stewart started to promote the careers of two women guitarists through his journal. The first, Meta Bischoff (b. 1867), daughter of immigrant guitarist Wilhelm Bischoff, later married to John Henning; the second Dominga I. Lynch who appears to have been teaching the guitar in Philadelphia in the mid-nineties. Stewart's apparent turn of face was above all else concomitant with his attitude to promotion of

[57] Gura, *C.F. Martin and His Guitars, 1796-1873,* p. 67.
[58] Noonan, *The Guitar in America: Victorian Era to Jazz Age*, pp. 64.
[59] Gura, *C.F. Martin and His Guitars, 1796-1873*, pp. 80-82.
[60] Gura, *C.F. Martin and His Guitars, 1796-1873, p*p. 86-94.
[61] Noonan, *The Guitar in America: Victorian Era to Jazz Age*, pp. 61-64.
[62] *Guitar Culture* is a phrase used in this thesis that owes its origins to Kevin Dawe & Andy Bennett. See Kevin Dawe & Andy Bennett (eds), *Guitar Cultures* (Oxford: Berg, 2001).
[63] Noonan, *The Guitar in America: Victorian Era to Jazz Age*, p. 64.

his own business dealings. Noonan also points to the inherent sexism regarding the role of female guitar pedagogues: where, when as part of a husband and wife teaching and performing partnership, the wife, even though she may have superior technical skills as a player, as in the case of the Hennings, was expected to take a supporting role. He continues by stating that in the case of Lynch, who wrote articulate articles on technique for Stewart's journal, once a male contributor took up the thrust of her teachings and published, her work no longer appeared.[64] However two female guitarists, Elsie Tooker and Jennie Durkee, did break through these confines to achieve some success in the last decade of the nineteenth century and early years of the next.[65]

Noonan gives bibliographic accounts of leading guitarists and guitar teachers active within the BMG movement that include: Alfred Chenet (b.1854), Walter Francis Vreeland (1868-1927), C. F. E. Fiset (1874-1966), Cornelius David Schettler (1874-1931), Carl W. F. Jansen (b. 1868), Johnson Bane (b. 1861), Winslow L. Hayden (d. 1886), William J. Kitchener (b. 1861), P. W. Newton (b. 1868) and A. J. Weidt. According to Noonan, 'hundreds of other guitarists figured in America's BMG movement'.[66] While all the aforementioned guitarists were recognised on either a local or national level, none achieved the fame and notoriety of William Foden (1860-1947) or Ethel Lucretia Olcott (1885-1980). Noonan devotes a whole chapter to the two guitarists under the title, *The Wizard and The Grand Lady*,[67] in which he surveys BMG literature depicting the public persona and musical personalities of both players. , Foden (some forty years Olcott's senior) was known for his masterful technique and somewhat scientific approach to the music that could be achieved with the guitar. Olcott was presented as a young prodigy who rapidly gained the affection of both the BMG community and her public audience. Of interest to the organologist is Foden's design and subsequent commission of a six-string bass guitar, which was tuned a sixth below standard guitar tuning.[68] According to Noonan, Foden conformed to the usual BMG business model; opening a shop in the retail trade to help promote his profile.

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[64] Noonan, *The Guitar in America: Victorian Era to Jazz Age*, p. 66.
[65] Noonan, *The Guitar in America: Victorian Era to Jazz Age*, pp. 66-68. Noonan also singles out Gertrude Miller as being active in the first decade of the twentieth century, her family significantly having a connection to the guitar virtuoso Johann Kaspar Mertz's widow, Josephine.
[66] Noonan, *The Guitar in America: Victorian Era to Jazz Age*, pp. 69-76.
[67] Noonan, *The Guitar in America: Victorian Era to Jazz Age*, pp. 138-154.
[68] Noonan, *The Guitar in America: Victorian Era to Jazz Age*, p. 139. Noonan notes that, although Foden describes this as early on his career, no specific dates are given. Foden is, on the other hand, in evidence in BMG journals of the mid-eighties.

This he gave up in the late eighties and whilst he was known as a teacher, composer and publisher, it was, states Noonan, his performance skills that awed his audience. In particular, Foden was known for his right-hand tremolo playing.[69] Longworth, in his history of Martin guitars, states that Foden endorsed these instruments from 1900 to 1920, ordering this make for his pupils. The Martin records show that by 1912 a 'Foden-Special' guitar was produced. At Foden's request, this model featured twenty, as opposed to nineteen, frets, with position markers in the edge of the fingerboard. The increase in frets was subsequently adopted across most of the Martin range of guitars. According to Longworth, Foden had previously for a short time in the 1890s, used Washburn instruments.[70] Noonan's survey of Olcott's career notes her studies as a teenager with Manuel Y. Ferrer. He states that she met Myron Bickford (1876-1961), whom she later married, at an American Guild of Banjoists, Mandolinists and Guitarists in 1906. At the time Bickford already had a wife and family. In these early years she performed solo recitals or featured as a soloist within an ensemble setting, playing pieces by Sor, Tárrega, Mertz, Ferranti and Legnani, as well as the Americans, Foden, Romero and Ferrer. Noonan cites performance notes, reviews and BMG editorials to show that at this young age Olcott was recognised as a formidable guitar talent. It was not until 1914 that Olcott and Bickford toured professionally as a duo, and not until 1915 that they wed. The Bickfords were both involved in astrology and took on names that identified themselves within this social group. Ethel became, Vahdah Olcott-Bickford; Myron became, Zarh Myron Bickford. Noonan states that the Olcott-Bickfords considered themselves proponents of an attitude of progressive modernism relating to American guitar culture. Vahdah's own method, published in 1921, reflects her respect for the nineteenth-century European masters, Carulli, Sor, Carcassi and Giuliani, whilst claiming the need for a modern form of tutor. As Noonan points out, the exact content of these modern and progressive methods, techniques and repertoire are not articulated. Olcott-Bickford was outspoken, however, about her abhorrence of showy technique in place of good musical taste. According to Noonan, Olcott-Bickford, save for including some of his compositions when performing in her youth, had no rapport with Foden, 'pointedly overlooking' him, even though they were

[69] Noonan, *The Guitar in America: Victorian Era to Jazz Age*, pp. 138-143.
[70] Johnston, Boak, and Longworth, *Martin Guitars: A History*. p. 50; Richard Johnston, Dick Boak, and Mike Longworth, *Martin Guitars: A Technical Reference*, 1st ed ed. (New York: Hal Leonard Books, 2009), p. 241.

considered the two most important American guitarists of their time. He concludes that this was Olcott-Bickford's reflection on Foden's technical wizardry. In the 1920s Olcott-Bickford could be seen to be attempting to expand the guitar's repertoire from that of its parlour setting by playing with string quartets and in duets with the piano, performing from a canon of nineteenth-century chamber pieces. Noonan considers that in so doing, this gave American guitarists the impetus to re-examine the guitar's European roots, even if this meant a split from its involvement with banjo and mandolin groups, so involving the guitar in a worldwide community whose musical status was aligned with that of serious European chamber music.[71] This definition of the role of the guitar in music making can be seen as a paradox that existed between Old World and New World culture. Noonan notes that in 1920 the Bickfords recorded some duets, released on their own label in 1921/2, and that these are some of the only surviving commercial recordings from an American guitarist of the period. In 1924 Olcott-Bickford formed the American Guitar Society. In the late twenties she took up presenting lecture-recitals based around historical guitarist-composers. In her own interpretation of guitar history, and having taken up playing the lute, she proposed that the guitar evolved naturally from that instrument. This was the view held by most guitar apologists of the time,[72] though it is not the accepted view of most musical instrument historians today.

Olcott-Bickford also endorsed Martin guitars. According to her profile in *Martin Guitars: A History* [in which Mike Longworth, Richard Johnston and Dick Boak chronicle the past and present history of the Martin family and their musical instrument making company],[73] Ethel Lucretia Olcott (later to become Vahdah Olcott-Bickford] had a relationship with the company that lasted for almost forty years. In the photograph depicting the Olcott Guitar Quartet of Los Angeles in 1903[74] she appears with a guitar sporting fingerboard inlays concomitant with a Martin style 42 instrument c1899, and with an ivory pyramid bridge and a brass or nickel plate on the front side of the head stock (features of Martin guitars of this period). The three other women [in the

[71] Noonan, *The Guitar in America: Victorian Era to Jazz Age*, pp. 148-149.
[72] Noonan, *The Guitar in America: Victorian Era to Jazz Age*, pp. 150-151.
[73] Johnston, Boak, and Longworth, *Martin Guitars: A History*; Johnston, Boak, and Longworth, *Martin Guitars: A Technical Reference*.
[74] *The Olcott Guitar Quartet of Los Angeles in 1903*, The International Guitar Research Archives (California State University at Northbridge). Photo reproduced in ton, Boak, and Longworth, *Martin Guitars: A History*, p. 50.

photo] also appear to be holding Martin guitars; the one furthest right is adorned with more pearl and fingerboard inlays suggesting a style 45 guitar, the fanciest of the range. Although not officially introduced until 1904, this guitar could be a special order or pre-production model.[75] Olcott-Bickford's championing of Martin guitars led to a style 44 'Soloist' model, in sizes ranging from 2 to 000, being manufactured, between 1913 and 1938, for her and her pupils. Following Olcott-Bickford's suggestions, the instruments were similar to style 42 and 45 instruments, but plainer, without the pearl inlays.[76]

The evolution of the steel-string guitar in North America cannot be pinned down to a single event or date. Rather, it happened gradually over a period of some twenty to thirty years in response to changes in performance practice that created a need for louder instruments.[77]

Noonan examines opinion expressed in editorials and articles appearing in the BMG periodicals of the last two decades of the nineteenth century. Here the introduction of steel strings not only created discord over correct playing technique, but also provoked controversial debate regarding race and class values. Editors themselves, on the other hand, often avoided taking sides in the gut versus steel argument, for the reason that their business interests lay in the merchandising of the strings themselves, not their material component. However, a letter from *Stewart's* journal of April-May 1897 exemplifies the xenophobic attitude prevalent in much of the BMG community at the time,

> 'The publishers [of a recent simplified method] are making a strong appeal to favor, and I have no doubt, will do considerable toward elevating the instrument on the downward journey, especially among that class of plunkers whose ideal *guitarist* is a negro armed with a steel-strung jangle-trap, tuned more or less Spanish, and which he manipulates with the second finger of his left hand, and a mandolin pick. I have three reasons for writing this: First, I am disgusted; Second, I love the guitar; Third, I despise *fakers*'.[78]

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[75] Johnston, Boak, and Longworth, *Martin Guitars: A History*, p. 50.
[76] Johnston, Boak, and Longworth, *Martin Guitars: A Technical Reference*, p. 79 & p. 227. Martin guitar sizes follow the engineering pattern of 2 being smaller with an increment upward of larger sizes by number to 000.
[77] Noonan, *The Guitar in America: Victorian Era to Jazz Age*, p. 52. 'Precise information about their introduction and early use on guitars in North America remains sketchy, but by the last two decades of the nineteenth century, steel strings appeared regularly on guitars in America'.
[78] Noonan, *The Guitar in America: Victorian Era to Jazz Age*, p. 52. Noonan is citing from *S. S. Stewart's Banjo and Guitar Journal*, 14/1 (April-May, 1897), p. 30.

The 'Spanish' tuning referred to above, is the practice of tuning the strings to a chord, in this case, D-G-d-g-b-d' from low to high. This allows a chord to be played without complicated fretting of the strings. The use of steel strings, together with this form of tuning, was seen by the leading agents of the BMG movement as an unwanted move away from the role the guitar played within an art music that had emanated from Europe, to an association with American popular music that was damaging to its cultural status. Noonan further proposes that this epitomised the widening gap between *highbrow* and *lowbrow* musical values, signalling the increased use of the guitar by the lower classes.[79] In 1892 Stewart conducted an experiment on the comparative tensions of the two different types of strings, specifically mentioning silk over wound strings (used for the basses), in which he concluded stringing with steel created too much strain for fine guitars such as those made by the respected C. F. Martin Guitar Company, further advising that the acclaimed Luis T. Romero would not even tune his gut-strung guitar up to concert pitch for fear of exerting too much tension on it. Noonan singles out John Henning as a BMG entrepreneur to exploit the use of steel strings by advertising in his periodical, *The Chicago Trio*, a line of guitars sporting a steel-reinforced neck, making them safe for steel stringing.[80] However, whilst the use of steel may have been chosen by a section of players both in the quest for more volume, and practicality (steel strings were cheaper and lasted longer than gut), most proponents of the BMG movement were initially opposed to this guitar development. Evidence from advertising in the BMG periodicals of the last two decades of the nineteenth century shows a steady increase in the use of steel strings for the guitar. Not only for example, does Stewart's journal feature boxed ads for the supply of both gut and steel strings, ads also start to appear for guitar tailpiece bridge adapters, designed to compensate for the added tension of steel strings. David K. Bradford, *The Unstrung History of the American Guitar: The Guitar and 19th Century American Music,* cites both Gura and Noonan in relation to issues arising from the use of steel strings. His website also features reproductions of ads for Stewart's strings, and for a guitar sporting a compensated bridge and tailpiece design. This particular bridge and tailpiece combination, patented in 1891 by Charles F. Geiger, featured on the Imperial Guitar marketed by the John Church Company. Bradford also states that the instrument maker

[79] Noonan, *The Guitar in America: Victorian Era to Jazz Age*, p. 52.
[80] Noonan, *The Guitar in America: Victorian Era to Jazz Age*, p. 53. Noonan is citing from *The Chicago Trio*, 1/1 (October-November, 1897), p. 21.

Joseph Bohmann who was making heavily braced guitars in the 1880s that could probably take the strain of steel strings.[81] He further states that by 1896, Lyon & Healy of Chicago was marketing their Jupiter [c1900], Columbus [c1892] and Marquette [c1896] models of guitar with factory installed steel strings. The Library of Congress in Washington DC holds copies of Lyon & Healy's instrument catalogues from this period, which show the supply of gut, silk and steel strings.

Whilst to date, evidence in North America of the use of steel strings for the trebles of the guitar emerges in the last two decades of the nineteenth century. The development of wound bass strings, incorporating steel as a component material, appears to have begun earlier. Gura, in his survey of the 1851-56 accounts of James Ashborn's guitar making factory in Wolcottville, Connecticut, documents entries for the sale of factory produced wound strings.[82] Penny's, *Cyclopaedia of Women's Work*, contains an entry for women working in a musical instrument string-making factory in Connecticut during the 1860s. It states that women, following a practice already employed in Germany, were employed in a Connecticut string-making factory, being paid $9 a week, winding wire for guitar strings. It also states that, 'most metal strings are made of steel and covered with fine wire of other metals'. It continues, 'Mrs. Z, whose husband, when living, manufactured covered strings for musical instruments, told me, she and her daughters had often assisted covering guitar strings and lighter piano strings'.[83] Leaving aside the question of whether Penny is referring to Ashborn's factory in her entry, the central issue here is the suggestion that wound guitar strings were being made with a steel core. Previous and continuing practice, for the manufacture of covered basses for the guitar, had been to overwind a core of gut, or more commonly in the nineteenth century silk, with a thin wire of usually copper or brass. Gura reports that the strings wound in Ashborn's factory (and shipped out to retailers by Ashborn and his business partner Hungerford) had a silk core, and were covered with a silver wire: gauge 18 for the sixth, gauge 16 for the fifth and gauge 13 for the fourth. Gura found no evidence in

[81] David K. Bradford, 'Joseph Bohmann ', *The Unstrung History of the American Guitar: Guitars and Guitar Makers of the Nineteenth Century* (2009), http://www.19thcenturyguitar.com. [Accessed 26 August 2010].
[82] Philip F Gura, 'Manufacturing Guitars for the American Parlor: James Ashborn's Wolcottville, Connecticut, Factory, 1851-56', in *The Crossroads of American History and Literature* (University Park: Pennsylvania State University Press, 1996). Reprinted from the Proceedings of the American Antiquarian Society, vol. 104, part 1 (Worcester: American Antiquarian Society, 1994).
[83] Virginia Penny, *The Employments of Women: A Cyclopaedia of Woman's Work* (Boston, Ma: Walker, Wise & Co, 1863), pp. 463-464.

the accounts of materials for the third, second and first strings, all usually made of gut. He adds that, although it may be presumed Ashborn and Hungerford purchased these gauges of strings from elsewhere, there is no credit record of that in the accounts.[84]

If steel as a core was being used, it is evidence of a change in material composition, which, as this material could also be used for uncovered treble strings, may have signalled a transformation in stringing practice.

[84] Gura, 'Manufacturing Guitars for the American Parlor: James Ashborn's Wolcottville, Connecticut, Factory, 1851-56'. p. 210, fn. 33.

Chapter 2 Johann Georg Staufer (1778-1853)

2.1 Biographical Details

Johann Georg Staufer[85] was born in Vienna on 26 January 1778, and died there, in the hospice of St. Marx, on 24 January 1853. The early twentieth-century historian Lutgendorff,[86] as well as Haupt[87] and Prochart,[88] in the nineteen-sixties and seventies respectively, all agree on these facts. Vannes, in his dictionary of luthiers claims the date of death to be 20 January 1853.[89] This would seem to be an error, as Prochart and Haupt are both sourcing the date from the Archiv der Stadt Wien, *Totenprotokoll*, the register of deaths.[90] The christening records of the church of St. Stephan show that Staufer's parents were Matthias Staufer and Eva Rosina.[91] According to Lutgendorff, Matthias Staufer worked as a porter and was not directly connected with the musical instrument-making trade. He also claims that, initially, Georg Staufer was encouraged to become a furniture-maker, but that his interest in music led him to specialize in making musical instruments.[92] Georg Staufer served his apprenticeship with the lute and violinmaker, Franz Geißenhof (1754-1821).[93] The precise circumstances that provided Georg entry into the string instrument making trade are not known. The word *träger* is used in Lutgendorf's text to describe Matthius Staufer's profession. If the literal translation of *träger* as *porter* were accepted, this apprenticeship would appear as a step up for a porter's son. It is possible that Matthius Staufer held a position that was more important than is revealed in the bibliographical records of his son. Geißenhof's other notable pupils included Gabriel Lemböck, Johann Baptist Schweitzer, Peter

[85] The spellings *Staufer* and *Stauffer* were both used by the maker himself and his contemporaries. *Staufer*, more often used by immediate secondary sources, is used throughout here. Of Staufer father and son, Johann Georg will be referred to as Georg, and Johann Anton, as Anton.
[86] Willibald Leo Freiherr von Lutgendorff and Thomas Drescher, *Die Geigen- Und Lautenmacher Vom Mittelalter Bis Zur Gegenwart* (Tutzing: Schneider, 1975).
[87] Helga Haupt, *Wiener Instrumentenbauer Von 1791 Bis 1815*, Studien zur Musikwissenschaft, Bd. 24, (Graz, Wien, Koln: Hermann Bohlaus Nachf, 1960), p. 176
[88] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*.
[89] Rene Vannes, *Dictionnaire Universel Des Luthiers*, revue et augmentée et ed. (Bruxelles: Les Amis de la Musique, 1975).
[90] ASTW, *Totenprotokolle* (1853).
[91] Sankt Stephan, *Taufbücher*, vol. 94 (Dompfarramt, Wien 1), p. 128; Haupt, *Wiener Instrumentenbauer Von 1791 Bis 1815*, p. 176.
[92] Lutgendorff and Drescher, *Die Geigen- Und Lautenmacher Vom Mittelalter Bis Zur Gegenwart*, vol. 2, pp. 482-3. He was originally an artisan cabinetmaker who turned to guitar making because of his love for music. He had an innate desire to experiment and research ways in which he could improve upon his abilities as an instrument maker.
[93] AMZ, mit besonderer Rücksicht auf den österreichischen Kaiserstaat, 7 (Wien: 1823), p. 90.

Teufelsdorfer, Johann Georg Staufer and Franz Xaver Werner.[94] Geißenhof, in turn, served his apprenticeship with Johann Georg Thir (c1709-1779). The Thir family were highly regarded as instrument makers through several generations. Haydn, for instance, possessed a viola d'amore (now in the Kunsthistoriches Museum, Vienna), made by Johann Georg Thir. Maunder refers to them as one of the dominant families in the lute and violinmaker's guild, which in itself was a tightly knit community. Johann Georg Thir had married Maria Theresa, the widow of his master, the lute maker Supper, and thus inherited his workshop in 1740. Lutgendorff gives Geißenhof's address as Singerstraße, Nr. 922, which Maunder notes is the same as Thir and Dallinger. Sebastien Dallinger was another prominent violinmaker of the time. Geißenhof received his *Bürgereid* here, at Singerstraße, Nr. 922, on 29 July 1780, and took over the workshop of his master, Thir, in 1781.[95] He was married to Anna Thir, the sister of Matthius and, possibly, Johann Georg Thir.[96]

Musical instrument making in nineteenth-century Vienna, as with other craft-based enterprise, was strictly controlled by a system of guilds. Staufer was operating within this system and obtained his *Wienerbürgereid* and *Bürgerrecht* in 1800, giving him citizen status and permission to trade. Haupt gives the date as 20 July 1800, whilst he was resident at Stadt 150, and Lutgendorff agrees with this address.[97] Richard Maunder, in explaining the intricacies of the guild system, defines *Bürgereid* as the position acquired on taking an oath to become a *Bürger*, or citizen of Vienna, and thus, paying an annual tax to be allowed to practise. The *Bürgerrecht* defines the citizen's civil rights attained with the status of *Bürger.* These awards, together with his *Meisterrecht,* which he would have received on having successfully completed

[94] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, p. 192.
[95] *AMZ*; ASTW, *Bürgereidbuch*, 1750-1791, p. 231.
[96] Richard Maunder, Viennese Stringed-Instrument Makers, 1700-1800, *The Galpin Society Journal*, Vol. 52. (Apr., 1999), pp. 27-51. Drescher suggests Anna Thir was Johann Georg Thir's sister. Maunder thinks this unlikely as Johann Georg Thir was born in 1709 and suggests she was possibly Matthius Thir's sister, She was probably closer in age to Matthius, but it must be pointed out that Matthius was 27 years younger than Johann Georg who is cited by both Lutgendorff, Haupt and Drescher as being his brother. Dallinger, another violinmaker, could have been married to one of Matthius's other sisters. This exemplifies the closeness of the instrument making community.
[97] Haupt, *Wiener Instrumentenbauer Von 1791 Bis 1815*, p. 176. Haupt cites the Bürgereidbücher as his source; Lutgendorff and Drescher, *Die Geigen- Und Lautenmacher Vom Mittelalter Bis Zur Gegenwart*, vol 2, pp. 482-3; Lorenz, Michael, 'Johann Georg Stauffer', *Staufer Miscellanea*. Lorenz gives the date as 20 June 1800 as entered: A-Ws [ASTW], Sonderregistraturen, Bürgereidbuch B1/10, fol. 70r.

apprenticeship, would have allowed Staufer, as a *Meister,* to trade as a guild member.[98] As such, he could entitle himself *Lauten-und-Geigenmacher*. In 1802, having fulfilled these requirements, demanded by both the guild and civil authorities, he took over the workshop of Ignaz Christian Partl (1732-1819), which was located at Schulhof, Nr. 448.[99] Timmerman points out that Zuth gives Partl's address as Schulhof, Nr. 446, although he notes that both Zuth and Prochart agree that Staufer's address was on Nr. 448. He also claims that No. 446 appears on labels from Staufer guitars of this period.[100] Prochart, however, sourcing his information from archival city records, *Vollständiges Auskunftbuch*,[101] the *Hof- und Staatsschematismus* [102] and Redl,[103] declares that Staufer's workshop was registered at No. 448 from 1802 to 1815. Lorenz, on the other hand, suggests that between 1803 and 1805 Johann Georg Stauffer moved his violinmaking workshop from the inner city to Laimgrube, Nr. 152 (today Mariahilfer Straße 11).[104] It was there that his second son Anton was born on 12 June 1805 and baptized in the parish church of St. Joseph ob der Laimgrube.

The following are the known and recorded addresses of Staufer's residencies, workshop and registered business ventures: From 1816-1818, he was located in Seitzergasse, Seitzerhof, Nr. 460;[105] from 1821-1822, on the 1st floor, 4th staircase, Laimgrube, Hauptstraße, Nr. 177;[106] from 1822-1823, Stadt Plankengasse, Nr. 1064; [107] in 1823 he

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[98] Richard Maunder, *Keyboard instruments in Eighteenth-Century Vienna* (Oxford: Clarendon Press, 1998); Viennese Stringed-Instrument Makers, 1700-1800, in *The Galpin Society Journal*, vol. 52. (Apr., 1999), pp. 27-51.

[99] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age,* p. 91. Timmerman is citing Staufer's workshop address from Zuth, 1926, p. 262.

[100] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age*, pp. 91 & 93.

[101] Oder Civil-und Kommerzialschema der k. k. Haupt- und Residenzstadt Wien*, Vollständiges Auskunftbuch, für Kaufleute, Künstler und Handwerker* (Wien: 1797 bis 1808), 1799, p. 69; 1802, p. 151; 1803, p. 162; 1805, p. 175; 1805, p. 200; 1808, p. 221.

[102] Österreichisches Staatsarchiv Wien, *Haus-,Hof- Und Staatsschematismus* (1804).

[103] Anton Redl, *Kalender Und Handlungs-Gremien-Schema Der… K, K, Haupt- Und Residenzstadt Wien* (1804-1817),1815, p. 242.

[104] Lorenz, 'Stauffer's Three Sons Franz, Anton and Alois', *Staufer Miscellanea*.

[105]Redl, *Kalender Und Handlungs-Gremien-Schema Der… K, K, Haupt- Und Residenzstadt Wien*; Anton Redl, *Addressen-Buch Der Handlungs-Gremien Und Fabriken In ... Wien, Dann Mehrerer Provinzial-Staedte, Für Das Jahr 1824. Verfasst Und Herausgegeben Von Anton Redl*, 1818 (Wien: 1818-1833), p. 227.

[106]Franz Heinrich Böckh, *Merkwürdigkeiten Der Haupt- Und Residenzstadt Wien Und Ihrer Nächsten Umgebung*, vol. 1-2 (Wien: 1823 & 1825); Franz Heinrich Böckh, *Wiens Lebende Schriftseller, Küntsler Und Dilettanten Im Kunstfache*, 1821 (Wien: 1821-1823), p. 420; 1822, p. 420.

[107] *WZ*, 7 März 1822; Böckh, *Merkwürdigkeiten*, vol. 2 (1823), p. 145; Ottner/144f.

was living in Vienna at the upper Laimgrube, Nr. 132;[108] [according to Lorenz, Staufer's workshop at that time was located at Stadt 1064 (the *Wetzlar'sches Haus*, today Plankengasse 2)][109] in 1824, Stadt Neuburgergasse, Nr, 1111, [110] and in 1825, Stadt Schulhof, Nr. 415.[111] Between 1827 and 1828, his business was registered as *Johann Georg Stauffer and Comp*. (Shareholders: Franz Edler von Lacasse; production Hohlflügeln)[112] and in 1828, his workshop address was Stadt, Nr. 480, Nächst dem Rothen Turm.[113] Prochart further informs that between 1828-1842, (with interruptions, see below) his address continued to be Stadt, Nr. 480, Nächst dem Rothen Turm.[114] Lorenz reports that in January 1831 Staufer was living at Stadt, Nr. 961 (in the hotel *Zur Ungarischen Krone*) when his tailor Friedrich Wendt sued him for a debt of 38 fl 13 schillings.[115] On 9 December 1833, Staufer claims to be trading from his home address, Stadt Wohnhaft, Nr. 919,[116] from where Wildauer declares he continued to work.[117] This seeming anomaly in addresses at this time, could suggest, that after his *schuldenarrest* [literally debt arrest, or being sued for payment] he made his business over to his son, Johann Anton, who continued to trade from Stadt, Nr. 480. Haupt claims that he was forced to stop trading in 1833 due to onerous debts, and made his business over to his son in 1836.[118] Prochart, on the other hand, states that it was in December 1831, and then in April 1832, that he was impoverished and declared in

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[108] Böckh, *Merkwürdigkeiten Der Haupt- Und Residenzstadt Wien Und Ihrer Nächsten Umgebung* (1823) vol. 2, p. 45.
[109] Lorenz, 'Stauffer Residencies', *Stauffer Miscellanea*.
[110] *WZ*, 1824, pp. 173 & 174.
[111] *WZ*, 1825, Amtsblatt, pp. 204 & 413; Lorenz, 'Stauffer's Firm "Johann Georg Staufer & Comp".' *Stauffer Miscellanea.* Lorenz claims this address was not that of Staufer's workshop, rather that of his business colleague Lacasse.
[112] *Adressenbuch Der Handlungsgremien Und Fabriken in Der K.K. Haupt- Und Residenzstadt* (Wien: 1827-1828); Stephan, *Taufbücher*, vol. 94. p. 238; 1828, p. 90.
[113] *WZ*, 3, September 1828, Amtsblatt, p. 415.
[114] Vgl. Anm.215; Redl, *Handlungs*, 1831, p. 156; 1832, p. 161; 1833, p. 197; Johann Baptist Schilling, *Adressenbuch Der Handlungsgremien Und Fabriken in Der K.K. Haupt- Und Residenzstadt* (Wien: 1834-1838). 1834, p. 232; 1835, p. 239; 1836, p. 244; Franz Fray, *Allgemeiner Handlungs- Und Gewerbealmanach* (Wien: 1836-1848); Franz Fray, *Allgemeiner Handlungs-Gremial-Almanach Für Den Österreichischen Kaiserstaat* (Wien: 1834-1835); Karl August Schimmer, *Neuestes Gemälde Von Wien* (Wien: 1837), p. 147.
[115] Lorenz, 'Stauffer Residencies', *Stauffer Miscellanea*. Lorenz reports that in January 1831 Staufer was living at Stadt, Nr. 961, in the hotel *Zur Ungarischen Krone* ('At the Hungarian Crown', today Himmelpfortgasse 14) when he was sued by his tailor Friedrich Wendt for a debt of 38 fl 13 x. [He] was convicted in absentia, but the garnishment proved to be uncollectable. At that time Stauffer had his workshop at Stadt No. 785.
[116] ASTW, *Hauptregistratur*, 69374, (1833), p. 186; *WZ*, Intelligenzblatt, 9 November 1833, 'im gleichen Jahr wird seine Arbeitsstätte stadt 480 mitgeteilt'.
[117] Johann Nepomuk Wildauer, *Adressenbuch Der Handlungsgremien Und Fabriken in Der K.K. Haupt- Und Residenzstadt Wien* (Wien: Gedruckt bey A. Strauss, 1839-1847). 1839, p. 135; 1843, p. 163.
[118] Haupt, *Wiener Instrumentenbauer Von 1791 Bis 1815*, p. 176.

schuldenarrest, and that on 24 August 1832 his assets/business were seized, but with no bankruptcy declared however. [119] Zuth claims that it was in 1836 that Staufer passed the business over to his son, Anton, who subsequently moved it to Klostergasse, Nr. 1100.[120] Hofmann has unearthed two documents that show Georg Staufer and his wife Josefa left Vienna and moved to Kaschau (Kôsice) in 1839:[121] the first is a passport application on 29 March that year to travel to Kaschau (their address is given as Leopoldstadt, Nr. 510, Vienna, a separate address to Anton Staufer and his wife Maria, who also appear in the document but as living at Stadt, Nr. 598);[122] the second being Kaschau's city's census records for 1839 and 1840, which show Georg registered there as a musical instrument maker, living at Stadt, Nr. 198, together with his wife and an attendant.[123] As Anton's marriage certificate on 22 February 1841 gave him as resident in Vienna (at Klostergasse, Nr, 1100)[124] it would appear that he had stayed there to run the Viennese operations, while the father was probably still at that time in Kaschau. According to Lutgendorff, Georg Staufer spent time in 1843 (together with his son Anton), at a second Staufer workshop in Kaschau,[125] which, together with the information from that city's census records, suggests it was Georg running that workshop in the early 1840s. On 13 February 1845 Georg Staufer, having returned to Vienna, entered the *Bürgerversorgungshaus* (the bürgers' hospice), of St. Marx;[126] his wife, Josefa (maiden name Fischer, from Leitmeritz, CSSR) had already been admitted there on 1 February 1845.' where she subsequently died on 31 January 1852. [127] According to Prochart, in 1848 the Staufers relinquished their license to trade (*Befungis*) while registered at Klostergasse, Nr. 1100.[128] Timmerman claims that Georg had stopped making musical instruments in about 1845 and spent the last years of his life in the hospice of St. Marx with his wife, while Hofmann, on the other hand, claims that he continued to produce musical instruments from a workshop facility for the interns of the

[119] *Registratur Des Wiener Städtischen Zentralsteueramtes Wien*, Band 304, Konto Nr. 5222 (Wien: 1828-1837).
[120] Josef Zuth, *Handbuch Der Laute Und Gitarre* (Wien: 1926), pp. 262-3.
[121] Hofmann, *Stauffer & Co., the Viennese Guitar of the 19th Century*, pp. 84-85.
[122] ASTW, *Passprotokolle*, vol. 27 (1839).
[123] Archiv mesta Kôsice (1839-1840).
[124] Hofmann, *Stauffer & Co., the Viennese Guitar of the 19th Century*; Archiv der Pfarre St. Augustin Wien, *Trauungsbuch X1*, vol. Folio 17 (1839).
[125] Lutgendorff and Drescher, *Die Geigen- Und Lautenmacher Vom Mittelalter Bis Zur Gegenwart*, p. 482.
[126] Wiener Bürgerversorgungshaus, *Standesprotokoll Für Männer*, vol. 2, (Wien: 1845), p. 176.
[127] Wiener Bürgerversorgungshaus, *Ebenda Für Frauen*, vol. 2, fol. 249/3 (Wien: 1845).
[128] ASTW, *Hauptregistratur* (1848), p. 27.

hospice.[129] Timmerman further alleges that the workshop at Klostergasse, Nr. 1100, which according to Prochart was situated underneath the firm of *Schmidt & Wanek*, was sold to Franz Seraph Schmidt in 1848.[130] A meeting, recounted in the memoirs of the Russian nobleman Nicolai Petrovitch Makarow, between himself and Schmidt, would support this sale.[131] Prochart gives Klostergasse, Nr. 1100 as Schmidt's address between 1846 and 1864 (sourcing it from Fray,[132] Kastner,[133] and Lehmann[134]) but also reports that Anton Staufer had a workshop at that address from 1846, and was resident there until 1851.[135] Georg Staufer died of pneumonia in the St. Marx hospice on 24 January 1853.[136] He and his wife, Josefa, had three sons, Anton who followed in his father's footsteps, Franz, a pianist and violinist, and Alois, who died in his infancy.[137]

2.2 Instruments and Privileges

Comparisons of Staufer's guitars from the early nineteenth century with those of Italian makers such as Gennaro Fabricatore and Gioacchino Trotto show how their style of making was evident in his early work. There was a strong Italian influence on guitar making at the turn of the nineteenth-century in Vienna, stemming from the migration north of Italian players such as the guitarist Mauro Giuliani, originally from around Naples, who was living and performing in Vienna from 1806 to 1819, and would have arrived with an Italian made instrument.

In Italy musical taste was changing, and whilst the guitar had a place as an accompanying instrument for singers, it could not compete in an orchestral setting. At

[129] Hofmann, *Stauffer & Co., the Viennese Guitar of the 19th Century*, pp. 90-94.
[130] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age,* p. 93.
[131] Makarow, Nicolai P., 'The Memoirs of Makaroff ', in *Guitar Review*, vol. 3, pp. 6–9.
[132] Fray, *Allgemeiner Handlungs- Und Gewerbealmanach*.
[133] Leopold Kastner, *Handels- Und Gewerbe-Addressenbuch Für Österreichisch-Ungarischen Monarchie, Enthaltend Die Adressen Von Wien, Hrsg. V. Niederöster, Gewerbeverein* (Wien: 1843-1855), 1849, p. 253.
[134] H. Lehmann, *Allgemeines Handels-Und Gewerbeadreßbuch Nebst Allgemeinem Wohnungsanzeiger ... Für ... Wien Nebst Umgebung* (Wien: 1861).
[135] Fray, *Allgemeiner Handlungs- Und Gewerbealmanach* Fray (1846), p. 365.
[136] ASTW, *Totenprotokolle* (1853).
[137] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert,* pp. 153-7. Josefa Staufer's maiden name was Fischer. Franz Staufer was born in 1782. Alois Staufer was born 7 June 1803 and died 23 June 1803.

this period in time it was simply not loud enough to be heard in the ensemble playing of the large musical theatre productions and operas that were becoming the Italian vogue. Naples, a well-known centre for the guitar in Italy, probably had a higher ratio of guitarists than available work. The salons of the Viennese nobility offered guitarists who were talented as solo performers a setting more suited to their chamber recitals. Another factor for migration stemmed from the turmoil and conflict on the Italian peninsula, and particularly the area surrounding Naples, at the turn of the century. Napoleon's armies were in Northern Italy, Cardinal Fabrizio Ruffo and his army were taking Naples while Lord Nelson was attacking from the sea. Players, such as Giuliani, travelling North in search of employment and fleeing political unrest, brought their instruments with them. These instruments undoubtedly influenced the work of Vienna's own stringed instrument makers.

Heck, in his work on Giuliani cites the preface to a guitar method, *Versuch einer vollstandigen methodischen Anleitung zum Guitare-Spielen,* written by Simon Molitor and Wilhelm Klingenbrunner.[138] This method, published in Vienna c.1811-12, makes reference to the *chitarra francese,* or French guitar, a five-stringed (as opposed to five-course) instrument, in use in Vienna around 1790, and claims that it was at this time a low sixth string was added, demonstrating not only the guitar's evolution but also the migration of instruments across territorial borders. The preface also alleges that the player-composers, Matiegka and Diabelli, active in Vienna at this time, had adopted a type of guitar notation that clarified written composition; namely separating the different melodic and harmonic voices into a form of notation where the bass, inner voices and top voice were easily distinguished from each other, done by the use of note stem directions and rests. [139]

Previously in eighteenth-century Viennese society, evidence of the use of the lute can be found, for example, in the works of Carl Ignaz Augustin Kohaut (1726-1782), but by

[138] Thomas F Heck, *Mauro Giuliani: Virtuoso Guitarist and Composer* (Columbus, OH: Editions Orphee, 1995)., pp 31-33. Wilhelm Klingenbrunner used the pseudonym R. Klinger; Dr. Ron Purcell *Molitor, Simon J*., California State University, Northridge,, Oviatt Library [Accessed 13 October 2007], <http://library.csun.edu/igra/bios/text/molitor.html>. Simon Molitor was one of Vienna's most respected musicians. From 1796-97 he was also an orchestral conductor.

[139] Heck, *Mauro Giuliani: Virtuoso Guitarist and Composer,* p. 33. Giuliani was apparently using this style of notation in late 1806 on his arrival in Vienna. Heck suggests that this new notation had probably originated elsewhere and was in use in Vienna before the arrival of Giuliani.

the end of that century altering musical taste, evident in an emergent salon society, favoured instruments with greater volume. Certainly the wider body shapes of the five, and later six-string guitar, were fundamental in improving the projection of these instruments compared to their Baroque predecessors with double courses of strings. Italian makers started building guitars with five single strings around 1765. The single bass strings as opposed to double strung courses were easier to tune, producing a more accurate pitch within the chord. From here it was a quick and simple progression, by adding a further bass string, to the six-string guitar. These larger instruments could be strung with thicker strings and now had an increased lower range that could incorporate the bass fundamental notes of chord inversions, thus producing a louder and more sonorous tone suited to vocal accompaniment.

The arrival of Mauro Giuliani in Vienna had the effect of strengthening the burgeoning appreciation of the guitar and increasing its popularity. Giuliani, known as the *Neapolitan*, was born in Bisceglie, Italy, moving to nearby Naples around 1798 to continue his musical studies. He settled in Vienna in 1806 after travelling north, via a stay in Trieste, where he probably played his debut concert in 1803.[140] He was a cellist as well as a player of both the six-string guitar and thirty-string harp guitar, and was received into Viennese musical life with glowing critical reviews. In the first known report of a Giuliani performance on 21 October 1807, the German music journal, *Allgemeine musikalische Zeitung*, praised both his virtuosity and compositional skills.[141] By all accounts he was a supremely talented guitarist who raised the level of composition for the instrument. He also taught, using the previously mentioned new form of notation.

The six-single string guitars that Viennese players such as Molitor, Tandler and Matiegka, were using in the first decade of the 1800's were either Italian made, or fashioned in that style. Giovanni Battista Fabricatore and Gaetano Vinaccia, members of large Neapolitan stringed instrument making families, were making guitars with six

[140] Heck, *Mauro Giuliani: Virtuoso Guitarist and Composer*, pp. 26-27. Heck cites an announcement in *L'Osservatore triestino* of 5 September 1803 which states that Mauro Giuliano (baptismal spelling of his family name), the Neapolitan wished to give an *Academia* (concert) in the public hall on the 7 September.
[141] Heck, *Mauro Giuliani: Virtuoso Guitarist and Composer,* p. 38. Quoting the *AmZ* 1X (4 Nov 1807), p. 89, 'Among the very numerous guitarists here one Giuliani is having great success, even creating quite a sensation, as much by his compositions for the instrument as by his playing. He truly handles the guitar with unusual grace, skill, and power'.

single strings.[142]. Both were active during the end of the eighteenth-century into the nineteenth, and as such spanned the era of evolution from guitars with five-courses to that of six-single-strings. Giovanni Battista Fabricatore was the teacher, and probably uncle, of Gennaro Fabricatore 1, who in turn trained Gennaro Fabricatore II.

Gary Southwell compares two Gennaro Fabricatore guitars that he says are identical in size and decoration except that one is of six-single-strings, the other, five-course.[143] The headstocks are consequently of dissimilar size to house the different number of tuning pegs. The tone woods used were the same; namely maple for backs and sides, and European Alpine spruce for the tops. The instruments of Giovanni Battista Fabricatore have fixed metal frets directly inlaid into the soundboards, as a continuation of the fingerboard, while on the Gennaro Fabricatore guitars, an ebony fingerboard is inlaid with fixed frets, and continued from the neck into, and flush with the top. This form of fretting, replacing the previous design of tied-on gut frets, is also evident in Viennese guitars of this era, together with other constructional influences, such as the deeper body shape, and the double-knot figure-of-eight style peg head. These single-six-string guitars are the type of instrument that Giuliani would have played and brought with him from Italy.

[142] James Westbrook, *The Century That Shaped the Guitar: From the Birth of the Six-String Guitar to the Death of Târrega* (s.l.: The Guitar Museum, 2006), pp. 41-42.
[143] Gary Southwell, 'Development of the European Guitar 1780-1880 and Its Relevance to Modern Guitar Design', *American Lutherie* 62 (1998).

Fig. 1.

Fig. 2.

Fig. 1. Six-string guitar by Gioacchino Trotto, Naples 1792 [Photo: Musikinstrumenten-Museum der Universität Leipzig], No. 555.
Fig. 2. Six-string guitar by Johann Georg Staufer, Vienna c.1812. Private collection [Photo: Brigitte Zaczek].

Examples of Staufer's guitars starting from 1810 continue in this tradition but already show the introduction of brass frets, replacing the previously used tied-on gut frets. Brass frets provided more accurate intonation, however it is relatively soft and prone to wear. According to Staufer and Ertl's *privilege* of 1822, the use of ivory was also cited as a material used for fixed frets.[144], Whereas previously, guitars with four and five courses of strings, as well as instruments of the lute family, and vihuelas, feature fixed

[144] Anton Ziegler, Darstellung der in der österreichischen Monarchie auf Erfindungen, Entdeckungen und Verbesserungen…ertheilten…Privilegien oder Patente (Wien: 1824), p. 50.

bridges where the strings were attached by a method of tying on, and did not pass through the soundboard, these six-single-string guitars have fixed bridges, where the strings pass through the top of the soundboard and are held in place by bridge pins. The pin bridge allows a break angle behind the saddle that secures the string tightly and provides a specific string length. In the last quarter of the eighteenth century, the developing six-string Italian guitars had fingerboards with the neck joining the body at the eleventh fret, and were flush with the soundboard, ending where the neck joined the upper body at the shoulders. Usually for this time, four or five additional frets were inlaid directly into the soundboard above the sound hole, thus allowing for a compass that, at its highest, extended to g#''. Staufer's early guitars, like those of Gennaro Fabricatore, feature fingerboards that extend over the front bout of the guitar to the edge of the sound hole, their fretted upper extensions inlaid into the soundboard, and allowing for the installation of nineteen frets, thus producing a playing compass with a top note of b^2. Heck compares a guitar made by Staufer around ca. 1810-1820 with one by Gennaro Fabricatore in 1811, after which he considers the Staufer is patterned.[145] Both of these instruments are in the *Sammlung alter Musikinstrumente*, Kunsthistoriches Museum, Vienna, catalogue numbers SAM 373 and, SAM 488 respectively and are almost identical in style and design.

[145] Thomas F Heck, 'Stalking the Oldest Six String Guitar', *Gendai Guitar* 9, no. 3 (1975), pp. 64-71.

Fig. 3. Guitar by Gennaro Fabricatore, Naples 1811. KHM, SAM 373 (left); Guitar by Johann Georg Staufer, Vienna c1810-20. KHM, SAM 488 (right) [Photo: Heck].

In the 1820's, Staufer's guitars start to feature fingerboards that are separated and elevated above the soundboard, increasing the instrument's compass further. This augmentation of their playing span is only one example of Staufer's continuing desire to improve their musical range and performance characteristics. An inquisitive approach to the sonic properties of musical instruments, together with improving the ease with which players may be able to express themselves on a particular instrument, led to a willingness to experiment with new ideas in construction that was evident throughout his life. Many of these ideas were patented as *privileges*, which will be discussed in more detail later. Others appear in the form of experimental instruments, or modifications to existing instrument design. One such example can be found in an early Staufer guitar, dated 1809, in the collection of W. Gans. This instrument shows internal

evidence that Staufer was already, early on in his career, experimenting with new ideas in design.[146] Italian guitars of the late eighteenth century, together with Viennese guitars of the early nineteenth century, were constructed with a simple transverse system of bars, commonly known as ladder bracing,[147]on the underside of the soundboard to give it the required amount of strength and rigidity. This Staufer, unusually for the period, has two extra soundboard braces running diagonally from the transverse braces, either side of the sound hole to a bridge plate. The incorporation of a thin wooden [bridge] plate underneath the bridge on the underside of the soundboard provides support for the strings passing through it, and although a sensible improvement in design, it is another uncommon addition for the period. The friction of the ball, or knotted, ends of the strings, passing through the bridge, and secured against the underside of the relatively soft spruce soundboard causes noticeable wear in this area. A bridge plate, improving the strength of the pin bridge design, is not usually found on the first five, and then, six-single string guitars.

A slightly earlier development by Staufer in guitar design, challenging the instrument's form to further expand its range, was the *Doppelgitarre*, built in 1807. The *Doppelgitarre* in this case, was one guitar with another smaller guitar morphing out of the larger guitar's body. The main part of the instrument is built to the same proportions as a standard six-string guitar with a playing compass of *E* to e'', and according to Prochart, the extended body that is the smaller guitar with its own neck and shorter scale length, functions as a guitar tuned one octave higher.[148] Zuth reports that this instrument, made by Staufer, 'in his search to expand tonal range', was acclaimed by the guitarists, Mauro Giuliani and Alois Wolf. Although no extant example of Staufer's instrument is known to exist, a *Doppelgitarre* made by his contemporary, Peter Teufelsdorfer, and dated 1815, is housed in the music instrument collection of the Stadtmuseum, Munich.[149] Zuth claims that Staufer had 'already turned to guitar making in 1800', [150] implying that his making previously was of the violin family. The impact

[146] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age,* p. 143, Fig. 11.
[147] The wooden bars that make up the bracing systems for both the soundboard and back will be referred to as 'braces' in this thesis. See glossary for a fuller explanation of components.
[148] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert,* pp. 153-7.
[149] *Doppelgitarre* by Peter Teufelsdorfer, 1815. Musikinstrumenten Sammlung, Stadtmuseum, Munich. no. 43-69.
[150] Zuth, *Handbuch Der Laute Und Gitarre*, pp. 262-3.

on Viennese musical culture by guitar virtuosi such as Giuliani saw a rise in popularity of the instrument thus leading to an increase in its demand. Zuth's implication that at this time guitar making, rather than violin making, was Staufer's main occupation, or at least the source of his income, would correspond with this.

Haupt recounts an incident that he suggests may have been pivotal in the Staufer's direction towards the guitar in his making. In 1813, on the death of Michael Stadlmann, the then court violinmaker, both Staufer and his contemporary, Martin Stoß, applied for the vacant position with eventually Stoß, and not Staufer, being appointed a year later in 1814.[151] Whatever disappointment this may have been for Staufer, his move to concentrate on guitar making may equally well have been influenced by its growing popularity and demand, with Giuliani's Viennese sojourns from 1806 to 1819 notably being fundamental to the rise and status of the instrument.

The second decade of the nineteenth century saw the beginning of the period where Staufer sought to patent his innovations, both singularly and collaboratively. These patents were awarded as *privileges* from the guild, giving the patentee exclusive rights for the inventions and time period detailed in the *privilege*. The granting of *privileges* should be seen within the context of a guild that exerted a strict control of trading and working practices.

At this time Staufer had started to collaborate with the violinmaker, Johann Anton Ertl. According to Prochart, who again is sourcing his information from Redl and the *Hauptregistratur* of the Archiv der Stadt Wien, Ertl was born in Raidling, Moravia in 1776.[152] Zuth declares he received his *Bürgereid* in 1813, and Prochart continues to inform that archival sources show he was president of the violinmakers' guild in 1815 and 1816, although not without some interference from the city authorities.[153] Together, Staufer and Ertl were granted a *privilege* for *Verbesserung in der Verfertigung von*

[151] Haupt, *Wiener Instrumentenbauer Von 1791 Bis 1815*, p. 176. Michael Stadlmann's will of 1808 (registered before his death in 1813) left money to Anton II Thir, son of Matthius. Drescher suggests that Anton may have worked for Geißenhof (his uncle by marriage to Anna Thir, his aunt, and sister to Johann and Matthius), after Geißenhof had taken over Johann Georg Thir's (Matthius's brother) workshop.
[152] Redl, *Kalender Und Handlungs-Gremien-Schema Der… K, K, Haupt- Und Residenzstadt Wien*, 1816.
[153] ASTW, *Hauptregistratur* 1815, Departmentbücher M, 30328 & Departmentbücher M, 30495; 1816, Departmentbücher M, 1562.

Guitarren, which can be translated as 'the complete perfection of guitars'.[154] The wording of the *privilege* declares that a 'Five-year privilege (was) bestowed on 9 June 1822, to Johann Georg Staufer and Johann Ertl, bürgers and violinmakers in Vienna, for improvement in the manufacture of guitars.' Prochart states that it 'expired by the passage of time, after a three-year extension in 1830.' The *privilege* is recorded as: '1) That by raising the neck and fingerboard extension above the soundboard so it is detached, it will allow a stronger and better-sounding tone, 2) That the neck is fixed by a screw device, facilitating speedy detachment, and finally 3) That the frets are made of a metal composition instead of the existing silver or ivory, which are prone to rapid wear and tear from the strings and [to] the detrimental deposition of verdigris, and [that they] will remain just as white and shiny as a silver. Their composition is of brass, copper, silver and arsenic, and is the same alloy, which is used by the button-makers to manufacture white buttons.'[155]

In the *Jahrbücher 1823* of the Polytechnischen Institutes in Vienna this same *privilege* is worded as: '175. (Privilege) for five years, of 9 June (1822) [to] the guitar and violin makers and bürgers of Vienna, J. G. Staufer (Stadt, Nr. 1064), and J. Ertl (Stadt, Nr. 863), for their improvement in manufacture of guitars, which consists of: 1) That by raising the neck and fingerboard extension above the soundboard so that it is detached it will allow a stronger and better-sounding tone, and that it will be easier to play simultaneously facilitating access to the instrument generally, and especially improving the fingering, 2) That the neck is fixed by a screw device, that does not hinder (obstruct) the instrument, facilitating speedy detachment, and the highest fingering position can be freely accessed on the whole fingerboard, and finally 3.) That the frets are made of a metal composition instead of the existing silver or ivory (frets) that are prone to rapid wear and tear from the strings and the detrimental deposition of verdigris, and will remain just as white and shiny as a silver.'[156]

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[154]Anton Ziegler, *Darstellung Der in Der Österreichischen Monarchie Auf Erfindungen, Entdeckungen Und Verbesserungen…Ertheilten…Privilegien Oder Patente* (Wien: Gedruckt bey A. Strauss, 1824), p. 50; *Beschreibungen Der Erfindungen Und Verbesserungen, Fur Welche…..Patent Ertheilt Wurden 1, Welcher Die Priviligien Vom Jahre 1821-1835 Enthalt*, vol. 1 (Wien: 1841), p. 277.

[155] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, pp. 153-7. Prochart gives the date of the *privilege* as 9 July 1822 as opposed to 9 June 1822.

[156] Technische Hochschule Wien, *Jahrbücher Des Kaiserlichen Königlichen Polytechnischen Institutes in Wien, in Verbindung Mit Den Professoren Des Institutes, Herausgegeben Von Dem Direktor, Johann Joseph Pretchl, K. K. Wirkl.Begierungsrathe, Und Mitgliede* (Wien: Carl Gerold, 1823), p. 623. Entry 175. Page 60 of digitized text.

In the *Darstellung des fabrics, 1824,* the privilege is worded as: '188. Johan Georg Staufer in Vienna and Johann Ertl received b. g. June 1822 a 5 year; exclusive Priv. to an improvement in the manufacture of guitars, which consists, that by raising the neck and fingerboard extension above the soundboard so that it is detached it will allow a stronger and better-sounding tone, and that it will be easier to play; that the neck is fixed by a screw device, that does not hinder (obstruct) the instrument, facilitating speedy detachment; and that the frets are made of a metal composition instead of the existing silver or ivory (frets) that are prone to rapid wear and tear from the strings and the detrimental deposition of verdigris.'[157]

This *privilege* relates directly to the innovation of a detachable and adjustable neck, allowing regulation of string height and with the extension of the fingerboard, floating freely, above the top bout of the instrument. Metal frets are already in use on guitars from the previous decade, but here a new alloy is detailed for their composition to further benefit the integrity of the instrument. Both the entries in the *Jahrbücher* of the Polytechnischen Institutes in Vienna, and the *Darstellung des fabrics*, point out that the function of the floating fingerboard, not attached to the surface of the soundboard, was to provide better tone. This would, presumably, be achieved from the creation of a greater, less-restricted, vibrating surface.

In 1823 Staufer is credited with inventing the *guitarre d'amour*, also known as the, *bogen-guitarre, guitarre-violoncell* or *arpeggione*. Zuth, Haupt and Prochart agree with this date, although Lutgendorff claims it was invented in 1821. Vannes refers to 'a cello guitar, or *guitarre d'amour*, in the Museum of Cologne (No. 609), invented by Staufer in 1823.' He describes it as:

> Looking like a small cello, 68.5 cm long, with sides 11 to 12 cm high, and cello-like openings in the soundboard. It is played with a bow. The ebony neck has a peg box, containing six wooden pegs with a mechanism inhibiting backwards slippage. The escutcheon (decorative plate) serves as a scroll and is decorated with a double star inlaid mother of pearl. Key features are non-protruding frets and a detachable neck that can be removed by unscrewing with a key. This device is found where formerly, luthiers had habitually inserted a nail crossing the sleeve and dowel (of the heel joint). The end has

[157] *Darstellung Des Fabriks- Und Gewerbswesens in Seinem Gegenwärtigen Zustande: Vorzüglich in Technischer, Mercantilischer Und Statistischer Beziehung.* ... , ed. Stephan von Keess (Wien: Mörschner und Jasper, 1824), Band 3, pp. 85-6. Entry 188.

(no built in heel). It is the neck itself that contains the (fixing) device. This is so well conceived that the neck marvellously (miraculously) fits in place without the device being noticed. The bindings and purflings are faultless. It is tuned as for the guitar. When Stauffer had finished making this new instrument, which he called the '*Arpeggione*', he presented it to the illustrious composer, Franz Schubert, who enchanted by it, composed, in November 1824, a sonata in A minor, performed shortly after in public by Vincent Schuster. Unfortunately Staufer did not enjoy his invention for long, because a decade later it fell completely into oblivion.[158]

Fig. 4. 19th century Arpeggione bowed guitar, attributed to Anton Mitteis, Leitmeritz [Photo: Musikinstrumenten-Museum, Berlin], no. 4678.

Prochart describes the fretted fingerboard as curved and located between the F-holes on the front, and that the instrument has the same tuning as the guitar: *E A d g b e'*. He claims that it was in 1825 (not 1824, as other sources claim) that Franz Schubert wrote a sonata in *a* minor for Piano and Arpeggione. Anton Diabelli & Co. of Vienna, also

[158] Vannes, *Dictionnaire Universel Des Luthiers*.

released a tutor (Verl-Nr. 2052), 'for the newly invented guitar-violoncello by Mr. Georg Staufer.'[159]

Haupt notes that *Guitarre d'amour* is similar in appearance to one of the violin models without corners of the Parisian, Francis Chanot.

Geiringer, in explaining the context of the instrument in Viennese musical society, refers to the articles on Staufer's invention printed in the *Allgemeine musikalische Zeitung* in 1823.[160] He suggests that the gently curving guitar-like form that the French violinmaker, Chanot, had adopted for the body shape of his instruments was appropriate for design sensibilities favoured at the time. It was considered that a regimented division between upper, middle and lower bouts, separated by corners was unfavourable for producing the best quality sound. He argues that, as a centre of guitar culture, Vienna was ready to adopt the manufacture of a bowed six-string guitar with twenty-four fixed metal frets, bigger than a guitar but smaller than a cello, and held between the knees of the player. He suggests that Viennese manufacturers, including Ertl and Teufelsdorfer as well as Staufer, were aiming their instruments at both players of the viola da gamba, which was becoming obsolete, and the guitar. However, despite the efforts to popularise it by the guitarist, Schuster and the cellist, H. A. Birnbach, a decade later the *arpeggione* had practically disappeared from the musical arena.[161] The instrument Vannes refers to in Cologne, is at present preserved in the Musikinstrumenten-Museum der Karl-Marx-Universität, Leipzig, and the Berlin Musikinstrumenten-Museum owns another instrument, No. 4678, attributed to Staufer's pupil Anton Mitteis, who was active in Vienna and Leitmeritz. A third, extant guitarre-violoncell, built in 1828 by Roboty Tomasza in Krakow, is today kept in the Salzburger Museum Carolino Augusteum, Salzburg (No. 102). In Paris, the Musée de la Musique has an instrument [E.982.8.1], classified as an arpeggione and made by Georg Staufer, with design details such as the Persian slipper headstock with mechanical tuners, and a detachable neck, that are similar to many of his Legnani endorsed guitars.

[159] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, pp. 153-7.
[160] *Allgemeine musikalische Zeitung,* vol. 25 (1823), p. 38, col. 626 (1823).
[161] Karl Geiringer, 'Schubert's Arpeggione Sonata and the 'Super Arpeggio'", *The Musical Quarterly* 65, no. 4 (1979), pp. 513-523.

Fig. 5. Arpeggione by Georg Staufer, Vienna c1825-1830 [Photo: Musée de la Musique], E.982.8.1.

Certain constructional features of Staufer's *arpeggione* are apparent in the designs detailed in both the *privileges* from 1822 and 1825. The detachable neck design is described in the 1822 *privilege* already discussed, and the instrument's tuning device is likely a prototype of the design referred to in the 1825 *privilege*, which will be examined later.

On 15 June 1824, Staufer, while resident at Stadt, Nr. 1111, together with the Viennese keyboard maker, Maximilian Haidinger, registered at Schaumbürgergrunde, Nr. 18, received a *privilege* for five years, to improve the so-called *Hohlflügel* piano.[162] Prochart describes the keyboard of this instrument as essentially flat and circular, with the keys shaped accordingly to its scale. This was to create a comfortable design that would allow any pianist, no matter the size or span of hand, and with children particularly in mind, the facility to tackle the most difficult compositions possible at any level. The *Allgemeine musikalische Zeitung* printed a notice that Georg Staufer and Maximillian Kaidinger in Wien had received a *privilege* 'for a new form of

[162] *Beschreibungen Der Erfindungen Und Verbesserungen, Fur Welche…..Patent Ertheilt Wurden 1, Welcher Die Priviligien Vom Jahre 1821-1835 Enthalt*, vol. 1 (Wien: 1841), p. 270; *WZ*, 31 Juli 1824, p. 173

keyboard.'[163] Ottner also confirms this *privilege* and cites an entry in the Wiener Zeitung from July 1824.[164] He continues to claim that in 1829 Staufer asked the magistrate to grant him an advance of 1,000 guilders for further development to it, which was refused.[165] It is difficult to speculate on how a magistrate might have the power to advance monies for an innovation, unless this person was administering business legalities on the part of the guild granting the *privilege*.

Staufer received another *privilege* in 1825, where he was now registered as operating in the Stadt at Schulhof, Nr. 415. This was bestowed 2 July 1825 and Prochart, in citing the *Beschreibungen der Erfindungen*, [166] the official ledger of inventions, describes the *privilege* as:

> Five-year privilege to Johann Georg Staufer, Bürger, Violin and Guitar maker in Vienna, for the invention of a very expensive tuning device. / Bestowed on 2nd July 1825 / Extinguished by passage of time in 1830. / This device consists of tubes of arbitrary metals which are fastened into the (peg box) holes of the violin or other stringed instruments, of which the core of the pegs are plugged into and detained on the opposite side by means of a set of screws. Through this device, which eliminates the friction of the core of the peg, completely preventing backward slippage, tuning is made easier and a pure pitch can be produced.[167]

Ottner concurs with the details of this *privilege*, citing the official notices printed in the *Wiener Zeitung*.[168] This privilege appears to relate to a form of semi-mechanical 'butterfly' tuning peg device that is evident from as early as 1810 on a Staufer guitar in the collection of Johannes Tappert.[169] With the string, once in tune, the peg is held tightly in place by a 'butterfly' wing nut to avoid slipping. Timmerman, who has examined this instrument, considers the tuning system to be original to the guitar.

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[163] *AMZ*, November 1825, no. 44, p. 728.
[164] WZ, 'Amtsblatt', 31 July 1824.
[165] ASTW, *Hauptregistratur*, Departmentbücher M, 23198 (1829)
[166] Beschreibungen der Erfindungen und Verbesserungen, für welche…Patent ertheilt wurdwn 1, welcher die Priviligien vom Jahre 1821-1835 *enthält*, vol. 1 (Wien: 1841), p. 277.
[167] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, p. 156.
[168] WZ, 'Amtsblatt', 22 August 1825.
[169] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age,* p. 99.

Fig. 6. Double-knot guitar headstock, Johann Georg Staufer, Vienna c.1810. Private collection [Photo: Alex Timmerman].

He claims that this type of tuning device was not uncommon at the time, and was being used in France by the makers, Pons and Lacôte. Why Staufer did not apply for a *privilege* for this system until 1825 is not clear, unless, either an existing *privilege* bestowed to another party had at that time become lapsed, or that he had successfully made modifications making the tuners unique. The exploration of means to prevent unwanted backwards turning of tuners, evidently an issue Staufer thought needed improving, can be found in other instruments he was making at the time. A wooden peg device incorporating a mechanism to inhibit backwards turning is mentioned by Vannes in his description of the *arpeggione*. Tuning pegs that are similar to those found on North- American banjos and ukuleles from the 1920's, are evident on a seven-string guitar from 1827made by Staufer's son, Anton. Designed to fit a figure-of-eight peg they are part rosewood and part silver-nickel with a series of metal rings fitted around the axle. Mounting is from the back of the peg head with one of the rings fixed from the front, and then the whole mechanism tightened and secured by a nut, threaded into the button of the peg.

Fig. 7. Tuning peg from 7-string guitar, Johann Anton Staufer, Vienna 1827. Private collection [Photo: Alex Timmerman].

Timmerman also points to an unusual lateral mechanism found on a guitar (ca. 1815),[170] labelled as from the Staufer workshop. Here, three tuners are fitted to each side of a rectangular headstock. The worm and gear apparatus are concealed in the headstock itself and the tuning buttons appear, three on either side and in the same plane. Viewed from the front, this system is visually reminiscent of a modern six-string 'paddle' headstock. Although some other European builders used this type of device, it is unusual to find it on a Staufer guitar. Timmerman identifies the brand mark 'BAUER' on the instrument and proposes that probably Christian Friedrich Bauer (and not Staufer) made it in the Staufer workshop. The tuning mechanism itself is attributed to Johann Gottlob Thielemann (c. 1780-1821) who was working in Berlin. [171]

[170] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age*, p. 99.
[171] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age,* p. 99. Christian Friedrich Bauer originated from Klingenthal. Timmerman gives the example of the French maker, Marechal, and Dutch maker, Cuypers, as using this mechanism.

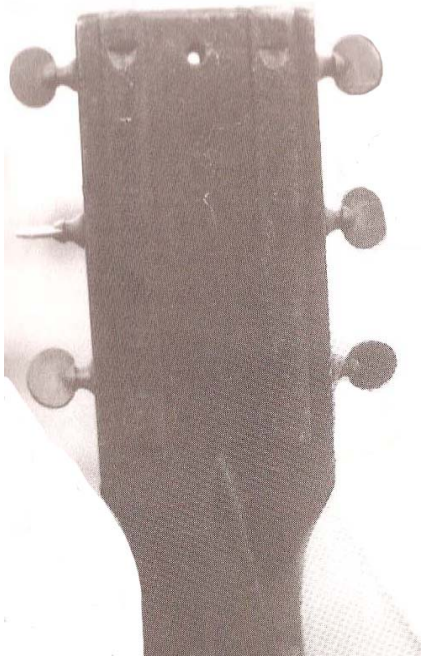

Fig. 8. Lateral Tuners from Stauffer workshop guitar, Christian Friedrich Bauer, c 1815. Private collection [Photo: Alex Timmerman].

It is reasonable to suggest then, that mechanical tuners fashioned outside of the workshop were being experimented with, and at times, fitted to Staufer instruments prior to the 1820s.

One of the most immediately identifiable components associated with Staufer guitars after 1820 is the S-shaped, Persian Slipper style headstock and tuning system. While the slipper design is visually reminiscent of a violin family peg head, although rather as a two-dimensional outline, Timmerman suggests that the flat headstocks of the Croatian 'tamburica' and 'brac' folk instruments could also have influenced the shape. This type of Staufer headstock was fitted with a concealed mechanical tuning mechanism with six tuning buttons appearing in line on the bass side of the headstock. The earliest version of this system had the gearing fitted and hidden within the wooden headstock. The tuner buttons appear in a row on one side, and on the other, small tapered pins approximately 4 mm in diameter are inserted through drilled holes, locking the spindle to prevent string slippage.

Fig. 9. Early Model of Persian Slipper Headstock, Johann Georg Staufer, Vienna c1820. Private collection [Photo: Alex Timmerman].

The perfected version, sometimes known as the *schraubenmaschine* or *gedeckte mechanik*,[172] contains six-a-side tuners, the mechanics of which are inset, but are accessible by removing a covering metal plate on the back.[173]

[172] *Schraubenmaschine* is the mechanical tuning system embedded into the headstock and concealed by the *gedeckte mechanik,* which is literally translated as 'covered mechanics'.
[173] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age,* p.100.

Fig. 10. *Schraubenmachine Gedeckte Mechanik*, Johann Georg Staufer, Vienna c1825. Private collection
[Photo: Alex Timmerman].

This system was widely copied by other Viennese makers such as Bernard Enzensperger, Nikolaus G. Reiß, Johann Bucher, Anton Fischer, Franz Brunner and others, and migrated north to the German, Russian and East European states, and south, where its elegance must have made an impression on the builder-families of Naples as the design began to appear on guitars made by Pasquale Vinaccia and Gennaro Fabricatore (2). [174]

Although this new mechanical form of tuner became identified with guitars made by most Viennese guitar makers from the second quarter of the nineteenth century, the Staufer workshop continued to offer traditional wooden friction pegs as an alternative. The new *gedeckte mechanik* must have been a more expensive option, and was probably

[174] The Gennaro Fabricatore, dated 1830, in the collection of James Westbrook, shows an immediate correlation to the six-a-side slipper headstock found on *Legnani* model guitars made by various Viennese luthiers.

fabricated outside of the workshop on sub-contract, making it likely to have been an optional extra to the customer's choice of instrument specifications.

Franz Besetzny, formerly a building inspector from Vienna, is known to have received two privileges for improved tuning devices designed for guitars. The first, a five-year *privilege* bestowed on 8 September 1822, voluntarily relinquished early in 1826, was for an elaborate mechanical cog and worm system. From the invention's description, it would appear that the string is first tightened to approximate pitch, secured, and then finely tuned with the cog and 'endless screw' (worm).[175] The second *privilege* was for two years, bestowed on 27 January 1823 and expired in 1825. The *privilege* wording suggests that it was firstly for improving the intonation of the low E string specifically, by using a hook system to lengthen or shorten the string, and secondly for improving the first tuning system by utilising a 'bearing gear' in the cog and worm configuration, which allowed a string to be quickly wound on to the string post, and tightened without the need for it to be locked in place to prevent it slipping backwards.[176] The description of the device in the first *privilege* details locking rings not dissimilar to those defined in Staufer's 1825 *privilege*, and already in use by him. It is possible that, until that date, exclusivity of the invention had already been awarded to Besetzny, which would explain Staufer's apparently late request for a *privilege*, and if that were the case it suggests that specific details between the two designs were the same and protected within the parameters of Besetzny's original *privilege*. That Johann Baptise Girardoni, work leader in the Imperial wool spinning factory at Teeödorf in Lower Austria, also received a five-year *privilege*, on 14 April 1826, for improvements to tuning devices for violins, cellos and guitars, using a system of metal rings and a locking wing nut to secure friction pegs, suggests an innovation that differed enough from Staufer's *privilege* for it to be awarded in its own right. Girardoni's *privilege* was again voluntarily ended early, in 1828.[177]

While it may seem from the amount of extant Staufer guitars, that its production was the workshop's main activity, both the *privileges* bestowed on Staufer and Haidinger for the

[175] *Beschreibungen Der Erfindungen Und Verbesserungen, Fur Welche…..Patent Ertheilt Wurden 1, Welcher Die Priviligien Vom Jahre 1821-1835 Enthalt*, vol. 1 (Wien: 1841), p. 277.
[176] *Beschreibungen Der Erfindungen Und Verbesserungen, Fur Welche…..Patent Ertheilt Wurden 1, Welcher Die Priviligien Vom Jahre 1821-1835 Enthalt*, vol. 1 (Wien: 1841), p. 277.
[177] *Beschreibungen Der Erfindungen Und Verbesserungen, Fur Welche…..Patent Ertheilt Wurden 1, Welcher Die Priviligien Vom Jahre 1821-1835 Enthalt*, vol. 1 (Wien: 1841), p. 278.

Hohlflügel, and those following, granted to Staufer and his son, for improvements to bowed string instruments, show a desire to experiment with instrument making beyond, though including, the guitar. On 25 July 1828, Staufer, together with his son Anton, filed for a five-year *privilege* for improvements to the violin, viola and violoncello. The *Beschreibungen der Erfindungen* details the improvements as:

> The upper bout where the neck is mounted has a same length and width as the lower parts, and the bridge is located in the centre of the body. The acoustic opening (sound hole) is not in the usual form of an 'f', but a shallow crescent. The outer elliptical shape also gives them a different appearance from the usual form.[178]

The Wiener Zeitung reports that on 5 September 1832, Anton Staufer again together with his father, received a *privilege* for an 'invention in the structure of the violins, violas and cellos,' which was, 'voluntarily completed [freely, or non-contentiously surrendered; suggesting release of monopoly of design?] in 1834.'[179] The *Beschreibungen der Erfindungen* describes the *privilege* as improvements to the structure of violins, violas and cellos; the wording is: '[position] the bridge is in the middle of the body of the instrument, which although having a body slightly longer than usual, does not hinder playing technique'. It continues by stating, 'what differentiates this [*privilege*] completely from the *privilege* of 25 July 1828, are the conical shapes with regard to the outer profile.'[180] An extant Staufer violin in the National Music Museum, USA (catalogue number 10028), sheds further light on Staufer's innovations, and questions existing perceptions on the chronology of his design experiments. John Koster, in his museum notes, claims that Staufer designated the letter 'P' on the label of this instrument to indicate its design was based on a drawing by the luthier 'Pagatella' (or Antonio Bagatella), which was published in the *Allgemeine musikalische Zeitung* in 1808.[181] Staufer's violin was not made until 1826. It is striking in appearance with equally proportioned upper and lower bouts, no corners and crescent-moon shaped f-

[178] *Beschreibungen Der Erfindungen Und Verbesserungen, Fur Welche…..Patent Ertheilt Wurden 1, Welcher Die Priviligien Vom Jahre 1821-1835 Enthalt*, vol. 1 (Wien: 1841), p. 278. Translates as 'Descriptions of Inventions'.
[179] *WZ* , vol. 60 (1834) p. 241.
[180] *Beschreibungen Der Erfindungen Und Verbesserungen, Fur Welche…..Patent Ertheilt Wurden 1, Welcher Die Priviligien Vom Jahre 1821-1835 Enthalt*, vol. 1 (Wien: 1841), p. 279.
[181] John Koster, *Inventive Violin Making: Important Acquisitions Enrich Museum's Holdings*, vol. 28, no. 3, America's Shrine to Music Museum Newsletter (August, 2001), pp. 1-3.

holes. Lutgendorff, Haupt, Prochart and others all refer to Staufer's violin making at this time, but consider that the French violinmaker, Chanot, influenced the body shape. Although this influence is evident, the link to Pagatella's design, which predates Chanot's work, is equally as strong.

Fig. 11. Violin by Johann Georg Staufer, Vienna 1826 [Photo: NMM], 10028.[182]

Staufer, in Vienna, was not alone in patenting his musical instrument making designs and innovations, during the first half of the Nineteenth Century. Peter Teufelsdorfer (1784-1845), born and living in Budapest but trained under Geißenhof in Vienna, was another maker working at this time to receive a *privilege* for guitar improvements. This *privilege,* bestowed on 13 July 1829 for duration of two years, details the insertion of a

[182] Violin by Johann Georg Stauffer, Vienna, December 1826. NMM 10028. http://orgs.usd.edu/nmm/Exhibitions/BeethovenBerlioz/BBStauffer.html. 'Experimental model in original condition. Because one is so used to seeing violin upper bouts more narrow than the lower, Stauffer's equalized upper bout appears wider than it actually is, an optical illusion. Board of Trustees, 2001'.

steel bar in the neck to prevent warping; a design could be interpreted as the invention of a non-adjustable truss rod. It also specifies profiling of the fingerboard by adding curvature under the lowest bass string, to allow ease of playing in the Italian style, in which the thumb of the left hand is wrapped around and over the bass side of the fingerboard, to play the lowest string. Additionally the *privilege* makes reference to the sloping shoulders of the upper bout of the *viola d'amour*, suggesting the adoption of this design to the body of the guitar would facilitate access to the upper reaches of the fingerboard.[183] An example of this design can be seen both in a guitar by Nikolaus Georg Reiß, made in Vienna in 1833 [Fig. 13],[184] and one attributed to Johann Georg Staufer from 1830, featured by Sharpe in his book *The Story Of The Spanish Guitar*.[185] Both utilise the gamba-like sloping shoulder design. Sharpe gives the string length on the Staufer instrument as 25.5" (647.7 mm). This is comparable to a Martin OM or Dreadnought model guitar [25.4" (645 mm)], but does not agree with the scale lengths Watchorn gives for Staufer guitars: 610mm or the shorter lengths of 580 – 590 mm for smaller instruments of this period.[186] Watchorn, in his article *Inventing the Modern Guitar*, illustrates a Staufer guitar from 1830 also with gamba-like shoulders, but does not specify its particular scale length.[187]

[183] *Beschreibungen Der Erfindungen Und Verbesserungen, Fur Welche…..Patent Ertheilt Wurden 1, Welcher Die Priviligien Vom Jahre 1821-1835 Enthalt*, vol. 1 (Wien: 1841), p. 278. This guitar made by Reiß, is now in the private collection of Catherine and Bruno Marlat, France.
[184] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age,* p. 92.
[185] A. P Sharpe, *The Story of the Spanish Guitar*, 2nd ed. (London: Clifford Essex Music, 1959).
[186] The string length of the guitar in Sharpe is in all likelihood 645 mm: The Staufer guitar from 1829 in the EUCHMI has a string length of 608 mm, however variations on length within one considered a standard are known, thus 608 mm can be bracketed together with Watchorn's identified standard of 610 mm. Research shows that Staufer used a number of different string lengths, which are given in Chapter 3, Table 1, p. 62 of this thesis.
[187] Ian Watchorn, 'Inventing the Modern Guitar - Johann Georg Stauffer and the Viennese School of Guitar Making', *Lecture Series, 5th Darwin International Guitar Festival, Music School, Northern Territory University* (2002). Watchorn states this guitar is in a Dutch private collection.

Fig. 12.

Fig. 13.

Fig. 12. 'Perfected Legnani' model of guitar, Johann Georg Staufer, Vienna 1830. [Photo: Alex Timmerman].[188]
Fig. 13. 'Perfected Legnani' model of guitar, Nikolaus Georg Reiß, Vienna 1833. [Photo: Catherine and Bruno Marlat].[189]

Certain of Staufer's innovations in string instrument design were applied to both his bowed, and plucked, instruments. Characteristics, such as the adjustable necks featured on some models of guitar, could also be found on his cellos.

Like Mauro Giuliani before him, Luigi Legnani (1790-1877), another Italian guitar virtuoso, exerted a major influence on nineteenth-century Viennese guitar culture. In

[188] Fig. 12. 'Perfected Legnani' model of guitar, Johann Georg Staufer, Vienna 1830. Private collection [Photo: Alex Timmerman].
[189] Fig. 13. 'Perfected Legnani' model of guitar, Nikolaus Georg Reiß, Vienna 1833. Private collection [Photo: Catherine and Bruno Marlat].

1819, the year Giuliani returned to Italy, Legnani gave a recital in Vienna. Krick reports that this performance was a huge success and applauded by the critics.[190] With the virtuosity of Giuliani, the standards of both guitar composition and performance had risen. Legnani proved to be his worthy successor returning to Vienna in 1822 and again in 1833 and 1839, when on each occasion his performances were greeted with universal applause.[191] Besides being a virtuoso guitar player and a singer, Legnani, according to Krick, was also an instrument maker in his own right. Whilst in Vienna after his second tour in 1822, Legnani collaborated with Staufer and Ertl as well as other Viennese makers, such as Nikolaus Georg Reiß, Martin Stoß, and Johann Schustler. According to Bone, it was in this period that Legnani is reported to have frequently visited the workshop of Staufer, which, between 1818-1822 was located at Laimgrube, Nr. 177, and that of Reiß, situated in the same district, at Landstraße, Hauptstraße Nr. 106.[192]

2.3 Instrument Endorsement

Many characteristics of Staufer's *improved*, and then, *perfected*, models of guitar, including; detachable necks with elevated fingerboards, shorter string lengths, mechanical tuners, the Persian slipper headstock design, and the sloping shoulders of the upper bout with the deepest part of the body set at the middle bout, became associated with the endorsement of Legnani, whose name appears on instrument labels. Labels reading 'Nach dem Modell des Luigi Legnani' can be found in Staufer guitars (both by father and son), from about 1825. These include instruments with wooden friction-peg tuners and rounded upper bouts, as well as those with the *gedeckte Mechanik* and sloping shoulders. Bone claims that Legnani instructed both Reiß and Staufer in the construction of this new model of guitar,[193] however, Legnani's name does not appear in any *privileges*, and not one particular model can be exclusively

[190] George C. Krick, 'Luigi Legnani, Guitar Virtuoso and Composer', *Etude*, vol. 59, no. 5 (1941), pp. 351-2.
[191] Giuseppe Gazelloni, 'Luigi Legnani,' ed. L. Macy, *Grove Music Online*, http://www.grovemusic.com. [Accessed 21 October 2007], <http://www.grovemusic.com> His association with Niccolo Paganini is of particular interest. They had become friends, Paganini himself being an excellent guitarist, and planned to appear as a duo in concert. Some biographers have reported that they toured together although these claims appear to be unsubstantiated. 'They planned to play as a duo in a series of accademie …..three contracts, for 7,16 and 23 August 1836…..cancelled by mutual agreement 30 October that year.
[192] Philip J Bone, *The Guitar and Mandolin: Biographies of Celebrated Players and Composers* (London: Schott, 1972), pp. 204-7.
[193] Bone, *The Guitar and Mandolin: Biographies of Celebrated Players and Composers*, p. 206.

associated with him. It seems more likely that discussions took place between musician and maker as to how to improve ease of playing when executing musical passages written in the higher range of the guitar, and to increase the tonal response of the instrument to meet these changing musical requirements. If it is accepted that Legnani was a guitar maker in his own right, he may possibly have used a self-built instrument for performance, which inspired certain Staufer improvements, but it is more likely that an endorsement from Vienna's leading virtuoso was commercially valuable enough for Staufer to present his new designs into guitars he would brand as *Legnanis*. By 1822 the Viennese publishing company Artaria had published Legnani's *36 Capricci per tutti I tuoni maggiori e minori, Op.20*, in which the fifth Capricio opens with the note *d'''*, and necessitates a guitar fingerboard with 22 frets. This extended playing compass, along with a narrow neck and radiused fingerboard to facilitate playing of passages in a higher register, starts to appear on guitars identified with Legnani. Indeed some guitars exist with fingerboards extending to 23 frets.[194] Labels with the Legnani endorsement, usually following the design improvements of the later 'perfected' Staufer models, can also be found in the guitars of Reiß and Stoß. The Reiß guitar from 1833 in Fig. 13 exhibits the characteristics associated with the 'perfected' Staufers of this period,[195] and with labels from both makers showing Legnani's endorsement, it is understandable to see how the generalisation, 'Legnani model', has come about. Lutgendorff declares that Reiß was operating in Vienna between 1820 and 1840, and became a bürger on 21 March 1823.[196] Timmerman differs stating that he had his permit to trade as a student in 1817 and took his *Bürgereid* in 1820,[197] while Prochart declares Reiß was working as a journeyman in 1817 and did not receive his *Bürgereid* until 1823.[198] The *Hauptregistratur* from the *Archiv der Stadt* provides information on Reiß's status and reveals the power still exerted by the guild over instrument production at the beginning of the nineteenth century. It seems that Reiß was a *störer* and had not progressed to the

[194] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age,* pp. 96-97. Timmerman cites the Guitarreclub München, *Festchrift zum VI. Internationalen Guitarrestentage in München,* (1904) 15. This mentions an Italian guitar built by Legnani.
[195] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age,* p. 147.
[196] Lutgendorff and Drescher, *Die Geigen- Und Lautenmacher Vom Mittelalter Bis Zur Gegenwart*, vol. 2, p. 419.
[197] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age,* p. 98 & p. 147.
[198] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, p. 138. Prochart cites ASTW, *Hauptregister* of 1817 for Reiß's date as a *geselle* and Lutgendorff as 1823 for obtaining his *Bürgereid.*

level of *Meister* with his own licensed workshop. The term *Störer*, used to describe his position, categorises those *gesellen* (journeymen), whom the government allowed to trade but who were not guild members.[199] It is not known whom Reiß trained under, and it is possible that he came to Vienna having apprenticed in a workshop situated in another city. This, together with not been able to purchase a *Besitzrecht* (the permit to run an approved workshop, which in turn was necessary to be able to trade as a *Meister*), would also have put him in the category of *Störer*. Whilst he did indeed receive his *Bürgereid* in 1823, there had been a history of objections from the guild from as far back as 1817, when he first applied to work as a *geselle* in Vienna. The guild objected and turned down his application in 1818, although finally rescinding and allowing him to practice in 1819.[200] According to Lutgendorff, in 1843, some twenty years after receiving the *Bürgereid*, guild superintendents were still overseeing his work.[201] The *Hauptregistratur* shows that from 1855 until he stopped working in 1857, his status once more had become that of a *geselle*.[202]

The esteem in which the Viennese public and critics alike held Legnani's musical prowess afforded the maker a certain amount of kudos on having his endorsement. This prestige, printed on an instrument's label, can be seen as a form of advertising, presumably rewarded in increased sales for the maker, and in return, Legnani would also have profited from having his profile raised from this co-operation. According to Lutgendorff Staufer's work was highly regarded. He cites a diary entry for 1821 from a used writing book, which at his time of writing (1922) was in the possession of W. Th. Jaura, as identifying the sale of a Staufer guitar to Professor Shimansky for 32 florins, a sum he describes as, 'a very high price for that period, but understandable when one considers that Stauffer was undisputed as the best Viennese guitar maker of his time'.[203] From the number of extant instruments remaining in collections today, it can be deduced that Staufer's workshop was productive and successful. The features of the

[199] C. R. F Maunder, *Keyboard Instruments in Eighteenth-Century Vienna* (Oxford: Clarendon Press, 1998), pp. 17-19.
[200] ASTW, *Hauptregistratur*, Departmentbücher M, 115 (1819); 4.910; 7.149; 10.628; 11.857; 14.335; 15.644.
[201] Lutgendorff and Drescher, *Die Geigen- Und Lautenmacher Vom Mittelalter Bis Zur Gegenwart*, vol. 2, p. 419.
[202] ASTW, *Hauptregistratur*, Departmentbücher G/S.5 (1855).
[203] Lutgendorff and Drescher, *Die Geigen- Und Lautenmacher Vom Mittelalter Bis Zur Gegenwart,* vol 2, p. 483.

style of guitar he made in association with Legnani were influential not only on his successors and apprentices but also on his competitors as well.

As well as making instruments, the Staufers were for a short time, 1830-36, music publishers.[204]

[204] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age,* p. 98.

Chapter 3 Staufer Workshop Guitars: a Comparison

3.1 Overview

It might be oversimplified to categorise Staufer guitars into three distinct types of model each associated with a particular period of making, but, allowing for design developments that appear concurrently in instruments of the differing forms and overlapping time periods, they can be grouped together into three general styles chronologically: firstly, guitars showing an Italian influence; secondly, those where the waist has become tighter and the back more arched, often with an adjustable neck that may or may not have a Persian slipper headstock fitted with mechanical tuners; and thirdly, those characterised by the introduction of increasing numbers of additional bass strings. Often, but not always, these design changes correspond to *privileges* granted for instrument improvements.

Certain materials are common to both Staufer and other Viennese guitars of this period. Unless otherwise mentioned they are as follows:

Soundboards are of quarter-sawn Spruce (*Pinus spp.*) and usually two-piece and book-matched.

Ribs and back are of sycamore (*Acer pseudoplatanus*), with either flamed or shattered glass figure, usually one-piece and sometimes veneered.

Internal bracing is of spruce, as are the continuous linings.

Neck, peg head (or headstock) and heel assembly is of sycamore blackened to appear as ebony (*Diospyros spp.*).

Fingerboards and bridges are of pear (*Pyrus spp.*), stained dark, with bridges often blackened further.

The heel is ice-cream-cone shaped and scarf-jointed to the neck, and the peg head is spliced with a V-joint to the neck. On the guitars from the first period the neck joins the body between the eleventh and twelfth fret, while on later models at the twelfth.

All instruments with a SAM prefix are from the collection of the Kunsthistorisches Museum [KHM] in Vienna.

Table 1 Staufer Instruments Examined in Chronological Order

Maker	Cat. No.	Year	Strings	String length	Neck	Tuners
G. Staufer	SAM 487	c1805-15	6	634	Fixed	Peg
G. Staufer	SAM 488	c1805-15	6	647.5	Fixed	Peg
G. Staufer	SAM 486	c1805-15	6	611	Fixed	Peg
G. Staufer	SAM 512	c1805-15	6	564	Fixed	Peg
Ertl	SAM 469	1821	6	648	Fixed	Peg
A. Staufer	SAM 674	c1825	6	606.5	Adjustable?	Peg
G. Staufer	SAM 513	1829	6	559	Adjustable	Peg
G. Staufer	SAM 489	1829	6	645	Adjustable	Peg
G. Staufer	3838	1829	6	608	Adjustable	Mechanical
G. Staufer	SAM 490	1830	6	561	Adjustable	Mechanical
A. Staufer	SAM 697	c1840-42	6 + 3	642	Fixed	Mechanical
A. Staufer	SAM 484	c1845	6	642	Adjustable?	Peg
A. Staufer	SAM 485	c1845	6	606	Fixed	Peg
A. Staufer	SAM 1059	c1848	6 + 7	646.5	Adjustable	Mechanical

3.2 First Period: 1800-1829

As previously mentioned, Viennese guitar making at the turn of the nineteenth century was greatly influenced by that of Italian makers centred on Naples.[205] The guitar in Figure 14 is made by Georg Staufer and thought, by its current owner, to date from the very beginning of the nineteenth century, thereby making it one of his first after setting up independently. It not only follows the form of instrument made by the Neapolitan Fabricatore family but is also adorned with similar decorative appointments. The hexagonal lozenges of mother-of-pearl that have been inlaid around the sound hole to

[205] See Chapter 2 on Johann Georg Staufer.

make up the rosette have been repeated inside of the soundboard bindings,[206] and then continued around the edge of the fingerboard extension. While the use of pearl in this way is commonly found on Fabricatores, which often have a high level of ornate decoration, Staufer generally favoured simpler decorative bindings made up of alternating strips of dark and light wood instead. The suggestion then is that this guitar is a high-end model, intended either as a presentation piece or as a commission by a wealthy client, however its style and level of ornamentation clearly shows the Italian influence on Staufer and early nineteenth-century-Viennese guitar making.

Fig. 14. Guitar by Georg Staufer, Vienna c1800. Private collection [Photo: Brigitte Zaczek].

The Italian influence on these first Staufers is also apparent in their size and form with the middle bout being situated halfway along the instrument's body, producing a distinct figure-of-eight shape, which is again reflected in the shape of the peg head. Although Staufer guitars from the first two decades of the nineteenth century generally feature a lower bout, some fifty to sixty millimetres wider than the upper, visually the

[206] See Glossary for a definition of 'binding'.

perceived impression (enhanced by the position of the middle bout) is that they are of almost equal size. Common to both Fabricatores and Staufers of this period are carved vine decorations extending from the bridge and applied to the lower area of the soundboard, and the manner of veneering the back of the neck with alternating black and white stripes.[207]

Fig. 15. SAM 487.

Fig. 16. SAM 488.

Fig. 15. Guitar by Georg Staufer, Vienna c1800-1815. KHM. SAM 487.
Fig. 16. Guitar by Georg Staufer, Vienna c1800-1815. KHM, SAM 488.

Both the Staufers, SAM 487 [Fig. 15] and SAM 488 [Fig. 16], although not dated, are from his first period of making and are probably from the first decade of the nineteenth century. On both, the vine motif is identical to that on Zaczek's more elaborately appointed guitar [Fig. 14]. Predominantly the same, woods are used for the

[207] This was commonly done using strips of ivory or holly, and ebony or a darkly stained wood.

construction SAM 487 and SAM 488. The soundboards are spruce and the backs and sides are flamed sycamore; their bridges, necks and peg heads are of ebonised sycamore.[208] The fingerboard of SAM 487, in contrast to the one-piece ebonised-pear fingerboard of SAM 488, is ebony up until the tenth fret, and from there is extended in darkly stained pear to the sound hole. The decorative bindings and rosette on both guitars are made from alternating strips of dark and lightly coloured woods and (allowing for slight variations in width) follow a seven-ply pattern. The decoration in the bindings then extends around the fingerboard extension, which is itself inlaid into the soundboard.

Although visually these instruments appear to be the same model of guitar, there are differences in string length, body size and method of construction. The string length of SAM 487 is 634 mm,[209] while that of SAM 488 is 647.5 mm resulting in it having a longer body to accommodate this difference. Compared to SAM 487, SAM 488 has wider and more pronounced upper and lower bouts but its body is noticeably shallower (by 8 mm at the shoulders and middle bout, 7 mm at lower bout, and 4 mm at the tail). Their peg heads also differ: that of SAM 487 is longer with its figure-of-eight dimensions echoing the narrower widths of the guitar's bouts. The soundboards of both instruments are on average 2.8 mm thick, supported by four transverse braces, although those of SAM 487 are approximately 3 mm taller, at around 16 mm high. Three transverse braces support the back of SAM 487 and these too are taller than the four fitted to the back of SAM 488. The back of SAM 488, on the other hand, features of an interior spruce lining.

The KHM, which houses these instruments, claims that both were made in the first quarter of the nineteenth century. Certainly they come from Staufer's first period of activity (both clearly show the same Italian influence of form) and prior to the introduction of the adjustable neck design mentioned in the *privilege* of 1822. However, while SAM 487 retains the same string length associated with Italian six-single-string guitars at the turn of the nineteenth century, that of SAM 488 is longer. Its

[208] Ebonised is a term used to mean the blackening of white or pale wood by either painting or applying black polish, usually shellac-based.
[209] The string length of SAM 487 at 634 mm is the same as the Staufer instrument (G.10) presented in *Stauffer & Co.* See Hofmann, *Stauffer & Co., the Viennese Guitar of the 19th Century*, pp. 132-133. The body dimensions between the two have the same ratio between the bouts of 3:2:4, but SAM 487 is 5 mm deeper overall.

body shape differs too, being wider with the back sloping up from a deeper tail to shallower shoulders. SAM 487 resembles an instrument from the turn of the nineteenth century, whereas SAM 488, while retaining most of that era's features, has started to show some variation and development on this model.

SAM 486 [Fig. 17], again from Staufer's early period of making, has the same-shaped body as SAM 487 including its flatter back. Its string length though is shorter at 611 mm with scaled down proportions to its body (somewhat more noticeably in the width of its upper bout and overall length), and the diameter of a smaller sound hole at 78 mm (those of both SAM 487 and SAM 488 are 80 mm) echoes this proportional reduction. Its peg head, on the other hand, is not made smaller and rather follows the dimensions of SAM 488's. The decorative bindings and rosette are in the same style as SAM 487 and SAM 488, as is the lower soundboard vine motif. Compared to SAM 487, the neck on this instrument is shortened by 7 mm to compensate for the difference in string length.

Fig. 17. Guitar by Georg Staufer, Vienna c1800-1815. KHM, SAM 486.

It is hard to date this instrument precisely, except to categorise it in Staufer's first period (although the shorter string length could suggest closer to the start of his second) and to observe that the similarities in the shape of the back and certain proportional relationships of the body follow those perhaps more of SAM 487 rather than SAM 488, but not exclusively. The differences in the instrument illustrate that while Staufer followed an Italian influence in this early period, he was already stepping out of that mould and was experimenting by making guitars with a shorter string length of around 610 mm, a length that would appear frequently on guitars made by him later.

Besides instruments with string lengths of 647.5 mm, 634 mm and 611 mm, Staufer was also at this time making guitars with an even shorter string length. SAM 512 [Fig. 18], which still conforms to the Italian influence of his first period, has a string length of 564 mm. This instrument is likely to be a terz guitar (tuned a minor third higher than standard)[210] According to Buckland the earliest published work for terz guitar was by Von Call in 1807, with Giuliani first mentioning it in 1815.[211] In the first half of the nineteenth century the terz guitar was particularly popular in Vienna with many player-composers such as Giuliani and Diabelli. It remained so into the middle of the century with Mertz, who was primarily associated with the standard guitar and the guitar with extra bass strings, still writing for it. Much of the published music from the period placed it in a duo setting with standard guitar, but it could also be found in trios with combinations of violin, flute and standard guitar.

[210] This particular string length continued to be used on various forms of guitar throughout both Johann Georg and Johann Anton's lifetime.
[211] James Patrick Buckland, .The Nineteenth-Century Terz Guitar: Instrument and Performance Practice' (University of South Carolina, 1998). Giuliani's opus 67 and opus 75 both refer to the use of Terz for the *prima chitarra*. Von Call is also referred to as Leonhard de Call elsewhere in this thesis.

Fig. 18. Guitar by Georg Staufer, Vienna c1805-1815. KHM, SAM 512.

To accommodate its 564 mm string length, SAM 512 features a neck 25 mm shorter than that of SAM 486 (whose 611 mm string length was associated with standard tuning), and a body length reduced by 28 mm. Because the width of the neck at the nut is the same on both guitars, and as a result of its shorter neck, SAM 512's has a wider fingerboard (58 mm as opposed to 55 mm) where it meets the body to maintain the same string spacing at the bridge. The diminishing widths of the different bouts are less exaggerated, with the upper bout almost the same size, and the middle and lower bouts narrowed by 6 mm and 18 mm respectively. The depth of the body is shallower by on average 8 mm with the back gently slope from the tail to the heel. Both the soundboard and back are supported by four transverse braces, which in this instance are all 14.5 mm in height. The peg head, while the same length, is a little narrower than that of SAM 486, and the sound hole is smaller in proportion to the reduced body size. The

decorative bindings, rosette, and carved vine motif extending from the bridge, are almost identical to the three previous instruments. As with the other guitars from this period, the label simply bears the name of 'Johann Georg Staufer in Wien' and is not dated, but it would be fair to suggest, given Von Call's reference to the terz guitar in 1807 together with its use by Giuliani who had settled in Vienna in 1806, that this instrument dates from around the latter part of the first decade of the nineteenth century.

By the end of the 1820s Staufer guitars had started to take on a new form, distinguished by rounder upper bouts and a fingerboard that was no longer inlaid into the soundboard, but rather set flush to, and extending over its surface. SAM 469 [Fig. 19] by Staufer's colleague, Johann Anton Ertl visually suggests the start of the transition from the early Italian influence of the Staufer's first period to the distinctly Viennese form of the second.

Fig. 19. Guitar by Johann Anton Ertl, Vienna 1821. KHM, SAM 469.

According to its label, Ertl made this instrument in 1821. Although it would appear initially to have the same constructional features as the earlier Staufers discussed: the same neck, heel and peg head arrangement with the extension of the fingerboard inset into the top of the soundboard, it differs in that it has more rounded lower bout and tighter waist, resulting in part from its shorter body. Its string length (648 mm) is comparable to that of SAM 488 [the Staufer examined with a string length of 647.5 mm and which appears to date most closely to this instrument], but to facilitate locating the bridge the same distance from the tail, it has a longer neck. It has the same general profile of SAM 488 but is shallower overall by 7 mm. Ertl used the same woods as Staufer in its construction and utilised three transverse braces to support the back, and four the soundboard, but at 15 x 6 mm, they are all slightly larger than those of SAM 488. In comparison the top knot of the figure-of-eight peg head appears more bulbous, with the lower knot less so, but what is more striking in appearance is the lack of the vine decorative motif on to the lower area of the soundboard. The bridge itself shows signs of extended moustaches (now missing) but with no evidence that these would have continued over the soundboard in the manner of the vine decoration commonly used on Viennese guitars from earlier in the century. They appear to have been a much simpler design and one that becomes characteristic of Staufer's second period. The bindings and rosette are of the same materials and pattern as the Staufers, and likewise are extended around the edge of the inset part of the fingerboard. Staufer and Ertl's first *privilege*, specifying improvements to guitar design that included a new metal alloy for the frets, replacing nickel silver and other materials, was granted in 1822. The frets on this instrument are of some kind of metal alloy and not the nickel silver that is evident on SAM 487, probably the earliest Staufer in the KHM collection, and it is likely that both Staufer and Ertl were already using this metal alloy for frets at the time of patenting it's use.

3.3 Second Period: 1829-1842

The KHM has three guitars made by Georg Staufer that fully display design characteristics associated with Staufer's second period of making. The printed label of SAM 513 declares that the instrument is a Legnani model, followed by the hand-written numerical of i527, and states Johann Georg Staufer in Vienna as the maker. Both the address of Stadt 480 and the year of manufacture as 1829, are added in handwriting.[212] The instrument also carries the red wax seal of endorsement embossed with *K.K. Aussch: Priv: Verbesser: Guit: Des J. G. Stauffer in Wien*, an abbreviation of *Kaiserlich und Königlich. Ausschließlich: Privilege:* 'by exclusive Imperial and Royal appointment, patented improvements to the guitars of J. G. Stauffer in Vienna'.

Fig. 20. Label of guitar by Georg Staufer, Vienna 1829. KHM, SAM 513.

[212] 'Nach Dem Modell des Luigi Legnani, i527. Johann Georg Staufer in Wien. Anno 829. Nr. 480'. The full address for Nr. 480 is often referred to as Nächst dem Rothen Turm, Nr. 480. An 'i' appearing in front of a three-figure number in this context indicates one thousand. It is sometimes seen as part of a date on these labels.

It is not certain what the different numerical appearing after Legnani's name refer to, lest they be instrument serial numbers;[213] an 'i' appearing in front of a three-figure number in this context indicates one thousand on these labels.

Fig. 21. Guitar by Georg Staufer, Vienna 1829. KHM, SAM 513.

The difference in form of SAM 513 to the Staufer guitars made at the beginning of the nineteenth century is immediately apparent. The lower bout, even though remaining slightly larger, has taken on the same curvature as the upper, while the waist appears tighter. The vine decoration to the soundboard has gone and the bridge is simplified with elegant moustaches. The rosette and binding patterns have been reduced to five alternating dark and light strips. Whilst this instrument retains the figure-of-eight peg head arrangement commonly found on earlier Staufers, the rest of the neck construction

[213] That they are instrument serial numbers is the view of Hofmann in *Stauffer & Co.* and is held by this author.

is revolutionised by being adjustable at the heel for regulation. Its fingerboard features twenty-two frets and is elevated above the shoulders of the upper bout to extend over the leading edge of the sound hole. A simple bolt device adjustable with a key passes through the heel, which also pivots on a locating dowel, and screws into a nut set in the neck block. The result of string tension pulling the neck forward is counteracted by tightening the bolt into the block, thereby changing the relationship of the heel and neck angle and thus lowering the action. The string length at 559 mm is short, making it likely designed for terz tuning. Compared with the earlier terz guitar SAM 512, this instrument has a slightly shorter but much wider body: the bouts increased by 30 to 35 mm overall. Although a little deeper at the tail, it is considerably shallower at the shoulders, sloping down from the bridge to the neck through the surface plane of the soundboard to allow for the floating fingerboard. The diameter of the sound hole has also increased commensurably to the size of the body. SAM 513 has a one-piece soundboard supported by three transverse braces measuring 16.5 x 8.5 mm, and a one-piece back supported by three transverse braces measuring 21 x 9 mm. As is common to most Staufers, the decorative end-graft is stained pear and the endpin is ebony.

Fig. 22. Guitar by Georg Staufer, Vienna 1829. KHM, SAM 489.

SAM 489 [Fig. 22] is similar, both visually and in incorporating certain design features first mentioned in the 1822 *privileg*e. Built in 1829 its formal characteristics place it Staufer's second period, but it differs from SAM 513 in having a longer string length of 645 mm. Their necks are the same adjustable design with a fingerboard elevated above the soundboard, and both join the body at the twelfth fret (which has become standard in this second period). SAM 489's fingerboard is fitted with twenty-one metal alloy bar frets. Compared to SAM 513, the volute and heel are 2 mm deeper, the neck narrower overall by 1.5 mm, and commensurately longer to compensate for the increased string length. While they are close in size, with the same 80 mm sound-hole diameter, their

body shape differs somewhat. SAM 489, like SAM 513, has more of an hourglass appearance with a tighter waist, although they take on the same profile when viewed from the side. The soundboard of SAM 489 has an average overall thickness of 2.7 mm and is supported by three transverse braces. Those in the upper and lower bouts are some 15 mm in height, while the brace in the middle bout just behind the sound hole differs in having a square profile and measuring only 5 mm in height.[214] Three transverse braces, some 19 mm in height, support the back. The decorative rosette and bindings are of the five-ply pattern, and the bridge, like that of SAM 513, is simple and elegant with fine moustaches orientated towards the tail of the instrument. The label of SAM 489 [Fig. 23] is the same as that found on SAM 513, specifying a Legnani model, dated by hand but with the different numerical of i6i9, and the instrument bears the red wax seal of the approved *privilege*.

Fig. 23. Label of guitar by Georg Staufer, Vienna 1829. KHM, SAM 489.

[214] Braces in Staufer's commonly have a domed profile.

The Edinburgh University Collection of Historic Musical Instruments describes the guitar in figure 24, made by Georg Staufer in 1829, as a 'Legnani' model.[215] Its label [Fig. 25] is identical in style to both those of SAM 489 and SAM 513 (except for the numerical i496 after Legnani), and again the guitar shows all the characteristics associated with both Staufer's second period of making and Legnani's endorsement.

Fig. 24. Guitar by Georg Staufer, Vienna 1829. Cat.3838. [Photo: EUCHMI]

[215] This instrument is in the Edinburgh University Collection of Historic Musical Instruments [EUCHMI], catalogued as 3838.

Fig. 25. Label of guitar by Georg Staufer, Vienna 1829. Cat. 3838. [Photo: EUCHMI]

EUCHMI 3838 has the same body shape as both SAM 513 and SAM 489, only differing fundamentally in two aspects: firstly, with a string length of 608 mm, it has neither the shorter length of a terz guitar as in SAM 513, nor the longer length of SAM 489; and secondly, unlike both of those instruments, which have friction peg tuners, it is equipped with six-in a-line mechanical tuners inset into a Persian slipper headstock. Apart from a body length that is proportionate to its string length, and small variations in width and depth relating to overall size, EUCHMI 3838 follows a form that is almost standardised around 1829, featuring improvements that are outlined in the 1824 patent including the adjustable neck design.

Comparing labels of Staufers beginning from around 1827, the extra numerical in addition to a date and workshop address, suggests a serial number for each instrument. The label [Fig. 26] of another examined Staufer in the KHM from this period, SAM 490, is also identical to those of SAM 513, SAM 489 and 3838, but also gives 1830 as the year of production and this time bears the numerical i8ii after Legnani's name.

Fig. 26. Label of guitar by Georg Staufer, Vienna 1830. KHM, SAM 490.

This label can also be compared to that of another Staufer dated 1830 [Fig. 27].[216] Again the two labels are the same, save for an additional signature from Georg Staufer himself, and a different numerical of 2022.

Fig. 27. Label of guitar by Georg Staufer, Vienna 1830 [Photo: Dorotheum], Auction Lot 213.

[216] Auctioned in Vienna by (www. Dorotheum.com), Lot 213.

If speculatively, the numerical were to refer to the number of the instrument produced (with ‘i’ being substituted by the figure ‘1’), the difference between the numbers i496, i527, i6i9, i8ii and 2022 would suggest that the Staufer workshop was producing between ninety and two hundred instruments a year, and during the years of 1829 and 1830 as many as two hundred and fifty a year.

With SAM 490, Staufer further developed the form of guitar he had established with SAM 513 and SAM 489. Its shape still features the hourglass figure, but the shoulders being visually reminiscent of the viola-da-gamba, are sloped away from where the neck joins the body to allow greater access to the upper reaches of the fingerboard. The ribs are scalloped and flow into the conical shape of the heel at the neck joint. As with EUCHMI 3838 it features a Persian slipper headstock incorporating mechanical tuners.

Fig. 28. Guitar by Georg Staufer, Vienna 1830. KHM, SAM 490.

While the slipper-style headstock fitted with differing versions of the enclosed mechanical tuner design appears on some Staufers from as early as the middle of the second decade of the nineteenth century,[217] it is more commonly associated, although not exclusively, with instruments featuring adjustable necks and elevated fingerboards. SAM 490 has a 561 mm string length and a fingerboard equipped with twenty-four metal alloy frets. If tuned a minor third higher as terz, this would give this guitar the capability of producing a highest note of *g'''*. It is constructed from the standard materials already mentioned. Internally, the three 23 mm high transverse braces supporting its back are noticeably taller than the three 15 mm braces to the soundboard. The rosette and binding decoration, as well as the bridge are all of same design as SAM 513 and SAM 489. Timmerman refers to this version of Staufer guitar (whether in terz or standard form) as the 'perfected' Legnani model, and as such it represents the evolution of his making in the second period.

The guitars with extra bass strings predominantly made by Georg Staufer's son Anton, herald the form of instrument most associated with the third era of the workshop's guitar production. Anton Staufer was born in 1805 and apprenticed to his father probably by 1820, and was quite possibly producing guitars in his own right soon after that date. Timmerman has identified a seven-string guitar (one extra bass) made by him in 1827, at a time when the workshop was still very much engaged in the production of the six-string guitar in the style of SAM 489 and SAM 490. The production of instruments with extra bass strings at this relatively early date highlights continuing developments in design that resulted in a new model of guitar that is associated with the third era of production but overlapped chronologically with the previous era.

Conversely, SAM 674 in the KHM is very likely an earlier Anton Staufer six-single-string guitar made before the seven-string instrument identified by Timmerman. Its label [Fig. 29] is inscribed with 'Nach dem Modell des Luigi Legnani. J. A. Staufer jun. in Wien', identifying him as the maker.

[217] See Johann Georg Staufer chapter in this thesis. Fig. 8: Lateral Tuners from Stauffer workshop guitar, Christian Friedrich Bauer, c1815 (Private collection of Alex Timmerman, The Netherlands).

Fig. 29. Label of guitar by Anton Staufer, Vienna c1825. KHM, SAM 674.

Certain observations can be made regarding this label: namely, that it is not dated, has no workshop address, model, serial number or numerical, and that it's maker is referred to as 'J. A. Staufer jun'. This spelling of 'Staufer' is unusual on Anton's labels, which rather use 'Stauffer'. The difference in spelling may be of no significance (many of Georg's labels have the spelling of Staufer with one 'f', but can also be found spelt as 'Stauffer' with two), however the use of 'jun' together with the other apparent lack of details on this particular label suggests an early Anton instrument, and perhaps one from during or soon after his apprenticeship.

Fig. 30. Guitar by Anton Staufer, Vienna c1825. KHM, SAM 674.

The first impression of the instrument [Fig. 30] is that it lacks the elegance of his later work. This could be partly due to its considerable reparations and possible alterations. A second internal label is present showing that Ignaz Johann Bucher (the son of Johann Bucher (1) one of Georg Staufer's early pupils) did repair work on the instrument in 1919 [Fig. 31].

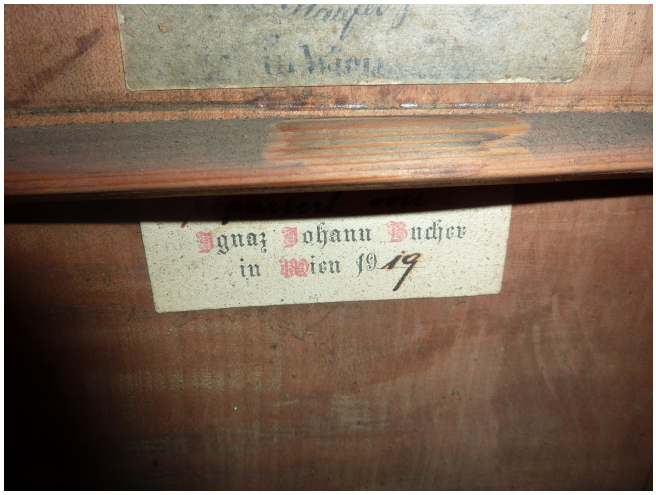

Fig. 31 a. Repairer's label on guitar by Anton Staufer, Vienna c1825. KHM, SAM 674.

The bridge has been moved back towards the tail of the guitar, and (if original) appears less well formed and oversized than those found on other guitars by Anton Staufer.

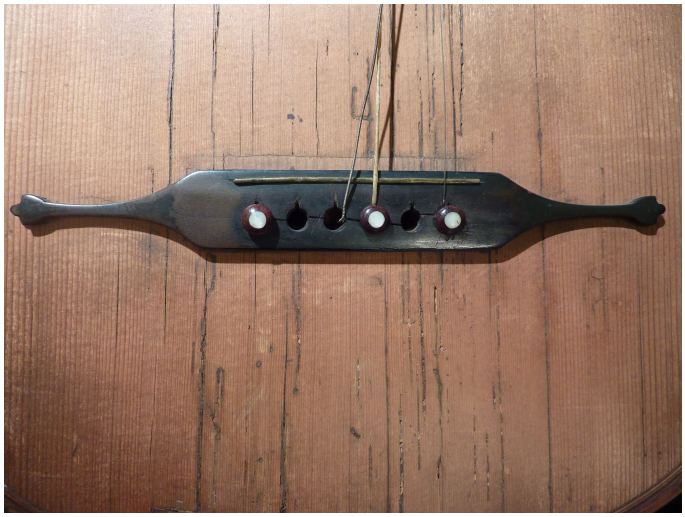

Fig. 31 b. Bridge of guitar by Anton Staufer, Vienna c1825 (KHM), SAM 674.

The decision to change the bridge position may have resulted from resetting and fixing the neck, which could originally have been adjustable. If this had happened and the neck (with the frets installed) had been shortened at the heel to body joint, even only minimally, then the bridge would need to have been moved closer to the tail to produce the correct string length. The heel now features a strap button located where the key would have regulated the neck angle, giving further weight to the argument that the

neck was formerly adjustable. The fingerboard (equipped with twenty-one metal alloy frets and joining the body at the twelfth fret), if once elevated, is now glued flush to the top of the soundboard and extends on the treble side over the leading edge of the sound hole. The shape of the instrument's body is somewhat of a departure from the other KHM Staufer guitars (both by father and son). In comparison to the lower bout, which has the more rounded appearance of Staufers after 1820, the upper bout is disproportionally small. A slower curve from the middle to the lower bout gives the impression of a mixture of first and second period Staufer design, though the depth of the body, being shallow at the shoulders with defined arching of the back in the middle and lower bouts, is more akin to the second period. The back is one-piece, lined internally with spruce, and supported by three 19 x 10 mm transverse braces. The sides are of solid sycamore and unlined. The soundboard, which has been heavily repaired, is two-piece and supported by three 15 x 6 mm transverse braces. The rosette and binding decoration conform to the five-ply pattern on other Staufers. Compared to other guitars made by Anton from the period starting in 1827, when labels identify him in partnership with his father, SAM 674 seems less well balanced in shape and of a form in an earlier stage of development.

Westbrook documents a Staufer guitar whose label, although damaged where the address would have been written, is of the style as those used while the workshop was operating from Stadt 480.[218] Clearly visible are the words 'Stauffer & Comp.' unfortunately the red wax seal has been applied over the initials obscuring them. According to archival sources the father's business was registered as 'Johann Georg Stauffer & Comp' at Stadt 480 between 1827 and 1828,[219] but so was the son's with his labels often bearing the inscription 'J. A. Stauffer & Comp',[220] making it impossible to be certain which Staufer this label refers to. However, as the numerical i420 is clearly written on the label, and the guitar EUCHMI 3838 from 1829 has a numerical of i496, it is plausible that this instrument could date from around the second half of 1828.

[218] Westbrook, *The Century That Shaped the Guitar: From the Birth of the Six-String Guitar to the Death of Târrega*.
[219] *Adressenbuch Der Handlungsgremien Und Fabriken in Der K.K. Haupt- Und Residenzstadt* 1827, p. 238; 1828, p. 90; *WZ*, 3 September 1828, Amtsblatt/415.
[220] Ottner, *Der Wiener Instrumentenbau 1815-1833*.

An Anton Staufer guitar this period does have a label showing the clearly printed inscription of ‘von J. A. Stauffer & Comp’ (Fig. 32).

Fig. 32. Label of guitar by Anton Staufer, Vienna 1830. Private collection [Photo: Westbrook].

The label states that the instrument is a Legnani model and carries the red wax seal associated with an approved *privilege.* It bears Anton Staufer’s signature (now spelling Stauffer with a double ‘f’), and although not dated, it is inscribed with the numerical i809 suggesting it was made around 1830. The guitar itself follows the form of EUCHMI 3838 made by Georg Staufer: featuring an adjustable neck, slipper headstock and mechanical tuners, and a tightly wasted hourglass-shaped body. Although it is made from standard Staufer materials, the figure in the sycamore used for the back is exceptional, visually resembling shattered glass. The neck in this case is not simply ebonised but has been inlaid with ebony and ivory in a chequered design (Fig. 33).

Fig. 33. Label of guitar by Anton Staufer, Vienna 1830. Private collection [Photo: Westbrook].

The guitar also has very finely carved moustaches extending from the bridge and applied to the soundboard (Fig. 34).

Fig. 34. Bridge of guitar by Anton Staufer, Vienna 1830. Private collection [Photo: Westbrook].

The string length of this instrument (560 mm) implies that it was designed for use as a terz guitar. Comparisons with SAM 490 (the terz also made in 1830 but by Georg Staufer), show a consistency in size and string length suggesting that Anton's guitar was a regular production model; enhanced by the choice of particularly pleasing woods, a finely carved bridge, and ornate neck decoration that had been by special order.

Table 2 Staufer Terz Comparison

	Anton Staufer Terz	Georg Staufer Terz
String length	560 mm	561 mm
Nut Width	43 mm	43.5 mm
Body Length	393 mm	406 mm
Lower Bout	291 mm	295 mm
Upper Bout	228 mm	231 mm
Body Depth at Shoulders	62 mm	62.5 mm
Body Depth at Tail	81 mm	77.5 mm

3.4 Third Period: 1842-c1848

SAM 484 [Fig. 35] and SAM 485 [Fig. 36], made by Anton Staufer between around 1843 and 1848 respectively, have an outwardly similar appearance and form.

Fig. 35. SAM 484.

Fig. 36. SAM 485.

Fig. 35. Guitar by Anton Staufer, Vienna c1843-1848 (KHM), SAM 484.
Fig. 36. Guitar by Anton Staufer, Vienna c1843-1848 (KHM), SAM 485.

Both instruments have a string length of 606 mm and although SAM 485 has a slightly narrower upper bout and is slightly less deep at the tail, both have similar body profiles: shallow at the shoulders and arched over the back of the lower bout with the relationship between upper and lower bouts more balanced than with the earlier SAM 674. Their neck measurements are almost identical, differing only where that of SAM 484 is longer to accommodate the extra string length. The construction of the neck, heel, and the peg head are the same. Both have a stained pear fingerboard, installed with twenty-one metal alloy frets, that extends over and flush to the top of the soundboard with the bass side cut away diagonally. Their necks are now fixed, but as SAM 484's fingerboard continues over the leading edge of the sound hole on the treble side (unlike that of SAM 485, which ends at its leading edge), it possibly once featured an adjustable neck.

Anton used the same materials for the component parts of his instruments as his father. Internally three transverse braces measuring about 21 x 7.5 mm support the backs of both SAM 484 and SAM 485. The bracing to the soundboard differs between the two, though: SAM 485 has four 7.5 mm high transverse braces, and an additional 2 mm thick spruce reinforcing strip along the centre seam, while SAM 484 has three taller transverse braces and no reinforcing centre strip. Both instruments have an 84 mm diameter sound hole and the same five-ply rosette and binding decoration. The bridges (of stained pear then ebonised) are the same and extend into elegant and restrained moustaches with their ends towards the tail of the instrument.

Fig. 37. Front view of SAM 484.

Fig. 38. Front view of SAM 485.

Their labels are of the same style, being signed ‘Joh. Anton Stauffer. Wien. Stadt 1100’ and countersigned by Carl Gerold, with the additional hand written numerical of 4656 for SAM 484, and 4554 for SAM 485.

Fig. 39. Label of guitar by Anton Staufer, Vienna c1843-1848 (KHM), SAM 484.

Fig. 40. Label of guitar by Anton Staufer, Vienna c1843-1848 (KHM), SAM 485.

Do the numerical on these refer to production numbers? At only one hundred and two apart, it seems quite possible and would tie in with the theory already offered concerning numerical on the labels of SAM 513, SAM 489, SAM 490, Lot 213 and EUCHMI 3838. If the different numerical are indeed designated instrument identification numbers, then SAM 485 was probably made nine months to a year earlier than SAM 484, and in relation to information evident from comparing other labels,[221] both were likely to have been made closer to 1845 than 1843. Alongside the maker's name, the labels inform us that they were made when the workshop was in the Bürgerspital at Stadt 1100. Carl Gerold, the other name that appears, countersigned the

[221] See in particular Fig 41, the label of the Anton Staufer *baßgitarre* SAM 697.

labels of Staufer instruments at this time to guarantee their authenticity. According to Junker, Carl Gerold (1783-1854) was a Viennese printer who in 1816 introduced the use of lithography into Austrian book printing and battled against the unlawful reproduction of German works in Austria.[222] The printed part of the labels translates as:

> As many are manufactured falsely bearing his name, this is to testify to the authenticity of this instrument as manufactured by the above with the hand-written signature of Carl Gerold.[223]

Timmerman speculates that Gerold may have been a business partner to the Staufers, but equally he may simply have provided his reputation as a leading figure in the Viennese printing industry with strong views on copyright to endorse their instruments, while at the same time supplying them with his lithographic services.

SAM 697 [Fig. 42] is a nine-string guitar (three extra bass) made by Anton Staufer, probably sometime around 1840 and before 1842, with a label again countersigned by Gerold, stating:

> This instrument has been manufactured by the above, testified, Carl Gerold.[224]

The label in this case carries the earlier workshop address of Wien, Stadt 480, together with the numerical 408i.[225]

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[222] Carl Junker, *Das Haus Gerold in Wien, 1775-1925* (Wien: C. Gerold's sohn, 1925); *Das Große Buch Der Österreicher – 4500 Personendarstellungen in Wort Und Bild* ed. W. Kleindel & H. Veigl (Wien: Verlag Kremayr & Scheriau, 1987). p. 615.

[223] Original printed wording of labels on SAM 484 and SAM 485: Da Viele von Obigem nicht verfertigte Instrumente fälschlich mit seinem Namen bezeichnet sind, so wird die Echtheit dieses, so wie ienes jeden von Obigem verfertigten Instrumentes bezeuget durch die eigenhändige Unterschrift von Carl Gerold.

224 Original printed wording of the label in Johann Anton Staufer nine-string baßgitarre SAM 697, with hand-written signature of Gerold, Dass dieses instrument vom Obigen verfertiget worden ist, bezeuget Carl Gerold.

[225] The Staufer workshop was located at Stadt 480 until 1842, moving to Stadt 1100 in 1843 (excepting the venture in Kashau concurrently in that year). The label also makes no mention of the instrument being a 'Legnani' model, as is commonly found on Staufer instrument labels from the earlier period at Stadt 480.

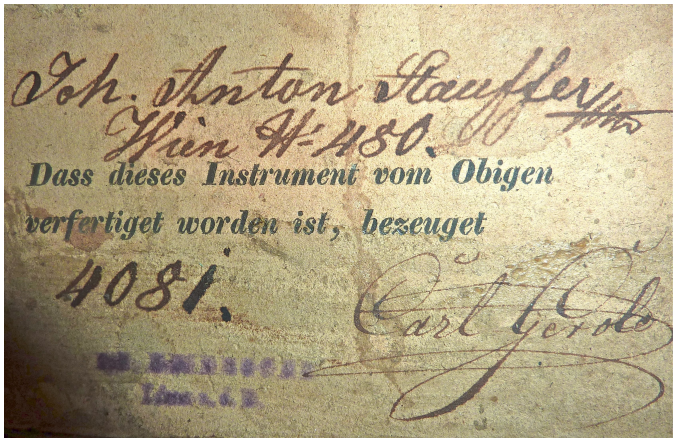

Fig. 41. Label of guitar by Anton Staufer, Vienna c1840-1842 (KHM), SAM 697.

Like other Staufers, SAM 697 has a two-piece book-matched spruce soundboard, one-piece flamed sycamore back and sides, ebonised sycamore neck assembly, stained and ebonised pear fingerboard and bridge. It is equipped with twenty-one metal alloy frets and the neck joins the body at the twelfth fret.

Fig. 42. *Baßgitarre* by Anton Staufer, Vienna c1840-1842 (KHM), SAM 697.

An ebonised sycamore bar runs from the shoulders of the instrument on the bass side to support the extension of the headstock that receives the three sub bass strings. The headstock itself is a slotted design, fitted laterally with mechanical tuners.

Fig. 43 a.

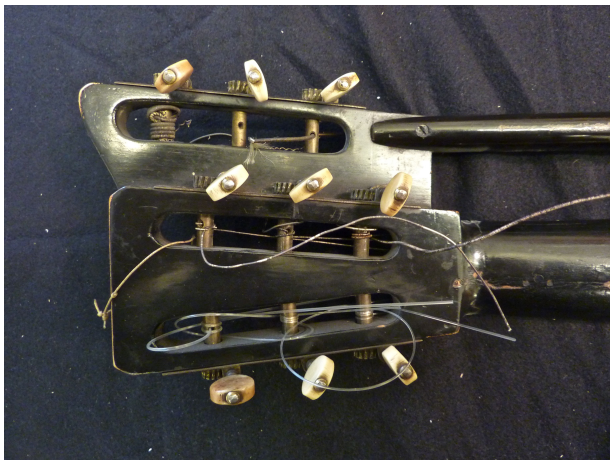

Fig. 43 b.

Fig. 43 c.

Figs. 43 a-c. Tuners, *Baßgitarre* by Anton Staufer, Vienna c1840-1842 (KHM), SAM 697.

Apart from the headstock and bridge, both of which are designed to accommodate the three additional bass strings, this guitar follows the same form and has almost identical

proportions to the six-single-string guitar, SAM 484. The length of the sub bass strings is uniformly 669 mm from the nut to saddle and the string length of the standard strings (like SAM 484) is 642 mm. The internal bracing between these two instruments differs only in that SAM 697 has an extra fourth transverse brace supporting the soundboard. The rosette, and bindings are again the standard Staufer appointments. The bridge (which if original) is rectangular without any moustaches, and is offset from the centre line of the guitar to accommodate the extra bass strings.

3.5 Anton Staufer's *kontragitarre*

SAM 1059 [Fig. 44 a], again built by Anton Staufer and categorised in the KHM as a *kontragitarre*, is equipped with thirteen single strings (six standard plus seven bass) and as exemplifies the developments in Viennese guitars with extra bass strings over a twenty-year period (their evolving state evident in the earlier *bassgitarre* SAM 697). From as early as 1827, an extra sub bass string had started to appear on some Staufer instruments, with subsequently two, three, and then by the mid-nineteenth century, four extra basses being added by makers of this form of the guitar.[226] While it is possible that one of the journeymen trained by the Staufers such as Shenck or Sherzer, already producing guitars with extra bass strings might have had a hand in the construction of this instrument, SAM 1059 nevertheless bears a Staufer label, and in featuring a full chromatic sub-bass range must be one of the earliest forms of the *kontragitarre*.

Even with some eight to ten years between the making of SAM 697 and SAM 1059, there is a marked development in the form of the latter. The body immediately appears more substantial and wider in the middle with larger upper and lower bouts. Although its depth is comparable to the earlier *bassgitarre* SAM 697, the shoulder area of the top in the upper bout is designed to slope downwards quite considerably to the neck block, allowing the extended fingerboard free elevation on both the treble and bass sides.

[226] See Chapter 5.1, p.154 in this thesis, where Timmerman gives an example of a guitar by 'J. A. Stauffer & Comp.'

Fig. 44 a. *Kontragitarre* by Anton Staufer, Vienna c1848 [Photo: KHM], SAM 1059.

Even though this particular design is in common with the later Legnani model of guitar such as SAM 490 made by Georg Staufer, here it appears more accentuated, and allows for the neck to be angled forward slightly.

Fig. 44 b. Side view of *kontragitarre* by Anton Staufer, Vienna c1848 (KHM), SAM 1059.

Although the same woods common to other Staufers are used in construction, the body (apart from the soundboard) has been stained to resemble rosewood, and while the neck, heel and headstock assembly is blackened sycamore, the fingerboard for the standard six strings is ebony and not pear. The fingerboard is fitted with twenty-one metal alloy frets that are noticeably domed, and pearl dots mark the third, fifth, seventh and tenth frets. Like many Staufers, the rosette and binding decoration is a five-ply alternating black and white pattern. The ebonised bridge (placed centrally unlike with SAM 697) is wide to accommodate all the strings, measuring in the main area 160 x 24.5 mm and extending to a total width of 258 mm to include its tapered ends.

Fig. 44 c. Bridge of *kontragitarre* by Anton Staufer, Vienna c1848 (KHM), SAM 1059.

Internally, three 21 x 8 mm transverse braces support the back and four measuring 10 x 10 mm the soundboard. A mild steel rod of 9.5 mm in diameter runs lengthwise from the end block to the heel block holding the sides of the instrument in compression.

The standard strings have a length of 646 mm, which is the same as the longer string length found on C. F. Martin's dreadnought and orchestral model guitars introduced in the early twentieth century.[227] Although the sub basses are not fretted and thus do not have to conform to a tuning temperament, they have small individual ebony nuts situated just after their respective tuner string posts, resulting in a different string length for each [Fig. 46 a].

[227] Comparisons of string lengths between Staufer instruments and his pupil C. F. Martin, together with developments in American guitar technology and the migration of Viennese design will be discussed further in Chapter 7.

Fig. 45 a. View of sub bass headstock on *kontragitarre* by Anton Staufer, Vienna c1848 (KHM), SAM 1059.

The entire headstock appears to have been carved from one piece of sycamore and v-jointed to the two necks. It is fitted with mechanical tuners for both the standard and sub bass strings, their workings inlaid into the headstock from the rear and covered with plain nickel silver plates [Fig. 46 b]. The two necks come together at the heel, which is an altered conical shape and is fitted with the Staufer clock key adjustable mechanism [Fig. 46 c].

Fig. 45 b. Rear view of headstock on *kontragitarre* by Anton Staufer, Vienna c1848 (KHM), SAM 1059.

Fig. 45 c. Heel of *kontragitarre* by Anton Staufer, Vienna c1848 (KHM), SAM 1059.

The label declares the maker as Anton Staufer at the workshop address of Stadt 1100. It bears a testimony of originality, longer than previously affirmed on the labels of both SAM 484 and SAM 485, again countersigned by Carl Gerold. It also carries the additional numerical of 4923.

Many of this instrument's design features also appear on the guitars with extra bass strings made by Staufer's pupils Shenck and Sherzer.[228]

3.6 Chapter Conclusions

SAM 490 has a 561 mm string length and a fingerboard equipped with twenty-four metal alloy frets. If tuned a minor third higher as terz, it would have the capability of producing a highest note of *g'''*. With its sloping shoulders Timmerman refers to this version of Staufer (whether in terz or standard form) as the 'perfected' Legnani model, and as such it represents the culmination of Staufer's design in the second period.

Timmerman has identified a seven-string guitar (one extra bass) made by Anton Staufer in 1827, at a time when the workshop was still very much engaged producing the six-

[228] These will be addressed in Chapter 5 of this thesis.

string guitar that followed the form of SAM 489 and SAM 490. The design of instruments with extra bass strings at this relatively early date precursors continuing developments that resulted in a new model of guitar associated with the third era of Staufer production: the *kontragitarre*. Categorised in the KHM as a *kontragitarre*, Anton Staufer's instrument SAM 1059 [Fig. 44 a] is equipped with thirteen single strings (six standard plus seven bass) and exemplifies the developments in Viennese guitars with extra bass strings over a twenty-year period (their previous state of evolution evident in the earlier *bassgitarre* SAM 697). From as early as 1827, an extra sub bass string had started to appear on some Staufer instruments,[229] with subsequently two, three, and then by the mid-nineteenth century, four extra basses being added by makers of this form of the guitar. While it is possible that one of the journeymen trained by the Staufers such as Shenck or Sherzer, already producing guitars with extra bass strings might have had a hand in the construction of this instrument, SAM 1059 nevertheless bears a Staufer label, and in featuring a full chromatic sub-bass range must be one of the earliest forms of the *kontragitarre*.

[229] See Chapter 5.1, p.154, in this thesis, where Timmerman gives an example of a guitar by 'J. A. Stauffer & Comp.'

Chapter 4 Johann Georg Staufer's Pupils and Contemporary Viennese Makers

4.1 Staufer School Chronology

Johann Georg Staufer	1778 – 1853
Associate Makers	
Johann Anton Ertl	1776– 1828
Maximilian Haidinger	1784 –1827
Prominent Pupils and Journeymen	
Anton Mitties	1791 – 1870
Johann Bucher	1792 – 1856
Bernard Enzensperger	1778 - 1865
Christian Friedrich Martin	1796 – 1873
Andreas Jeremias	1797 – 1838
Friedrich Schenk	c1800 – c1875
Philipp Friedrich Wolf	1801 – 1843 (after)
Johann Gottfried Scherzer	1802 – 1870
Johann Anton Staufer	1805 – 1871

Alongside Georg Staufer, string instrument makers producing guitars in Vienna and neighbouring Budapest and Prague in the first half of the nineteenth century, include: Bernhard Enzensperger, Nikolaus Georg Reiß, Peter Teufelsdorfer, Martin Stoß, Ambrose Joseph Bogner, Franz Brunner, Franz Charwath, Franz Feilnreiter (and his son Ferdinand Feilnreiter), Anton Fischer (and his sons Georg and Gottfried Fischer), Johann August Schuster, Joseph Klimits, Matthius Daum, Johann Baptiste Schweister, Johann Michael Rudert, Franz Seraph Schmidt, Andreas Zettler and Staufer's colleague, Johann Ertl.[230]

[230] Rudolf Hopfner, *Wiener Musikinstrumentenmacher 1766-1900: Adressenverzeichnis Und Bibliographie* (Tutzing: Schneider, 1999).

In 1811, the Wiener Zeitung reported that Staufer had offered to voluntarily donate ten percent of his business earnings to the *Bancozettel-Tilgungsfonds*,[231] and that inspired by this example his five apprentices: Johann Götz, Johann Buckschek, Franz Fink, Bernhard Enzensperger and Mathias Hametter pledged one gulden per week from their income for the same purpose. Additionally known prominent pupils of Staufer throughout the course of his working life (although the announcement in the Wiener Zeitung [2.1.1811] suggests there were numerous others at any one time) were his son Johann Anton, Johann Bucher, Anton Mitteis, Christian Friedrich Martin, Andreas Jeremias, Friedrich Schenk, Philipp Friedrich Wolff and Johann Gottfried Scherzer.

4.2 Pupils

4.2.1 Philipp Friedrich Wolff

In Wolff's case, his association with Staufer is likely to have been in piano construction, possibly in relation to Staufer and Maximilian Haidinger's collaborative invention of the *Hohlflügel*. Ottner and Haupt both record Wolff (1801-after 1843) as a Viennese piano maker who first applied for a licence to operate as a journeyman in 1829 (received in 1830, the following year). Later in 1843, he took his oath of citizenship while resident at Wieden 762.[232] According to Ottner, Haupt and Clinkscale, Haidinger (1784-1827) had applied unsuccessfully for a builder's licence as a piano maker first in 1817 and then again in 1824 and 1826 but with the same result. He was however, granted a five-year *privilege* with Staufer in 1824 for their invention of a piano with a curved keyboard named the *Hohlflügel*.[233] Ottner lists Georg Staufer as a piano maker under a different heading to Johann Georg Staufer the string instrument maker, but it is extremely likely they are the same person.[234] Given the date Wolff acquired his

[231] Wiener Zeitung, 2 January 1811. *Bancozettel* was paper banknotes, and the *Bancozettel-Tilgungsfonds* was an attempt to curb paper money inflation; Lorenz, 'Was Christian Friedrich Martin Stauffer's Apprentice?', *Stauffer Miscellanea*.
[232] Helmut Ottner, *Der Wiener Instrumentenbau 1815-1833*. Tutzing: Schneider, 1977; Helga Haupt, *Wiener Instrumentenbauer Von 1791 Bis 1815*; Martha Novak Clinkscale, *Makers of the Piano,* vol. 2, 1820-1860 (Oxford: Clarendon, 1998). The oath of citizenship is the *Bürgereid*.
[233] Helmut Ottner, *Der Wiener Instrumentenbau 1815-1833*. Tutzing: Schneider, 1977; Helga Haupt, *Wiener Instrumentenbauer Von 1791 Bis 1815*; Martha Novak Clinkscale, *Makers of the Piano,* vol. 1, 1700-1820 (Oxford: Oxford University Press, 1993).
[234] Ottner, *Der Wiener Instrumentenbau 1815-1833*.

journeyman status and as Haidinger (unlike Staufer) had no operating licence, it is conceivable that Wolff was employed by Staufer (rather than Haidinger) to help specifically on the *Hohlflügel* piano collaboration. On the other hand, Wolff may well have served his apprenticeship to Staufer as a string instrument maker, as according to Prochart, in 1841 he was actively looking for employment as a violinmaker and not as a piano maker.[235] Wolff apparently gave up looking for vacancies as a violinmaker two years later in 1843 and Vannes reports that his work in this field was rather amateurish.[236] In 1829, Staufer and Haidinger made an unsuccessful request to an un-named magistrate for further associated funding of 1,000 guilders for the *Hohlflügel*,[237] and then applied for a further five-year *privilege* in 1839.[238] Apart from his activities with Haidinger there is no evidence that Staufer was particularly entrepreneurial otherwise in piano production. However, his associations with both Haidinger and Wolff (who is known retrospectively more in his capacity as a piano maker rather than as a violinmaker) is indicative of Staufer's willingness to explore musical instrument making and involve himself with instrument makers beyond his own established area of expertise.

4.2.2 Johann Gottfried Scherzer

Prochart (sourcing Buek) gives 1834 as the year of Sherzer's birth, and although this date now appears to be erroneous it has been repeated in most of his biographical entries. Hofmann gives the date as 1802, supported by a letter from Makarow to *Revue et Gazette musicale de Paris* (1857).[239] In the letter, Makarow bemoans the fact that Scherzer lived in obscurity for thirty years as the foreman of the Staufer workshop. Given that it appears to have been common practice in nineteenth-century musical instrument making to apprentice pupils when they were about thirteen to fifteen years old for a period that lasted around five years,[240] and that Anton Staufer ceased trading in

[235] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*. Prochart supports this claim with an example of an extant violin from 1841, after the style of Stradivari with a label inscribed by both Wolff and Staufer.
[236] Vannes, *Dictionnaire Universel Des Luthiers*.
[237] ASTW, *Hauptregistratur*, M, 23198 (1829).
[238] Wildauer (1839), p. 135; (1843), p. 163.
[239] *Revue et Gazette musicale de Paris*, vol. 24, no. 1 (4 January 1857), p. 7.
[240] See previous chapter in this thesis, *Johann Georg Staufer*, in which Maunder is cited regarding training and status within the Viennese guild system.

1848, it is even more likely that the 1834 date is wrong. Timmerman claims that Georg Staufer introduced Makarow to Scherzer (when on a visit to the workshop), describing him as his best young apprentice.[241] Makarow's memoirs indicate he was in Vienna in 1845 and 1849, making Scherzer, if born in 1802, then in his forties and at a time when Anton and not Georg, was running the main workshop [Georg Staufer entered the St. Marx hospice in February 1845].[242] It seems more likely that Georg Staufer's comments to Makarow on Scherzer's apprenticeship were retrospective, and that he had started with Staufer at the usual age for an apprentice, first meeting Makarow in 1845 when he was older. Hopfner gives his workshop addresses from 1864 (after the period with the Staufers) until his death in 1870 as: Margarethen, Langegasse, Nr, 99, and between 1852-1863, and 5 Hundsthunnerstraße 65 [in actuality the same address renamed].[243] According to their company history, Martin the most well known of Staufer's pupils today, was fifteen (the average age for a new apprentice) when he was sent to train with Staufer.[244] If Wolff, on the other hand, had been brought in to work on pianos as already having acquired some skills in that profession before going on to study string instrument making with Staufer, he may have been an exception to this practice and could have been older. Equally he may have served an apprenticeship as a string instrument maker with Staufer before turning to pianos. Given the dates of Wolff's association with Staufer it is likely that he crossed over with both Martin, who stayed with Staufer for about fourteen years in total, and another of Staufer's pupils, Andreas Jeremias as well as probably Sherzer.

4.2.3 Andreas Jeremias

There is not a lot known about the life of Andreas Jeremias (1797-1838) except that he is thought by Lutgendorff to have been a pupil of Staufer. He is recorded as having received his *Befungis* in 1831, but this licence to trade was withdrawn a year later in 1832. From 1833 to 1836 he was registered as living at Laimgrube, Nr. 168, where in 1836 he was once again given permission by the guild to trade as a violinmaker (his

[241] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age,* p. 121.
[242] Wiener Bürgerversorgungshaus, *Standesprotokoll Für Männer,* vol. 2 (Wien, 1845), p. 176. Georg Staufer entered St. Marx hospice on 13 February 1845.
[243] Hopfner, *Wiener Musikinstrumentenmacher 1766-1900: Adressenverzeichnis Und Bibliographie*.
[244] Gura, *C.F. Martin and His Guitars, 1796-1873*.

thirty-six year old wife Anna died of tuberculosis the same year). He died of tuberculosis two years later while resident at Mariahilf, Nr. 130.[245] Prochart suggests that he may only have produced guitars and Vannes confirms that a Legnani model exists whose label bears his name and the Laimgrube address.[246] Jeremias was thirty-two when he received his *Befungis* and would, like all aspiring makers have followed the standard route of entry into the violin and guitar making trade. After successfully completing an apprenticeship, it can be assumed that a pupil would then carry on for some years as a *geselle* [journeyman] in the same workshop, aiming eventually to attain the status of *Bürger* with an independent trading licence, and ultimately setting up a separate business. Staufer rose to the position of *Bürger* at an early age, having already received his trading licence when only twenty-two and operating his own workshop from the age of twenty-four, while it appears that most of his pupils did not receive their *Bürgereid* until they reached their early thirties.

4.2.4 Anton Mitties

Anton Mitties and Johann Bucher were the earliest of Staufer's known pupils. Although Mitties (1791-1870) was a resident of Leitmeritz in Czechoslovakia, when he received his *Bürgereid* on 10 March 1826, the labels in his instruments announce that he was a pupil of Staufer's. He was also connected to Vienna through his wife Elizabeth (née Hellmer), a native of the city. He is known to have made violins after Stradivari, which Prochart describes as having 'good acoustic projection, beautifully engraved scrolls and finished in yellow to red spirit varnish',[247] as well as corner-less violins in the Chanot style, guitars and arpeggione. [248] An unusually large guitar with a 'silver mechanism and ivory inlays in the ebony neck' is in the Bohm National Museum in Prague.[249]

[245] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*.
[246] Vannes, *Dictionnaire Universel Des Luthiers*.
[247] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*.
[248] Anton Mitties, *Arpeggione,* 2nd quarter of the 19th century. Musical Instrument Museum, Cat. 4678.
[249] Lutgendorff and Drescher, *Die Geigen- Und Lautenmacher Vom Mittelalter Bis Zur Gegenwart*, vol. 2.

4.2.5 Johann Bucher

Johann Bucher was born in Hammerschwang (Württemberg) in 1792 and then moved to Vienna, where according to Haupt, he died in 1856 while resident at Mariahilf, Rittergasse, Nr. 97.[250] Between 1809 and 1815 he was registered at Staufer's address, Schulhof, Nr. 448, after which in 1816 he set up independently.

Fig. 46. Guitar by Johann Bucher, Vienna c1850. Private collection [Photo: Luka Vlašić].

[250] Hopfner, *Wiener Musikinstrumentenmacher 1766-1900: Adressenverzeichnis Und Bibliographie*. Prochart agrees with the year of death but gives the address as Mariahilf 92 & 96.

4.2.6 Christian Friedrich Martin

Christian Friedrich Martin (1796-1873) declared on the labels of his early New York made instruments that he was a pupil of the celebrated Staufer of Vienna. Martin was born in Markneukirchen, Saxony, to Johann Georg Martin and Eva Regina Paulus. According to Martin family history he was sent to Vienna aged fifteen to train with Staufer.[251] His father (Johann Georg) was a prominent figure in the local cabinetmakers guild, several of whose members including himself had turned to guitar making, thereby angering the violinmakers guild who wished to retain a monopoly on string-instrument making. This resulted in a bitter dispute between the two bodies, lasting for a period of over thirty years, with petitions and testimonial evidence filed in court, before it was finally resolved.[252] As part of their court defence, the cabinetmakers declared the quality of Christian Friedrich Martin's work, whom they stated as having trained under Staufer in Vienna and risen to become shop foreman, as an example of their craft and ability as guitar makers. His colleagues witnessed that Martin had made instruments 'which in consideration of quality and beauty left nothing more to be desired and left him as a craftsman'.[253]

Excepting the self-proclaimed announcement from instrument labels, these court records from 1826 are the only definitive testament found so far that Martin was apprenticed to Staufer. However, given that Martin's early work is remarkably similar to Georg Staufer's, not only in design but also in decoration and style of craftsmanship, he must have spent a long period of time immersed in Staufer's practice, or studying his craft. Why Martin does not appear listed in Staufer's employment in other Viennese

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[251] Johnston, Boak, and Longworth, *Martin Guitars: A History*. p. 23.
[252] Gura, *C.F. Martin and His Guitars, 1796-1873*, pp. 35-38. The violinmakers accused the cabinetmakers of being 'bunglers' where instrument making was concerned, suggesting that they were only fit to fabricate instrument cases. The violinmakers considered themselves to be artists rather than mere 'mechanics', as they described the cabinetmakers, with their own guild imposing higher standards such as calling for the production of a masterwork before being allowed to trade. As being in contravention of guild practice they formally cited a list of cabinetmakers that included, Johann Georg Martin, Carl Friedrich Jacob, Carl Gottliob Wild, August Paulus, and Heinrich Schatz. As part of their defence, the cabinetmakers declared the quality of Christian Friedrich Martin's work, whom they stated as having trained under Staufer in Vienna, and as having risen to become Staufer's shop foreman, as an example of their craft and ability as guitar makers. His colleagues witnessed that Martin had made instruments 'which in consideration of quality and beauty left nothing more to be desired and left him as a craftsman'.
[253] Gura, *C.F. Martin and His Guitars, 1796-1873*.

archival sources is not known. The Markneukirchen dispute, which dates from before the time Martin went to train in Vienna, and Staufer's own position in 1811 as president of the Viennese lute and violinmakers guild [the same year Martin started his apprenticeship],[254] could have created a politically delicate situation and perhaps it was simply not acceptable for Martin to appear on Staufer's books, or perhaps Martin himself had no desire to acquire a *Befungis* for Vienna in his own name. He is known to have left Staufer's employ in 1824 and worked for Karl Khüle, another Viennese carpenter and instrument maker, for a period of a year, during which, on 25 April 1825 he married Ottilie Lucia, Khüle's daughter.[255]

Although his name is not included amongst Staufer's employees in 1811,[256] that Martin was in Vienna and had a connection to the Staufers, Ertl and Jeremias can be shown on a document signed by all parties [Martin and Jeremias as witnesses] on 20 February 1826 in which Ertl declares he has no objection to his joint patent with Georg Staufer [later extended with Anton Staufer] becoming part of the Staufer business arrangement made with Franz von Lacasse on 15 September 1825.[257]

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[254] Hopfner, *Wiener Musikinstrumentenmacher 1766-1900: Adressenverzeichnis Und Bibliographie*. Hopfner, citing Haupt (1952) and Redl, claims Staufer was president of the guild in 1811. See also, reference later on Ertl entry.

[255] Hofmann, *Stauffer & Co., the Viennese Guitar of the 19th Century*, pp. 80-83. Hofmann cites a five-year privilege granted to Karl Khüle on 4 June 1821 for a pedal harp (Archiv der Technishen, Universität, Wien, Privilegiensammlung, Priv.-Reg. Nr. 433); and the marriage register from Pfarre St. Ulrich, Wien, for the marriage of Christian Friedrich Martin and Ottilia Khüle (Archiv der Pfarre St. Ulrich, Wien, Trauungsbuch 1823-1825, Matrikenientrag Nr. 62).

[256] Wiener Zeitung, 2 January 1811.

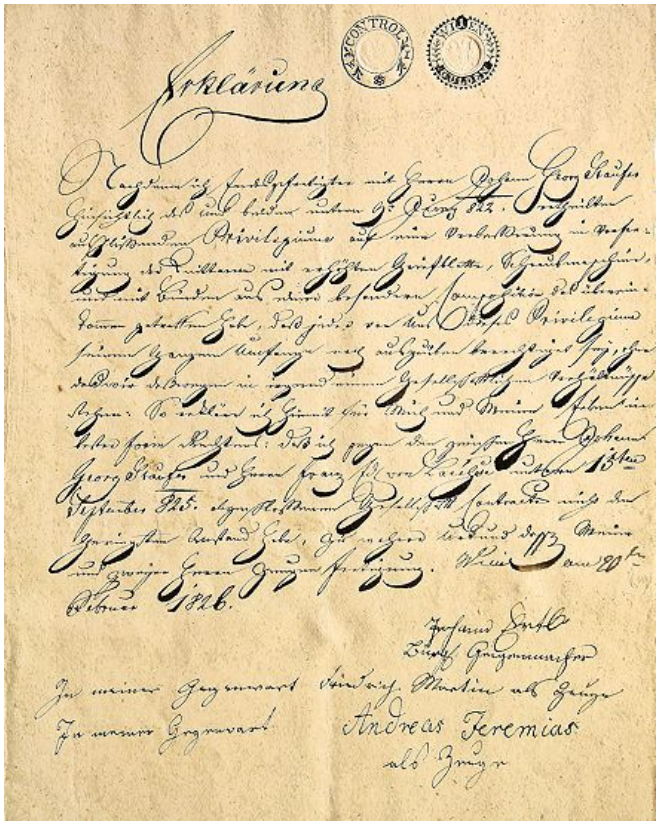
[257] ASTW A-Wsa, Merkantilgericht, Fasz. 3, 1. Reihe, S 471; Lorenz, 'Stauffer's Firm "Johann Georg Staufer and Comp"', *Stauffer Miscellanea*. Translation: Lorenz.

Declaration

Because I, the undersigned, have reached an agreement with Mr. Johann Georg Staufer that the excluding patent which was granted to both of us on 9 June 1822 concerning the improvement of guitars with elevated fingerboards, screw machines and metal frets made of a special alloy can be used by both of us to its full extent, without entertaining any business relation because of this, Therefore for me and my heirs I declare it formally legal: that I bear not the slightest objection against the business contract which on 15 September 1825 was concluded between Mr. Johann Georg Staufer and Mr. Franz von Lacasse. In witness whereof my and the two witnesses' signatures.

Vienna, 20 February 1826.

Johann Ertl
civil luthier
In my presence Friedrich Martin as witness
In my presence Andreas Jeremias
as witness



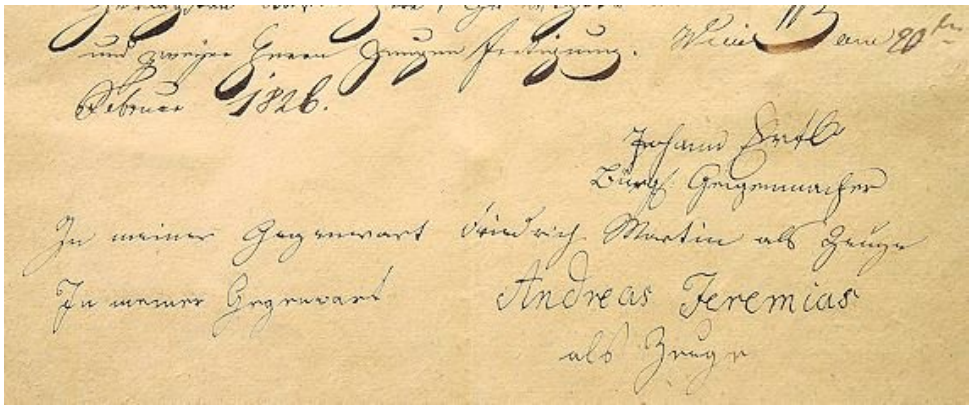


Fig. 47. Johann Ertl's declaration of no objection to Staufer's use of their joint patent in 1826. A-Wsa, Merkantilgericht, Fasz. 3, 1. Reihe, S 471. Courtesy: Michael Lorenz, *Stauffer Miscellanea*.

Martin & Co. claim that Friedrich Martin returned with his family to live in Markneukirchen shortly after the birth of his son Christian Friedrich (2) on 2 October 1825,[258] but it seems he was still in Vienna until sometime after 2 May 1827. On that date his name, along with that of Heinrich Schatz, appears on the baptismal record from

[258] Johnston, Boak, and Longworth, *Martin Guitars: A History*. p. 23.

St. Ulrich's [Vienna] for his daughter, Emilie. According to Lorenz, this is the only document found so far that corroborates Schatz's presence in Vienna.[259]

Christian Friedrich Martin became embroiled, along with his father, family relations and guild members, in the dispute with the Markneukirchen violinmakers over the right to make guitars. The situation was acrimonious and remained unresolved, prompting Martin, in 1833 shortly after the death of his father, to follow his neighbour and colleague Heinrich Schatz who had left a year earlier, and immigrate to North America. Schatz, himself, had been named in the Markneukirchen violinmakers' court petition and defended his position as a guitar maker by claiming that he had spent two years and five months working as such in Vienna.[260] Some guitars made by Martin and Schatz together, after they had immigrated to New York, bear labels stating both were students of Staufer. It is possible that Schatz's period in Vienna was also with Staufer but again no archival records to support this have yet come to light. While there remains ambiguity surrounding Martin's period of training in Vienna and the following years in Markneukirchen before his migration to America, with no known extant instruments from this time bearing his name, the circumstantial evidence and body of work existing from his early days in New York clearly shows and advertises his connection to the Staufer workshop.

Martin, if he had come to work for Staufer at the age of fifteen, would certainly have encountered Bucher and probably Mitties, both employed as journeymen. He would have started his own training around the time Jeremias was taken on, completing it soon after Friedrich Schenk started his and at about the same time as Wolff 's engagement. Staufer appears to have been most active in training pupils from around 1805-1825, and it is towards the end of this period that his son Anton would have taken on more of a managerial role in the workshop.

[259] Lorenz, 'Heinrich Schatz', *Stauffer Miscellanea*.
[260] Johann Friedrich Hilpert, 'Gitarren: Christian Friedrich Martin Und Der Frühe Vogtländische Gitarrenbau', in *studia instrumentorum musicae*, ed. Andreas Michel (Leipzig: Museums für Musikinstrumente der Universität Leipzig, 2005).

4.2.7 Freidrich Schenk

Freidrich Schenk, another important Viennese maker to have emerged from the Staufer workshop, was born around 1800 and died sometime after 1875. In 1836 he had his own workshop at Margarethen, Nr. 150, but appears not have received his *Befungis* until later when he was registered at Margarethen, Lange Gasse, Nr. 151 (his address between 1839 and 1845). This would support Timmerman's view that Schenk's early work, at least up until 1839, and quite possibly as a matter of mutual convenience afterwards, was often sold through the Staufer workshop along with that of Staufer's other pupils. Biographical information on Schenk is sketchy, excepting his known workshop addresses, which Hopfner lists as the following:

1836: Margarethen, Nr. 150
1839-1845: Margarethen, Lange Gasse, Nr. 151
1846: Schauenfeld, Feldgasse, Nr. 491
1847: Margarethen, Grohgasse, Nr. 179
1851-1854: Margarethen, Grohgasse, Nr. 186
1856: Reinprechtsdorf, Reinprechtsdorferstraße, Nr. 24
1858-1860: Margarethen, Langegasse, Nr. 120
1864: 5 Rüdigergasse 1
1871-1875: 9 Berggasse 18[261]

A better profile of this innovative maker can be drawn from observing the instruments and designs he created that included not only guitars in standard, bass and terz form, but also the *bogengitarre* as well as lyres and harps. He presented a terz guitar at the 1839 exhibition of Austrian industrial products,[262] and another instrument at the Industrial Exhibition of Vienna in 1845.[263] According to Timmerman, in 1848 Caspar Joseph Mertz performed for the first time in Vienna on a 'Harfengitarre' with four extra bass strings that probably originated from the Staufer workshop. This instrument may well have been the forerunner to Schenk's ten-string *bogengitarre*.[264] Phillip Bone notes that

[261] Hopfner, *Wiener Musikinstrumentenmacher 1766-1900: Adressenverzeichnis Und Bibliographie*.
[262] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhunder,* p. 143.
[263] Hofmann, *Stauffer & Co., the Viennese Guitar of the 19th Century*, p. 204.
[264] *Bogengitarre.* The name 'Bow-guitar' is derived from the construction of a hollow arm extending from the body on the bass side of the fingerboard. The extension took the form of a pillar-shaped bow; ending in a round, hollow headstock incorporating another smaller sound hole. When copied these instruments became known as *Schenksche Bogengitarre*.

Friedrich Schenk was for a time foreman at the Staufer workshop and that he taught his son both how to play and make guitars.[265]

The period of the early 1830s appears to have been a financially difficult time for the Staufers with Georg twice under *schuldenarrest*, resulting in what appears to be a device to preserve the equity of the family business by moving financial control in 1836 to the son Anton.

4.2.8 Anton Staufer

Anton Staufer [Georg's son] was born around 1805, and although he was known to have stopped trading in Vienna and moved to Prague in the early 1850s, but it is only recently that any account of his activities from then, or the precise date of his death, have come to light. Hofmann has uncovered a passport document showing Anton, and his wife Maria travelled to Olmütz [Moravia] in 1849 before continuing on to Prague and then Graz. According to Hofmann, Anton made his living as a piano teacher, having retired from musical instrument making. He eventually returned to Vienna where he died in 1871. Hofmann suggests that his will indicates that he was living comfortably, which he supposes was the result of shrewd financial investment after since leaving Vienna first in 1849.[266] Lorenz though, has highlighted a codicil (dated 13 June 1868) to Anton's original will from 2 November 1867,[267] 'in which he tacitly conceded that his supposed huge financial assets were gone (or rather had been imaginary)'.[268]

Prochart claims that he had spent a long time apprenticed to his father, while Ottner reports that by 1827, when he was granted a three-year extension to the five-year guitar *privilege* his father had previously received in 1822, he had his own workshop at Stadt,

[265] Bone, *The Guitar and Mandolin: Biographies of Celebrated Players and Composers*, p. 262. See the entry for Decker-Schenk (the son of Friedrich Schenk).
[266] Hofmann, *Stauffer & Co., the Viennese Guitar of the 19th Century*.
[267] ASTW A-Wsa, BG Wieden IX, 128/1871.
[268] Lorenz, 'Stauffer's Three Sons Franz, Anton and Alois', *Stauffer Miscellanea*.

Rotenturmstraße, Nr. 480.[269] From 1828 Georg Staufer was also registered at that same address (presumably for business purposes).[270] Timmerman cites an early seven-string Staufer guitar (one extra bass) from 1827 labelled, 'Nach dem 827 Modell des Luigi Legnani von J. A. Stauffer & Comp in Wien No. 136', additionally signed by Johann Anton himself, to show that he was operating under his own name at that time.[271] According to Vannes,[272] collaborations between Georg and Anton were not formalised until 1836 when both their names started to appear on instrument labels. As father and son in a successful family business is it not likely that their commercial affairs were entwined, and for the main part they traded from the same address? Although Lutgendorff states that Anton worked independently from his father between 1840 and 1843,[273] some labels from the second Staufer workshop in Kaschau are inscribed with the father and son's names together. Guild records show that Anton applied for his *Befungis* in 1833[274] but didn't swear his *Bürgereid* until 4 February 1841 (when registered at Stadt, Nr. 1100),[275] both of which would have been necessary for him to act as the company director. While not precluding the possibility that Georg in his last years produced some instruments in the communal workshop of the St. Marx hospice, besides the Kaschau operation and one year between 1827 and 1828, they appear to have shared the same business address.[276] In practice though, there may well have been more than one workshop operating concurrently in Vienna during the mid 1830s as well as the separate one in Kaschau between 1840-1843.

Anton was named together with his father in two different *privileges*. The first (1828) was for the improvement of the violin, viola and violoncello:

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[269] Stadt, Rotenturmstraße, Nr. 480, is referred to at other times as Stadt, Nr. 480, Nächst dem Rothen Turm. They are the same address. Anton received this *privilege* extension 23 September 1827.
[270] Ottner, *Der Wiener Instrumentenbau 1815-1833*, pp. 144-145.
[271] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age,* p. 113 7 P. 159, fig. 42.
[272] Vannes, *Dictionnaire Universel Des Luthiers*.
[273] Lutgendorff and Drescher, *Die Geigen- Und Lautenmacher Vom Mittelalter Bis Zur Gegenwart*, vol. 2, p. 482.
[274] ASTW, *Hauptregistratur*, H, 43796 (1833).
[275] ASTW, *Bürgereidbuch* (1792-1835); ASTW, *Bürgereidbuch* (1841).
[276] ASTW, *Hauptregistratur*, 69374 (1833), p. 186; *WZ* 'Intelligenzblatt' on 9 November 1833 reports that in the same year his workplace was at Stadt, 480. The Hauptregistratur was set up in response to Emperor Joseph II wishing to standardise the constitutions of towns in his crown-lands. The Municipal Council Constitution (valid from 1783 to 1850) was established in the form of three senates, the division was reflected in the conduct of the registry. Established in 1783, the Hauptregistratur was kept up until 1901. The Hauptregistratur comprises all the records of central administration in the 19th century.

> The upper bout where the neck is mounted has the same length and width as the lower parts, and the bridge is located in the centre of the body. The acoustic opening (sound hole) is not in the usual form of an "F", but a shallow crescent. The outer elliptical shape also gives them a different appearance from the usual form.[277]

The second (1832) was for improvements to the structure of violins, violas and cellos:

> With these instruments the bridge is in the middle of the body of the instrument, although the body below the bridge is slightly longer than usual, it does not hinder playing technique. Incidentally, they are completely different from the instruments with conical forms regarding the outer shape of the privilege on 25 July 1828.[278]

The Wiener Zeitung reports that this last *privilege* was voluntarily surrendered two years later in 1834, indicating that the Staufers released their monopoly on the design early.[279] Lorenz claims Georg Staufer retired from the family business in 1833,[280] the same year that Anton Staufer applied for a *befungis*. Although this coincides with a company change of management, as both Georg and Anton held the *privilege*, the reason for it to be rescinded remains unclear. According to Prochart, the few violins Anton made are in the style of Stradivari exclusively, unlike his father, who not only made violins after Stradivari, Stainer and Forster, but also corner-less instruments similar to those of Chanot. From 1841 to 1851 Anton's workshop was located at Stadt, Kapuzinergasse, Nr 1100 in the Bürgerspital, and from 1846 situated below that of Franz Seraph Schmidt who was also registered at this address. Makarow recounts that Schmidt claims to have bought the business from Staufer in 1848 when the latter moved to Prague, however entries in Viennese address books still have Staufer registered at the address until as late as 1851.[281] (Prochart also reports that he gave up his business in 1848, presumably relinquishing his *Befungis*).[282] That Sherzer gives 1849 as the year of

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[277] *Beschreibungen Der Erfindungen Und Verbesserungen, Fur Welche…..Patent Ertheilt Wurden 1, Welcher Die Priviligien Vom Jahre 1821-1835 Enthalt*.
[278] *WZ*, vol. 60 (1834), p. 241;Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*.
[279] *WZ*, vol. 60 (1834), p. 241.
[280] Lorenz, 'Stauffer's Firm "Johann Georg Staufer and Comp"', *Stauffer Miscellanea*.
[281] Leopold Kastner, Handels- Und Gewerbe-Adressenbuch Des Österreichischen Kaiserstaates ... Zusammengestellt Und Herausgegeben Von L. Kastner, Etc. 1868, 70, 77 (Wien: 1868); Kastner, Handels- Und Gewerbe-Adressenbuch Des Österreichischen Kaiserstaates ... Zusammengestellt Und Herausgegeben von L. Kastner, Etc. 1868, pp. 70 & 77; Vinzenz Franz Gottfried, Handelungs- Gemien Und Fabriken Der K.K. Haupt- Und Residenzstadt Fur Das Jahr 1850 (Wien: 1850).
[282] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, p. 153.

construction for the two guitars made by him but supplied as Staufers to Makarow,[283] suggests that although Anton Staufer's business was in decline he was still operating from Stadt, Nr. 1100 at that time, but perhaps trading through the then proprietor, Schmidt.

4.3 Contemporaries

4.3.1 Bernhard Enzensperger

Like Georg Staufer, Bernhard Enzensperger emerged at the end of the eighteenth century having been trained in the guild tradition of lute and violinmakers. He was born in Füssen, Bavaria, on 22 May 1778[284] and died in Vienna in 1865.[285] He was a student of Mathias Thir, who according to Ottner bequeathed him one hundred florins in his last will and testament (a considerable sum at the time).[286] Mathias Thir learnt the trade from his father Johann Georg Thir who also taught Franz Geißenhof. Geißenhof's pupils included Georg Staufer and in 1811 Enzensperger was in Staufer's employ.[287] According to [Viennese] archival records Enzensperger was granted his *Befungis* in 1817 and opened his own workshop. Prochart (sourcing his information from the *Archiv der Stadt Wien, Haupregistratur* and *Bürgereidbücher* for the years between 1817 and 1820) states that he also applied to be incorporated into the violinmakers' guild in 1817. In 1818 he requested to take over the business of the recently deceased Jakob Fux. In 1820 he presented his *Meisterprobe* [the example of his master work] and later on 23 June that year, swore his *Bürgereid* while registered at Leopoldstadt, Nr. 100.[288] During the rest of the 1820s he was as operating at Leopoldstadt, Nr. 590, except between 1825-1826 when he was located at the top of Bäckerstraße, Nr. 780. On 15

[283] Makarow, Nicolai, P., 'The Memoires of Makaroff', in *Guitar Review*, no. 1 (1946), pp. 8–10; no. 2 (1947), pp. 4–6; no. 3 (1947), pp. 6–9; no. 5 (1948), pp. 1–5. The details of this episode are discussed in Chapter 5, p. 158 of this thesis.
[284] Karel Jalovec, Charlotte Kirschner, and Ferdinand Kirschner, *Enzyklopædie Des Geigenbaues. (Deutsch Von Charlotte Und Ferdinand Kirschner.) [with Plates and Illustrations.]* (2 vol. Hanau/M.; Brno printed, 1965); Karel Jalovec, Patrick Hanks, and George Theiner, *German and Austrian Violin-Makers. (Translated by George Theiner. Edited by Patrick Hanks* [pp. 439. pl. XVI. Paul Hamlyn: London; Brno printed, 1967).
[285] ASTW, Hauptregistratur.
[286] Ottner, *Der Wiener Instrumentenbau 1815-1833*.
[287] Wiener Zeitung. 2 January 1811, front page.
[288] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*.

July 1823 the Wiener Zeitung reported that his first wife, Theresa Schmolinger, had died childless of a slow fever a few days earlier on 10 July. From 1830-1832 he returned to the top of Bäckerstraße, this time at number 760 and situated next to the university.[289] From the 1830s until his death, Enzensperger was resident in the Wieden district of Vienna: from 1831-1840 his address was, 'next to the Freyhause Nr. 6, staircase 3 on the first floor of the golden eagle';[290] from 1841-1849 at upper Schleifmühlgasse, Nr. 741;[291] from 1850-1861 at Wieden, Hauptstraße, Nr. 11;[292] in 1864 he was registered first at IV, Wiedner, Hauptstraße, Nr. 49, and then in the vault of Wiedner, Hauptsraße, Nr 20;[293] finally in 1865 his business address was IV, Floragasse, Nr. 9.[294] Ensenzperger's son from his second marriage, Bernhard Enzensperger (2), succeeded him and was registered at this last address in 1865, although Enzensperger's (1) widow continued to operate her husband's business until 1870from their home address at Wiedner, Hauptstraße, Nr. 49.[295]

Enzensperger (1) was the same age as Georg Staufer, but unlike Staufer who was independently in business from the age of twenty-two, he was nearly thirty before he set up shop. Although Prochart claims, that up until the beginning of the 1830s most of his work appears to have been violinmaking after the style of his *meister* Matthius Thir,[296]there are extant Enzensperger guitars from before this date. One example from c1815 (now in the Schubert museum in Vienna) is claimed to have been the property of Schubert.[297] On 29 November 1831 Enzensperger received the following *privilege* for improvements in guitar construction:

> The lower bout of this guitar has the limitation of an ellipse whose major axis at the width of the instrument is 11/15 of the length of the body and corresponds to the length

[289] Redl, *Addressen-Buch Der Handlungs-Gremien Und Fabriken In ... Wien, Dann Mehrerer Provinzial-Staedte, Für Das Jahr 1824. Verfasst Und Herausgegeben Von Anton Redl*.
[290] Willibald Leo Luttgendorff and Thomas Drescher, *Die Geigen- Und Lautenmacher Vom Mittelalter Bis Zur Gegenwart* (Tutzing: Schneider, 1975).
[291] Kastner, *Handels- Und Gewerbe-Adressenbuch Des Österreichischen Kaiserstaates ... Zusammengestellt Und Herausgegeben Von L. Kastner, Etc. 1868, 70, 77*; Franz Fray, *Allgemeiner Handlungs- Und Gewerbealmanach* (Wien: 1836-48).
[292] Fray, *Allgemeiner Handlungs- Und Gewerbealmanach*.
[293] H. Lehmann, *Allgemeines Handels-Und Gewerbeadreßbuch Nebst Allgemeinem Wohnungsanzeiger...Für Wien Nebst Umgebung* (Wien: 1861).
[294] ASTW *Haupregistratur,* 8326 (1865), p. 186.
[295] Lehmann, *Allgemeines Handels-Und Gewerbeadreßbuch Nebst Allgemeinem Wohnungsanzeiger...Für Wien Nebst Umgebung*.
[296] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*.
[297] See chapter *Repertoire and Players* in this thesis.

> of the fingerboard being the same length extending from the twelfth fret (to the nut). The minor axis is equal to 8/15 of the same. Right in the middle of the major axis of the ellipse is fixed the narrow, concave string-saddle, standing on five feet, three inches long, with six incisions. Instead of the former method of attaching the front and back in the upper bout (with the neck block), the wedge-shaped tapered neck sits in to the upper bout, with scalloped corners (small cutaways), supported internally by rectilinear blocks, In addition to each corner (of the upper bout) there is a larger sound hole. The fret board has such a favourable position that it has expanded to a full four octaves, and can be played in the highest fingering almost as easily as in the lower position. Regarding this part, based upon the above design, it is not a determining factor in enabling vibration. It is therefore unnecessary to make the upper fret board float to improve the tone in this case. Also fret markers on the fret board, some as dots and some as strips, make playing and performance easier.[298]

According to Shilling, by 1834 Enzensperger had built and introduced 'the brand new *Akustik-gitarren*, which have all sorts of fret markers on the fingerboard, [are] provided with two sound holes, and are so constructed that they can be played in the highest position with the greatest ease '.[299]

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[298] *Beschreibungen Der Erfindungen Und Verbesserungen, Fur Welche…..Patent Ertheilt Wurden 1, Welcher Die Priviligien Vom Jahre 1821-1835 Enthalt*. 1 (1841), p. 278. *'Dreijähriges Privilegium des Bernhard Enzensberger, bürger. Geigen- und Guitarrenmachers in Wien, auf Verbesserungen im Baue der Guitarren. Erteilt am 29. November 1831. Erloschen durch Zeitablauf im Jahre 1834.' 'Der untere Theil dieser Guitarren hat die Begränzung einer Ellipse, deren größere Achse nach der Breite des Instrumentes liegt, und beträgt 11/15 der bis zum zwölften Bund reichenden Körperlänge. Die kleine Achse aber ist gleich 8/15 derselben. Genau in der großen Achse der Ellipse befindet sich das schmale, auf fünf Füßen hohl stehende drei Zoll lange Saitenfesi (Sattel) mit sechs Einschnitten. Statt des bisher mit dem unteren Theile ähnlich geformten oberen Theiles ist dieses Instrument vom Mittelbuge gegen den Hals keilförmig zulaufend, und mit zwei kleinen rund ausgebogenen, im Inneren mit geradlinigen Klötzchen ausgefüllten Ecken versehen. Neben jeder größeren Ecke befindet sich ein Klangloch. Das Griffbret hat eine so günstige Lage, daß es bis auf volle vier Oktaven erweitert ist, und das Spiel in den höchsten Applikaturen fast eben so leicht wie in den niederen Posizionen Statt finden kann. Da dieser Theil, nach der oben beschriebenen Gestalt, durchaus nicht die Bestimmung hat, in Vibrazionen versetzt zu werden, so ist es daher auch überflüssig, zur Verbesserung des Tones in diesem Falle das obere Griffbret frei schwebend zu machen. Auf dem Griffbrett sind ferner die Flageoletpunkte theils durch flache Streifen, theils durch Metallbünde bezeichnet, wodurch das Flageoletspiel leicht zu erlernen und auszuüben ist; Jahrbücher des kaiserlichen königlichen polytechnischen Institutes in Wien, 17. Band 1832'.*

[299] Johann-Baptist Schilling, *Adressenbuch Der Handlungsgremien Und Fabriken Für K.K. Haupt-Und Residenzstadt Wien* (Wien: 1834-38).

Fig. 48. *Akustik-gitarre* by Bernhard Enzensperger. Vienna, 1832. Private collection [Photo: Brigitte Zaczek).

Enzensperger (1), having started as a violinmaker before turning to guitar improvements and construction was also known to have made harps, all of which his son Bernhard Enzensperger (2) (1828-1896) continued to do after inheriting the business. His son Vicktor Enzensperger (1867-1918) in turn succeeded him

4.3.2 Nikolaus Georg Reiß

Together with Enzensperger, Nikolaus Georg Reiß (1790- after 1857) was a major competitor of Staufer's. From whom and where he learnt his craft is unknown, although Prochart thinks he may possibly have been related to Franz Reiß, another violinmaker working in Vienna. Archival records reveal that his working relationship with the guild was not altogether harmonious, which led to certain restrictions. He applied for his *Befungis* in 1817. It was initially blocked and rejected by the guild in

1818 and only finally granted in 1819 but still with some objections from the guild.[300] Prochart reports that in 1820 Reiß was making violins at Landstraße, Hauptstraße, Nr. 106: the address given when he swore his Bürgereid three years later on 21 March 1823.[301] Albeit at different premises, he seems to have kept his business in the same street throughout his working life: in 1835 at Hauptstrasse, Nr. 245; and from 1838-1857 at Hauptstraße, Nr. 119.[302] According to Lutgendorff, in 1843 Reiß was only allowed to operate while directly overseen by a superintendent from the lute and violinmakers guild.[303] The *Hauptregistratur* records that he gave up his business in 1854,[304]and then lists him in the following year as working in the capacity of a Störer: Störeri being the title given to the official group of journeymen who could not afford to become a *Meister* with the necessary *Besitzrecht* [permit] to run an approved workshop.[305] In 1857 the *Haupregistratur* records that Reiß discretionally gave up his *Befungis* and was succeeded in business by Francis I. Lux.[306] It certainly seems that the guild, from the time of its early refusal of a permit to trade until when he gave up his workshop, enforced strict regulations on Reiß's business operations. This may suggest that Reiß wasn't financially or commercially successful enough to avoid guild scrutiny, however his clients regarded his work highly and Bone mentions him alongside Staufer as having direct contact with Luigi Legnani, whom he claims visited Reiß's workshop and lent his seal of approval to the labels of his guitars.[307]

4.3.3 Peter Teufelsdorfer

Peter Teufelsdorfer (1784-1845) was born in Budapest, and like Staufer, served his apprenticeship under Franz Geißenhof in Vienna,[308] before returning to Budapest to set up a workshop there in 1808.[309] According to Lutgendorff, Teufelsdorfer was made

[300] ASTW, *Hauptregistratur*, M, 119 (1819).
[301] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*.
[302] Hopfner, *Wiener Musikinstrumentenmacher 1766-1900: Adressenverzeichnis Und Bibliographie*.
[303] Lutgendorff and Drescher, *Die Geigen- Und Lautenmacher Vom Mittelalter Bis Zur Gegenwart*.
[304] ASTW, *Hauptregistratur*, 94848 (1854), p. 186.
[305] Maunder, *Keyboard Instruments in Eighteenth-Century Vienna*, p. 19.
[306] ASTW, *Hauptregistratur*, G, S.5 (1857)
[307] Bone, *The Guitar and Mandolin: Biographies of Celebrated Players and Composers*, pp. 204-207.
[308] Lutgendorff and Drescher, *Die Geigen- Und Lautenmacher Vom Mittelalter Bis Zur Gegenwart*, p. 509.
[309] Vannes, *Dictionnaire Universel Des Luthiers*, p. 358.

head of the Budapest lute and violinmakers guild in 1837.[310] His violins, violas and celli are after the style of Stradivari,[311] but again like Staufer he also sought to improve the guitar and to experiment with stringed instrument making in general. Timmerman suggests that these experiments brought him into direct competition with Staufer, and gives as examples Teufelsdorfer's *Doppelgitarre*, *Arpeggione* and guitar patent.[312] Although Staufer is credited with inventing the *Doppelgitarre* in 1807 no extant instrument by him is known to exist, however, both a *Doppelgitarre* made by Teufelsdorfer in 1815 [Fig. 62][313] and one in 1820 by Martin Stoß [Figs. 50 a-b], most likely follow the same form. Both Zuth and Prochart cite a review of Staufer's instrument in the *Allgemeine musikalische Zeitung* from 1807, which describes it as part standard six-string guitar with a playing compass of *E* to $e^{///}$ but having an extended body that is the smaller guitar with its own neck and shorter scale length tuned one octave higher, thus making it fundamentally similar to the extant *Doppelgitarres* by Teufelsdorfer and Stoß.[314]

[310] Lutgendorff and Drescher, *Die Geigen- Und Lautenmacher Vom Mittelalter Bis Zur Gegenwart*, vol. 2, p. 509
[311] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, pp. 169-170.
[312] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age,* pp. 91-93.
[313] *Doppelgitarre* by Peter Teufelsdorfer, 1815. Musikinstrumenten Sammlung, Stadtmuseum Munich, no. 43-69.
[314] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, pp. 153-7; Zuth, *Handbuch Der Laute Und Gitarre*, p. 81.

Fig. 49. *Doppelgitarre* by Peter Teufelsdorfer, Pest 1815 [Photo: Musikinstrumenten Sammlung, Stadtmuseum, Munich].

The *Doppelgitarre* was not the only new invention credited to Staufer that Teufelsdorfer took up. In 1823 both men claim to have invented the bowed guitar, or *Arpeggione* as it became known as in the 1870s. Hayes and Fontana consider it likely that Johann Ertl, Staufer's colleague and co-patentee, could also have contributed to its invention. They suggest too that J. G. Leeb of Pressburg may have been experimenting with a bowed-guitar design some twenty years earlier.[315] The apparent competition between Staufer and Teufelsdorfer continued, with the latter receiving a two-year *privilege* in Budapest

[315] Eszter Gerald Hayes & Fontana, 'Arpeggione,' in *Grove Music Online* [Accessed 8 September, 2011].

on 13 July 1829 for the improvement of guitars, specifying:

> A. Instead of the usual round sound hole in the middle of the soundboard; two sound-holes, as found on bowed string-instruments.
>
> B. If the neck of the guitar is made thinner than usual to make it more comfortable to hold, a steel brace can be inserted to prevent pulling up and curvature.
>
> C. If the upper part of the body is shaped like that of the viola d'amour, and designed to have the soundboard (and upper bout) gradually sloping, it will create a comfortable fingering position when playing.
>
> D. If the upper surface of the fingerboard is perfectly flat and only curved a little under the first [sixth or lowest bass] string, it will make it easier for the thumb to fret the string.[316]

The use in 1829 of a metal bar to strengthen the neck was innovative and can be seen as an early form of truss rod, a component introduced later in the century to counteract increased tension resulting from stringing guitars with steel. The styling detailed here of the guitar's upper bout in the fashion of a viola d'amour was no doubt in part to allow easier access to the higher playing positions of the neck and fingerboard. This design concept is mirrored in the form of cutaways, principally found on electric guitars from the twentieth century but also adopted by many makers of steel string acoustic guitars. Another design feature detailed in Teufelsdorfer's *privilege* commonly found later on steel string guitars is a radiused fingerboard, enabling the thumb of the fretting hand to curl around the back of the neck and over the top edge of the fingerboard to fret the low bass string. Many of the later Viennese Legnani-endorsed instruments feature

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[316] *Beschreibungen Der Erfindungen Und Verbesserungen, Fur Welche…..Patent Ertheilt Wurden 1, Welcher Die Priviligien Vom Jahre 1821-1835 Enthalt.*

'Zweijähriges Privilegium des Peter Teufelsdorfer, bürger. Geigen- und Lautenmachers zu Pesth, auf die Verbesserung der Guitarren. Ertheilt am 13. Juliu, 1829. Erloschen durch Zeitablauf im Jahre 1831.

A. Statt des bisher üblichen, in der Mitte des Resonanzdeckels befindlichen runden Schall-Loches, sind zwei Schall-Löcher nach Art der Streich-Instrumente am Ausbuge angebracht.

B. Ist der Hals der Guitarre, obgleich er des bequemen Haltens wegen, dünner als sonst ausgearbeitet ist, gegen das Krümmen dadurch gesichert, daß eine stählerne Spreize eingelassen ist.

C. Ist der obere Theil am Korpus nach Art der Viola d'amour geformt, durch welche Bauart die Stufen um ein Bedeutendes außer dem Resonanz-Deckel kommen, wodurch ein bequemes Spiel in der Applikatur erhalten wird.

D. Ist die obere Fläche des Griffbretts ganz flach, und nur bei der ersten Saite etwas abgebogen, wodurch dem Daumen ein leichteres Uebergreifen der ersten Saite verschafft wird'; the sixth, lowest pitched, string on the guitar was often referred to as the first string at this time in the nineteenth century.

the same sloping shoulder design in the upper bout outlined in Teufelsdorfer's patent.[317] Timmerman gives the manufacture date of a slope-shouldered Staufer guitar as 1830 [Fig. 12], and SAM 490's label also declares its from 1830 [Fig. 28], thus questioning the exclusivity of Teufelsdorfer's *privilege*, which did not expire until 1831. This could suggest that his *privilege* was limited to a particular geographical region and under the jurisdiction of that guild only locally.

Staufer, although credited with inventing the *Doppelgitarre* in 1807, does not appear to have applied for a *privilege* to protect his interest at that time. In fact the first *privilege* he is known to have applied for and subsequently received was in 1822, when in partnership with Johann Ertl. These *privileges*, within an atmosphere of new innovations in musical instrument making, in part further advanced by evolving nineteenth-century technology were granted for a short period only, typically between two and five years. That Staufer and his contemporaries would have been responding to new playing demands at the same time, makes it likely that similar developments in design would have taken place concurrently in different workshops. It is no surprise then, with Staufer's invention (which wasn't under a protective *privilege*) being praised by the successful guitarists of the day such as Mauro Guiliani and Alois Wolf that Teufelsdorfer and Stoß took advantage of its popularity and also made *Doppelgitarres*.

4.3.4 Johann Martin Stoß

Johann Martin Stoß was born on 12 September 1778 in Fußen, Bavaria,[318] and died on 9 August 1838 in Vienna.[319] He was the son of Stephen Magnus Stoß, and brother to Johann Baptist Stoß and Joseph Alois Stoß.[320] In 1809 he was operating in Vienna's neighbouring town of Neulerchenfeld (now known as Neulerchenfeldstrasse), but in 1810 after the looting of his workshop by French troops he decided to apply for a

[317] See chapter *Johann Georg Staufer*, respectively Fig. 11 by Staufer in 1830 and Fig. 12 by Reiß in 1833.
[318] Lutgendorff and Drescher, *Die Geigen- Und Lautenmacher Vom Mittelalter Bis Zur Gegenwart*, vol. 2, p. 492.
[319] *WZ*, 17 October 1838.
[320] Lutgendorff and Drescher, *Die Geigen- Und Lautenmacher Vom Mittelalter Bis Zur Gegenwart*, vol. 2, p. 491.

transfer of his *Befungis* to the inner part of the city of Vienna.[321] He swore his *Bürgereid* on 25 July 1811 while resident at St. Ulrich, Kapuzinergasse Nr. 4.[322] In 1813, both he and Georg Staufer applied for the position of violinmaker to the Royal Court, which had been made vacant by the death of Michael Ignaz Stadlmann. Prochart reports that although it was not until August 1814 that he was officially appointed *Hofgeigenmacher* Stoß had actively been repairing instruments for the court orchestra before then.[323] From 1817 to 1837, now resident at St. Ulrich, Kapuzinergasse, Nr. 70, he was head of the civil association of Viennese lute and violinmakers;[324] also becoming its instrument treasurer in 1834.[325] He died at the age of sixty from asthma, after which his widow Anna Stoß, together with Anton Hofmann, took over the operation of the workshop. Hofmann acquired the workshop trading rights in October 1844, and by 1854 the company was trading as Stoß & Hofmann.[326] Anna Stoß remained at the apartment in St. Ulrich, Kapuzinergasse, Nr. 70, until her death in 1855.[327] Although he is known to have produced other guitars[328] besides the *Doppelgitarre* shown in Figures 63 & 64, much of Stoß's work was with bowed stringed instruments. Prochart regards his celli after Stradivari as some of best made by a Viennese master: meticulously made with careful attention to detail and a quality common to all his work.[329]

[321] Hopfner, *Wiener Musikinstrumentenmacher 1766-1900: Adressenverzeichnis Und Bibliographie*, p. 488.
[322] ASTW, *Bürgereidbuch*, p. 316.
[323] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, pp. 158-159; *Hofgeigenmacher* translates as Violinmaker to the Royal Court.
[324] Hopfner, *Wiener Musikinstrumentenmacher 1766-1900: Adressenverzeichnis Und Bibliographie*, p. 488.
[325] Schilling, *Adressenbuch Der Handlungsgremien Und Fabriken Für K.K. Haupt-Und Residenzstadt Wien*.
[326] Kastner, *Handels- Und Gewerbe-Adressenbuch Des Österreichischen Kaiserstaates ... Zusammengestellt Und Herausgegeben Von L. Kastner, Etc. 1868*, p. 70, 77 & 288.
[327] Gottfried, *Handelungs- Gemien Und Fabriken Der K.K. Haupt- Und Residenzstadt Für Das Jahr 1850,* p. 321
[328] Two examples of his guitars, SAM 452 and 491, are in the KHM.
[329] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, pp. 158-159.

Fig. 50 a

Fig. 50 b

Fig. 50 a - b. *Doppelgitarre* by Johann Martin Stoß, Vienna 1820. Private collection [Photo: allmusicalinstruments].[330]

[330] *Doppelgitarre* by Johann Martin Stoß, Vienna, 1820. Private collection [Photo: http://www.allmusicalinstruments.net].

4.3.5 Ambrose Joseph Bogner

Twenty–six years older than Staufer and so from a previous generation of instrument makers, Ambrose Joseph Bogner (1752-1816) had been operating in the late eighteenth century as a lute and violinmaker in Vienna. At the very beginning of the nineteenth century he produced some guitars built in the Italian style with a good reputation. From 1804-1806 Bogner was deputy head of the guild, and its president between 1808-1809.[331]

4.3.6 Franz Brunner

Although Franz Brunner was known for making pedal harps, Prochart claims he also introduced a guitar of his own design.[332] The Wiener Zeitung mentions him as being active in 1824 and the *Hauptregistratur* later records his death as 1840.[333] According to Hofmann he was an innovative guitar maker, 'build[ing] some of the lightest guitars of the Viennese School by reducing the thickness of the back and the soundboard'.[334]

4.3.7 Franz Charwath

It is not known exactly when Franz Charwath was born or whom he trained under. The *Hauptregistratur* recorded that he first applied for a *Befungis* in 1818, that it was rejected in 1819, but that he reapplied as a lute maker in 1820.[335] The *Hauptregistratur* then shows that he applied successfully for a new *Befungis* in 1822. As Kastner states that later in 1845 he was operating as a violinmaker, it is presumed that profession was the basis for the 1822 application.[336] However the *Hauptregistratur* indicates that in

[331] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, pp. 25-26.
[332] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, p. 28.
[333] *WZ*, Intelligenzblatt, 9 November 1824; ASTW, *Hauptregistratur*, 62514 (1840), p. 186.
[334] Hoffman, *Stauffer & Co.,* p. 78
[335] ASTW, *Hauptregistratur*, M 24021 (1818); ASTW, *Hauptregistratur*, M 2949, 4911, 7066, 11240, 16507, 24854 (1819).
[336] ASTW *Hauptregistratur*, M 5827, 21494, 24600, 28898, 36071 (1822); Kastner, *Handels- Und Gewerbe-Adressenbuch Des Österreichischen Kaiserstaates ... Zusammengestellt Und Herausgegeben Von L. Kastner, Etc.* (1844, 1845, 1868), pp. 70 & 77.

1849 he had relinquished this *Befungis*,[337] but then records him trading again in 1855.[338] Hopfner reports that Charwath stopped operating in 1860,[339] but this was probably only temporarily as Lutgendorff claims that after his death in 1868, his widow continued running the business until 1880, after which it was taken over by his pupil Friedrich Hawliczek.[340] This suggests that Charwath's business was still in operation in 1868 at the time of his death even if he had taken a back seat possibly due to retirement or ill health. Prochart thinks it questionable that Charwath actually built any violins (although Kastner claimed he was registered as a violinmaker). The guitars, SAM 465, 466 and 467 in the KHM, represent extant examples of his work.[341]

4.3.8 Franz Feilnreiter

Franz Feilnreiter (1791-1867) was another Viennese maker of bowed stringed instruments producing guitars at the same time as Staufer. Although like Charwath it is not known under whom he trained, the *Hauptregistratur* does record that he first applied for a *Befungis* in 1811 then again in 1814,[342] and that in 1815 he was requested to present a *Meisterprobe*.[343] Presumably these first submissions weren't successful as he applied again for a *Befungis* in 1817, eventually being granted but not without some objections from the civil authorities.[344] He applied to take over Jacob Fux's business after his death in 1819 but it wasn't until 1822 that he succeeded, having then to present another *Meisterprobe* for examination in 1823.[345] In 1833 he appears to have crossed swords with the civil authorities again, resulting in a notice being filed against him for misconduct in trade.[346] According to Prochart, from 1834-1843 he was in business with Theresa Kutrowatz, operating as a lute and violinmaker; from 1844-1863 he was

[337] ASTW, *Hauptregistratur*, H 186 (1849).
[338] ASTW, *Hauptregistratur*, 18612 (1865), p. 186.
[339] Hopfner, *Wiener Musikinstrumentenmacher 1766-1900: Adressenverzeichnis Und Bibliographie*, p. 83.
[340] Lutgendorff and Drescher, *Die Geigen- Und Lautenmacher Vom Mittelalter Bis Zur Gegenwart*, vol. 2, p. 202.
[341] Hopfner, *Wiener Musikinstrumentenmacher 1766-1900: Adressenverzeichnis Und Bibliographie*, p. 83.
[342] ASTW, *Hauptreistratur*, 2307 (1811).
[343] ASTW, *Hauptregistratur*, M 12535 (1815).
[344] ASTW, *Hauptregistratur*, M 14790, 10711, 22387, 24270, 26201, 29406, 30879, 32329, 33501 (1817); Ottner, *Der Wiener Instrumentenbau 1815-1833*., p. 45.
[345] ASTW, *Hauptregistratur*, M 23472, 32002 (1823).
[346] ASTW, *Hauptregistratur*, H 5302. 17062, 17190, 17285, 17683, 22777 (1833).

registered at Windmühl, Krongasse, Nr. 48; and from 1864-1867 at Mariahilf, Bienengasse, Nr. 3, where he died in 1867.[347] Prochart describes his work as careful in execution, with his double basses particularly well regarded.[348] Although he appears to have had problems with the civil authorities regarding running his own workshop, he retained a licence to trade throughout his working life, only relinquishing his *Befungis* in 1865.[349]

4.3.9 Anton Fischer

Makarow mentions meeting both Anton Fischer and Franz Seraph Schmidt when he visited Vienna sometime in the late 1850s or early 1860s, at the time he commissioned a guitar from Fischer. Guided around Vienna by a Mr. Kovatzick (an employee of the Austrian emperor's office), Makarow was taken to the music store of Gasslineer where on enquiring as to the best guitar maker in the city at the time, he was directed to Fischer who had been appointed to look after the guitars in the Vienna Conservatory.[350] Anton Fischer (1794-1879) was born and died in Vienna. He first applied to trade as a violinmaker in 1820, presenting his *Meisterprobe* and swearing his *Bürgereid* in 1821to starting trading independently at Seitzerhof 427.[351] Fischer's personal life appears to have been full of family tragedy. According to Prochart, Fischer's first wife Magdalena (previously married to the violinmaker Johann Karl Leeb who had died in 1819) died from a cerebral edema in 1826 at the age of thirty-five. Of the three children she had with Fischer a daughter (also named Magdalena) died in 1832 aged six, and the same year Fischer's second wife Josepha, also died of consumption. She left behind her a son (Carl) who that year died of convulsions when only twenty days old, and then her daughter (Antonia) died a year later in 1833, caused again by a cerebral edema. As if this was not enough personal tragedy, his third wife Aloysia died three years later in

[347] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, pp. 46-47.
[348] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*; Hopfner, *Wiener Musikinstrumentenmacher 1766-1900: Adressenverzeichnis Und Bibliographie*, pp. 125-126. The KHM has three examples of his surviving guitars, SAM 470, 471, 472, together with the *Baßgitarre* SAM 473.
[349] ASTW, *Hauptregistratur*, 46964 (1865), p. 186.
[350] Makarow, Nicolai, P., 'The Memoires of Makaroff', in *Guitar Review*, no. 1 (1946), pp. 8–10; no. 2 (1947), pp. 4–6; no. 3 (1947), pp. 6–9; no. 5 (1948), pp. 1–5.
[351] ASTW, *Hauptregistratur*, M 30136 (1820) & M 3071, 9061 (1821); ASTW, *Bürgereidbuch* (1821); Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, pp. 48-49.

1836 at the age of twenty-seven, from what was described as a 'nervous fever'.[352] Prochart states that from 1835 Fischer was trading firstly from the Seitzerhof Gasse, then Seitzergasse, Nr. 427, followed by periods at Graben, Nr. 618 and Stadt, Tuchlauben, Nr. 16; and that from 1872-1875 at 1, Bräunerstrasse, Nr. 3, where his son, Gottfried succeeded him in business.[353] In 1861 Fischer, along with his son–in-law Gabriel Lemböck (who had worked for him as a *geselle*), were elected for the position of 'musical instrument handlers'.[354] The organisation from which they received this position is not specified, however Makarow's reference to meeting Fischer mentions the Vienna Conservatory and it is likely they are one and the same, putting this event in the 1860s and raising an interesting biographical point. Namely that if Makarow's meeting with Fischer and subsequently Sherzer took place in the 1860s, then his resulting discussion with Anton Staufer in Prague later was after that date, further confirming the Staufer's whereabouts after giving up the workshop in Vienna. Although Prochart describes Fischer's violinmaking as only second-rate, he does consider his guitars to be of better quality. Makarow on the other hand, recounts that although the finish [varnish] of the instrument he commissioned from Fischer was impressive, its sound was disappointing, and dismisses him as 'not a very good guitar maker'.[355]

[352] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, pp. 48-49.
[353] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*.
[354] ASTW, Hauptregistratur, 1G (1861). Musikinstrumentenhändler is the term used.
[355] Makarow, Nicolai, P., 'The Memoires of Makaroff', in *Guitar Review*, no. 1 (1946), pp. 8–10; no. 2 (1947), pp. 4–6; no. 3 (1947), pp. 6–9; no. 5 (1948), pp. 1–5.

Fig. 51. Guitar by Anton Fischer, Vienna c1850. Private collection [Photo: Anthony Glise].[356]

Makarow recounts that after meeting Fischer he went in search of Staufer at his last known address, Stadt, Klostergasse Nr. 1100. On reaching the workshop he describes finding a sign outside bearing a guitar and Schmidt's name. On enquiring as to the whereabouts of Staufer, Schmidt replied that Staufer had sold him the business in 1848 and had moved to Prague.[357]

4.3.10 Franz Seraph Schmidt

Franz Seraph Schmidt (1799-1870)[358] first applied for his licence to trade as a violinmaker in 1827. His *Befungis* was initially rejected before being granted a year

[356] Glise suspects label is a forgery, but the address stated coincides with Fischer's. Other Fischer guitars are in the KHM.
[357] Makarow, Nicolai, P., 'The Memoires of Makaroff', in *Guitar Review*, no. 1 (1946), pp. 8–10; no. 2 (1947), pp. 4–6; no. 3 (1947), pp. 6–9; no. 5 (1948), pp. 1–5.
[358] Lutgendorff and Drescher, *Die Geigen- Und Lautenmacher Vom Mittelalter Bis Zur Gegenwart*, vol. 2, p. 447.

later in 1828.[359] 1833 appears to have been a difficult year for him with the Wiener Zeitung reporting that his four-year old son died of convulsions and that his business went under.[360] His home address from 1833-1852 was Josefstadt, Piaristengasse, Nr. 7, where for a time he temporarily ran a workshop.[361] Towards the end of the 1830s his fortunes seemed to have improved and in 1839 he swore his *Bürgereid*[362] and received his *Meisterrecht*.[363] From 1845-1850 he was listed under the company name of 'Schmidt & Wanek' (Wanek is thought to probably have been a piano maker).[364] In 1846 he appears to have been operating from Stadt, Klostergasse, Nr. 1100, at a time when the Staufers were also still registered at this address (possibly in a workshop below), and he remained there until 1864.[365] According to Prochart, although Schmidt built a few mediocre violins and some guitars, most of his work was as a repairer and a retailer of stringed instruments and pianos.[366]

4.3.11 Johann Rudert

Johann Rudert and Andreas Zettler were both producing guitars in Vienna during the second and third decade of the nineteenth century. These instruments follow the earlier Italian-influenced design adopted by makers there at the beginning of the century. Prochart provides some bibliographical details on Rudert: stating that he probably originated in the Vogtland and in 1809 was reported to have received his *Befungis* in Korneuburg (a town just outside of Vienna), before moving into Vienna itself in 1813, where he worked until 1842.[367]

[359] ASTW, *Hauptregistratur*, M I22088, M 25449 (1827) & M I25449 (1828).
[360] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, pp. 145-146; *WZ*, 22 May 1833; ASTW, *Hauptregistratur*, H 35232 (1833).
[361] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, pp. 145-146.
[362] ASTW, *Bürgereidbuch* (1839).
[363] ASTW, *Hauptregistratur* (1839), p. 415.
[364] Hopfner, *Wiener Musikinstrumentenmacher 1766-1900: Adressenverzeichnis Und Bibliographie*, pp. 432-433.
[365] Fray, *Allgemeiner Handlungs- Und Gewerbealmanach* (1846), p. 365.
[366] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, pp. 145-146.
[367] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, p. 139.

Fig. 52. Guitar by Johann Rudert, Vienna 1814. Private collection [Photo: Karel Fleischlinger & Jan Tuláček].[368]

4.3.12 Andreas Zettler

Prochart does not list Zettler at all in his bibliography, but Hopfner does trace his addresses as: Spittelberg, Nr. 111 in 1814; at St. Ulrich, Nr. 47 between 1818-1822; and then finally in 1823 at Josephstadt, Kaiserstrasse, Nr. 131.[369]

Although there are few biographical details on either of these makers, examples of their work are extant.

Fig. 53. Guitar by Andreas Zettler, Vienna c1821. Private collection [Photo: Kurt Decorte].[370]

[368] Fig. 66. Guitar by Johann Rudert, Vienna 1814. Private collection [Photo: Karel Fleischlinger & Jan Tuláček; Romantic Guitar Duo]. http://www.rgd.cz/kytary.html [Accessed 16 September 2011].
[369] Hopfner, *Wiener Musikinstrumentenmacher 1766-1900: Adressenverzeichnis Und Bibliographie*, p. 564.
[370] Fig. 67. Guitar by Andreas Zettler, Vienna, c1821. Private collection. [Photo: Kurt Decorte]. Restored by Kurt Decorte. http://www.the-guitarworkshop.com/restoration.htm [Accessed 16 September 2011].

4.3.13 Johann Anton Ertl

Of the working associations Staufer formed with his pupils and colleagues, that of Johann Anton Ertl in the early nineteenth century was pivotal to the innovations in string instrument making he then continued with after Ertl's death.

Ertl was born in Raidling, Moravia in 1776[371] and died in Vienna on 2 October 1828.[372] Lutgendorff claims that he was a son of Jakob Ertl who himself originated from Keiling in Moravia, and who was known to have received his *Bürgerrecht* in 1813 while operating as a guitar maker in Preßburg [now Bratislava in the Czech Republic].[373] Jakob Ertl was indeed the father of Karl Ertl (c1805-1870) who was recorded as a violinmaker in Preßburg, but given that Jakob was probably in his thirties when he received his *Bürgerrecht*, as was Johann, its more likely that if there was a family connection it is was fraternal. Lutgendorff suggests Johann Ertl was rumoured to be in Vienna as early as 1785, but the earliest evidence he gives of Ertl's activity there is an instrument label dated Vienna, 1809.[374] Prochart reports that archival records show he swore his *Bürgereid* and received his *Bürgerrecht* on 16 November 1810 while resident at Stadt, Nr. 902.[375] Although Ertl's apprenticeship and early training as an instrument maker remain unknown, Hopfner observes that his address in 1810 was Stadt, Nr. 902, formerly that of the violinmaker Sebastian Dallinger thus leading him to conclude that Dallinger was probably his teacher.[376], Ertl was elected vice-president of the Viennese lute and violinmakers' guild in 1811,[377] and then after stepping down from the position in 1815, [378] was re-elected as president in 1816. [379]. Between 1816 and 1823 he moved his workshop three times but stayed in the same street (1816 -1817 at große, Schulerstraße, Nr. 879; 1818-1820, at große, Schulerstraße, Nr. 876; 1821-1823, at große,

[371] Ottner, *Der Wiener Instrumentenbau 1815-1833*, p. 44.
[372] *WZ*, 8 October 1828.
[373] Lutgendorff and Drescher, *Die Geigen- Und Lautenmacher Vom Mittelalter Bis Zur Gegenwart*, vol. 2, p. 126.
[374] Lutgendorff and Drescher, *Die Geigen- Und Lautenmacher Vom Mittelalter Bis Zur Gegenwart*, p. 125.
[375] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, p. 44.
[376] Hopfner, *Wiener Musikinstrumentenmacher 1766-1900: Adressenverzeichnis Und Bibliographie*, p. 122.
[377] Lutgendorff and Drescher, *Die Geigen- Und Lautenmacher Vom Mittelalter Bis Zur Gegenwart*, vol. 2, p. 126.
[378] ASTW, *Hauptregistratur*, M 30328 (1815).
[379] ASTW, *Hauptregistratur*, M 1562 (1816).

Schulerstraße, Nr. 858).[380] Together with Johann Georg Staufer he was named as the joint applicant for the 1822 *privilege* in guitar improvements that concerned adjustable and detachable necks, floating fingerboards and alloy fret composition.[381] During this period of collaboration he was living at Stadt, alter Fleischmarkt, Nr. 724. Lutgendorff claims he also practised as a harp maker and Prochart mentions important Ertl improvements to a bowed-harp invented by the music director Birnbach.[382] For the last eighteen months of his life he was bedridden, eventually dying of fever whilst being cared for in the hospice of the 'Brothers of Mercy' at Spiegelgasse, Nr. 1102.[383] Ottner adds to this that he died destitute and intestate having been unable to work due to illness, leaving behind only his widow Maria, and no decedents.[384] Ertl evidently had a close working relationship with Staufer both in the workshop and in the guild. Together they developed and patented designs on instrument improvement and held positions of responsibility within their professional body. According to Hopfner, Staufer was president of the guild in 1811 (the same the year that Ertl himself was vice-president), its membership including thirteen recognised masters.[385] There are guitars by Ertl that feature an adjustable neck design from before the 1822 joint *privilege* with Staufer, suggesting it was an innovation in development. The instrument in Figure 68 is constructed with the extension of the fingerboard above the neck to body joint directly inlaid into the soundboard, as opposed to the free-floating fingerboard design outlined

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[380] Redl, *Addressen-Buch Der Handlungs-Gremien Und Fabriken In ... Wien, Dann Mehrerer Provinzial-Staedte, Für Das Jahr 1824. Verfasst Und Herausgegeben Von Anton Redl*. 1817,1818; Zuth, *Handbuch,* p. 91. Zuth also states that in 1822 he lived at Grosse Schulerstrasse 863 with Johann Georg Staufer. It is uncertain whether they were sharing a workshop or whether this was the address registered for their *privileges.*

[381] *Beschreibungen Der Erfindungen Und Verbesserungen, Fur Welche…..Patent Ertheilt Wurden 1, Welcher Die Priviligien Vom Jahre 1821-1835 Enthalt* (Wien: 1841), p. 277. 'Fünfjähriges Privilegium des Johann Georg Staufer und Johann Ertl, bürger. Geigenmacher in Wien, auf Verbesserung in der Verfertigung der Guitarren. Ertheilt am 9. Junius 1822.

Erloschen durch Zeitablauf, noch einer dreijährigen Verlängerung, im Jahre 1830.

Diese Verbesserung besteht 1.) darin, daß durch die Erhöhung des Griffblattes und Absonderung desselben vom Resonanzdecket das Instrument einen stärkeren und besser klingenden Ton erhält; 2.) daß durch eine angebrachte Schraubenmaschine dem Schwinden des Halses auf das Schnellste abgeholfen wird, und endlich Z.) daß die Bünde aus einer Metall-Komposizion bestehen, bei welcher weder die den Saiten so nachtheilige Absetzung des Grünspanes, noch eine so schnelle Abnutzung, wie bei Silber und Elfenbein, Statt findet, und welche dennoch eben so weiß und glänzend als Silber bleibt. Letztere besteht nämlich aus Messing, Kupfer, Silber und Arsenik, und ist dieselbe Legirung, welche von den Knopfmachern zur Verfertigung weißer Knöpfe verwendet wird.'

[382] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, p. 44.

[383] Timmerman, *'Guitars with Extra,* p. 95. The hospice was called 'Barmherzigen Brüdern' in Austrian.

[384] Ottner, *Der Wiener Instrumentenbau 1815-1833*, p. 44.

[385] Hopfner, *Wiener Musikinstrumentenmacher 1766-1900: Adressenverzeichnis Und Bibliographie*, p. 476. Hopfner is citing Haupt (1952) and Redl.

in the *privilege*. However the method of attaching the heel by a screw mechanism into the neck-block to regulate string height or detach the neck is essentially the same, but with a break in the fingerboard just behind the eleventh fret to facilitate this operation.

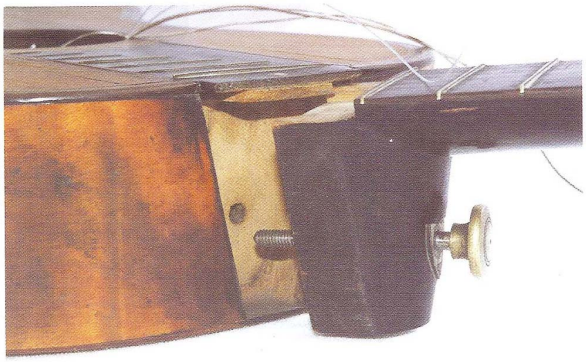

Fig. 54. Detachable neck on guitar by Johann Anton Ertl, Vienna 1819. Private collection [Photo: Alex Timmerman).

The *privilege* of 1822 expired after five years but was extended for a further three, presumably shortly before Ertl himself died. Hayes and Fontana consider that Ertl probably had a lot of input into Staufer's development of the *Arpeggione*,[386] and it is reasonable to speculate that, Staufer and Ertl would have continued their working partnership had he lived.

4.3.14 Lesser Makers

Little is known of Johann August Schuster[387] apart from Zuth stating that he was a contemporary of Georg Staufer, operating in Vienna during the first half of the Nineteenth Century making terz guitars and specialising in *Staufer-Legnani* models.[388] Hofmann suggests he could be categorised as '*Kleinmiester* or "little master"' along with makers such as Joseph Klimitz, Franz Charvat and Anton Jarasch, but that even so their presence within Viennese guitar culture proved its popularity was 'much more than a marginal artistic phenomenon'.[389] He highlights the fact that Schuster's

[386] Gerald Hayes & Fontana, 'Arpeggione'. [Accessed 8 September 2011].
[387] *Schuster* or sometimes *Schustler*.
[388] Zuth, *Handbuch Der Laute Und Gitarre*, p. 232.
[389] Hofmann, *Stauffer & Co., the Viennese Guitar of the 19th Century*.

instrument labels pay homage to the work of Georg Staufer: being in the style of those labels endorsed by Legnani, but rather declaring 'Nach dem Modell Johann Georg Staufer' and the influence of Staufer instead.[390]

4.4 Chapter Conclusions

The profile of Georg Staufer that emerges is of a gifted craftsman with, as a musical instrument maker, an unending desire to experiment and invent. This at times worked against him financially. In 1811 he was prominent in the guild, offered to help the state in its attempt to counteract monetary inflation by donating part of his earnings above his normal taxes, and ran a successful workshop. By 1827, although the company was successfully producing high quality guitars, largely due to his persistence with experimentation, his debts were mounting up. It is likely that the final demise of the Staufer workshop in 1848, then controlled by Anton Staufer [Georg Staufer died in 1853] was due to never quite recovering these. It is evident though, that with his development of a distinctly Viennese model of guitar, his was an important influence not only on his pupils and colleagues in Vienna, but on central European string instrument making as a whole. His design influence migrated both to North America through Christian Friedrich Martin and Heinrich Schatz, and to Russia through Johann Gottfried Scherzer.

[390] Hofmann, *Stauffer & Co., the Viennese Guitar of the 19th Century*.

Chapter 5 Viennese Guitars with Extra Bass Strings

5.1 The Staufers, their pupils and contemporaries

No extant guitars with extra bass strings bearing only Georg Staufer's name have come to light apart from two unusual and possibly inauthentic instruments shown on Greg Miner's *Harp Guitars* website. One, a nine-string instrument (three extra basses), resembling an enlarged oval-shaped flat-back mandolin (perhaps following Staufer's own mandolin design), has a label of a design not known from other Staufer instruments and which reads 'Nach der neuesten Verbesserung von Johann Georg Stauffer, verfertigt in Wien, Anno. 1852. Landstrasse Nr. 572' (According to the latest improvement by Johann Georg Stauffer, manufactured in Vienna, in the year 1852. Landstrasse. No. 572).[391] Georg Staufer, who died the following year in 1853, was living in the St Marx care-home in 1852, but had by then ceased operating as a musical instrument maker.[392] On the other hand, this label address does correspond to that given in the 'Austria: österreichischer Universal-Kalender' of 1845 for the St Marx care-home, under the entry of *Bürgerspital zu St. Marr*.[393]

Fig. 55. Label of nine-string guitar 'After the newest inventions of Johann Georg Stauffer', Vienna 1852. Private collection [Photo: Miner, *Harp Guitars*].[394]

[391] Nine-string guitar with label bearing the name of *Johann Georg Stauffer*. Private collection [Greg Miner], *Harp guitars* http://www.harpguitars.net [Accessed 15/10/2010]
[392] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, pp. 153-157.
[393] *Austria: Ã¶sterreichischer Universal-Kalender* (Klang, 1845), p. 317.
[394] Greg Miner, 'Stauffer Label-Lotze', www.harpguitars.net [Accessed 21 July 2011], http://www.harpguitars.net/history/org_images/form2/stauffer_label-lotze.jpg

Fig. 56. Nine-string guitar bearing the label ‘Nach der neuesten Verbesserung von Johann Georg Stauffer, verfertigt in Wien, Anno. 1852. Landstrasse Nr.572’. Private collection [Photo: Miner, *Harp Guitars*].[395]

The other instrument shown by Miner is an eight-string guitar (two extra basses) of a more squat almond-shaped outline, with a similar label using the same wording as before apart from the date: ‘Nach der neuesten Verbesserung von Johann Georg Stauffer, verfertigt in Wien, Anno 1840, Landstr. 572’. Although Staufer purportedly built this instrument in 1840, he was in Kaschau at that time and did not enter the St

[395] Miner, 'Stauffer Label-Lotze'. Private collection [Photo: Miner, *Harp Guitars*]. [Accessed 21 July 2011].

Marx care-home until 1845,[396] so although ostensibly dated 1840, this must have been made (or at least labelled) after 1845 by someone who associated the Landstrasse 572 care-home address with Staufer.

Fig. 57. Eight-string guitar labelled 'Nach der neuesten Verbesserung von Johann Georg Stauffer, verfertigt in Wien, Anno 1840, Landstr. 572.' Private collection [Photo: Miner, *Harp Guitars*].[397]

The issue of where Georg Staufer made instruments towards end of his life is complicated. As the addresses given for Anton Staufer's [the son] workshop from 1843, and Georg Staufer's [the father] residence from 1845 both contain the word Bürgerspital, some confusion could arise as to whether these refer to the same place,

[396] Wiener Bürgerversorgungshaus, *Standesprotokoll Für Männer (1845)*, vol. 2 (Wien: 1845), p. 176.
[397] Greg Miner, 'Stauffer Label-1840 Stevens'. Private collection, www.harpguitars.net [Accessed 21 July 2011], http://www.harpguitars.net/history/org_images/form1/staufer,1840-stevens.jpg

however they are two distinctly different addresses. The 'Universal-Kalender' of 1845 gives the location of the *Bürgerspital zu St. Marr* (Bürgers' Hospital of St. Marx), where Georg was resident, as Landstrasse, Nr. 572, but Prochart states that Anton's workshop, and as such the Staufer business, was situated at *Stadt, Klostergasse, Nr. 1100 im Bürgerspital* (known today as the Bürgerspital-Platz [Civic Hospital Square]). In addition to this, while Timmerman claims that even though the running of the business had officially been turned over to Anton in 1836, Georg continued in the workshop alongside his son,[398] Hofmann cites Lorenz Novag's description in 1820 of a workshop on the ground floor of the St Marx care-home for the use of its residents, and deduces this is where Georg Staufer built these instruments.[399] So while it is possible that Georg Staufer could have made instruments from his residence at St Marx perhaps as experiments), it is equally plausible that this activity would rather have taken place in the official Staufer workshop at Klostergasse, Nr. 1100. Three main issues then, cast doubt on the authenticity of these two instruments: it is likely that any instruments made by Georg after 1845 (when he entered the St Marx care-home) would have been sold with a label from Johann Anton's workshop at Klostergasse, Nr. 1100; Georg was not resident at Landstrasse, Nr. 572 in 1840; and both the instruments and their labels bear little resemblance to his earlier work. Hofmann argues that these instruments were Georg Staufer's last 'chef d'oeuvre' and for the benefit of his own satisfaction. However, while many Staufer instruments (both by father and son) survive today, they are only a small proportion of the instruments the company made in total. Therefore, if these last two instruments of Georg's were an example of his insatiable desire to further improve guitar design, then as surviving instruments, would they not be proportional to a greater number made? If so, and there had been more, again would that activity not have taken place in the registered Staufer workshop, rather than at St Marx?

Did Georg Staufer himself then, have a direct influence on the addition of extra bass strings to the guitar? Timmerman identifies two extant Staufer seven-string guitars (one extra bass). The earlier is labelled, 'Nach dem 827 Modell des Luigi Legnani von J. A. Stauffer & Comp in Wien No. 136', additionally signed by Anton Staufer himself in 1827, and it carries the red wax seal of *privilege* and Legnani's endorsement. He

[398] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age*, p. 93.
[399] Hofmann, *Stauffer & Co.,* pp. 92-94.

reports that the label of the second instrument, which he considers is from c1840, contains the printed text: 'Georg Anton Stauffer / Geigen und Guitarrenmacher / in / Wien', showing that this was a period when both Georg and Anton appear together on some labels.[400] Whether this signifies that Georg had a direct influence on the design of this guitar, which not only carries seven strings but is also of the heavier build more common with Anton's instruments, is unclear. It could be that these labels simply indicate the business relationship of the father and son within the Staufer enterprise and that in themselves they do not denote the actual maker, but it is equally possible that Georg was involved with the design, and not only of the instrument labelled 'Georg Anton Stauffer' but also others bearing Anton's labels. Labels bearing the inscription 'Joannes Georgius et Antonius filius Staufer' can also be found, as well as labels by the Staufers individually.[401]

In his memoirs, the Russian nobleman and guitar enthusiast Nicolai Petrovich Makarow recounts, how whilst in Moscow in about 1839 he acquired 'a very good Viennese guitar made by Staufer, who at the time was the best guitar-maker in Europe'.[402] He states that on two occasions (1841 and 1844) he was staying in St Petersburg. Whilst there, in 1844, he sent for and received a new guitar from Staufer (although he does not identify whether the father or son made the instrument), describing it as 'improved by the addition of two extra strings, which increased tonal power as well as harmonic possibilities'.[403] He recounts that four years passed where other matters than the guitar had demanded his attention, but then at the end of this period he had written to Staufer to commission two guitars of 'a deep tone, as well as sustaining and singing qualities…. that would remain a monument to his craftsmanship throughout the world'. He reports that he received these instruments five months later and that they were larger in size and 'of much greater sonority'.[404]

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[400] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age*, Fig. 43, p. 159. Text: pp. 110-115.

[401] As has previously been stated in the introduction to this thesis, both spellings, *Staufer* and *Stauffer*, are used concurrently on the labels of different instruments.

[402] Makarow, 'The Memoirs of Makaroff', in *Guitar Review*, vol.1, issues 1-6, no.1 (1946), pp. 8–10; no.2 (1947), 4–6; no.3 (1947), 6–9; no.5 (1948), 1–5 (The Society Of The Classic Guitar: New York, 1946, 1947, 1948,), p.11.

[403] Makarow, 'The Memoirs of Makaroff', in *Guitar Review*, vol. 1, p. 12.

[404] Makarow, 'The Memoirs of Makaroff ', in *Guitar Review*, vol. 1, p. 12. Makarow states that Staufer included a letter with the guitars supplied, urging him to travel to London to hear Mr. (Leonard) Schultz, whom he considered the greatest guitarist of the time.

Makarow was interested in all areas of the guitar, seeking out new compositions from current composer-players as well as endorsing instrument makers. In 1852, on a visit to Vienna, he met the Hungarian guitarist Johann Casper Mertz and was not only impressed with Mertz's compositions but also by the quality of his performing instrument: a nine-string guitar made by Johann Gottfried Scherzer, from whom he subsequently ordered three new instruments. His commission stipulated the addition of an extra bass string to tune to *sol* [*G'*], thereby increasing the number of strings from nine to ten.[405] Later in his memoirs Makarow again recounts this stay in Vienna, where he enquires as to the best Viennese guitar maker at that time. Being informed that Staufer had not made any guitars since 1848 and had moved to Prague, he was directed to Anton Fischer, who had the charge of looking after the instruments in the Vienna Conservatoire. Makarow had also gone to the address of Staufer's former workshop, to find that it had been taken over by Franz Schmidt, to whom Staufer had sold his business in 1848 or 1849.[406] Schmidt directed Makarow to Scherzer, who having formerly been Staufer's apprentice, he considered would be the best maker to build him an instrument. Makarow describes going to see an impoverished Scherzer who, during the course of their meeting, informed Makarow that the two guitars he had received from Staufer in 1849 were in fact made by him on commission.[407] Given the date of the order and receipt of the instruments it is probable that Anton Staufer supplied these guitars, but whether he actually made them is therefore questionable. The memoirs give 1841 and 1844 as years in which Makarow resided in St Petersburg. While the memoirs imply that it was in the second period that Makarow ordered his first eight-string guitar from Staufer, they do not specify the actual date, only that the order was placed from St Petersburg. It is more likely that the instruments referred to as having been made by Scherzer (and supplied as Staufers) were to fulfil the subsequent order of 1848. This testimonial evidence though, suggests a Staufer workshop practice of selling instruments by former apprentices under the umbrella of their registered business, at times identified by a Staufer label alone.

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[405] Makarow, 'The Memoirs of Makaroff ', in *Guitar Review*, reprint, p. 59 & p. 109. One of these instruments was for a friend of Makarow.

[406] Kastner, *Handels- Und Gewerbe-Addressenbuch Für Österreichisch-Ungarischen Monarchie, Enthaltend Die Adressen Von Wien, Hrsg. V. Niederöster, Gewerbeverein*. 1849, p. 253. Kastner gives Schmidt's workshop address in 1849 as Klostergasse 1100. According to Prochart, J. A. Staufer had a workshop underneath Schmidt & Wanek from 1846. 1846 to1864 are the dates given for Schmidt & Wanek's workshop at Klostergasse 1100.

[407] Makarow, 'The Memoirs of Makaroff ', in *Guitar Review*, reprint, pp. 57-58.

Makarow identifies the work of Scherzer from 1852 as pivotal to his own ideas for the improvement and subsequent promotion of the guitar. It is likely then that this was the year of their first meeting, when the account of the instruments made by Scherzer but supplied as Staufers, came to light. In his memoirs Makarow reveals his displeasure at finding out that Scherzer had been paid a fraction of the price Staufer had charged. It appears that Scherzer, working as a sub-contractor, had been paid twenty-two roubles for each guitar, while Makarow had been charged one hundred and twenty roubles (including seventy-six roubles postage)[408] for each. He was not amused by what he considered a deception and subsequently writes that after a three-week stay in Vienna, he travelled to Prague where he, 'did not miss the opportunity to meet Staufer.'[409] Anton Staufer's address, according to Kastner, ceased to be registered at Stadt, Klostergasse, Nr. 1100 in 1851.[410] It is not known at this time if Staufer continued to trade as an instrument maker in Prague. According to Hofmann, Anton and his wife first travelled to Olmütz, afterwards Prague, and then Graz, where he worked as a piano teacher. Hofmann reports that when he returned later to Vienna, Anton 'pass[ed] a peaceful retirement thanks to a comfortable income from – apparently – a number of judicious investments'.[411] Anton Staufer's death certificate states he died on 28 May 1871.

It appears that an extra seventh string started to appear on Viennese guitars in the late 1820s,[412] and that by the mid-1830s this had increased to eight. The eight-string guitar (two extra basses) [Fig. 73] made by Friedrich Schenk in c1835 (now in the Germanisches National Museum) can also be associated with the Staufer workshop. Schenk was a pupil of Georg Staufer and a contemporary of his son Anton, who set up

[408] This sum of seventy-six roubles for postage is considerably more than Staufer's retail price of forty-four roubles, and Staufer's retail price was exactly double the sum Scherzer was paid for each guitar.
[409] Makarow, 'The Memoirs of Makaroff ', in *Guitar Review*, reprint, p. 59.
[410] Kastner, *Handels- Und Gewerbe-Addressenbuch Für Österreichisch-Ungarischen Monarchie, Enthaltend Die Adressen Von Wien, Hrsg. V. Niederöster, Gewerbeverein*, p. 262.
[411] Hofmann, *Stauffer & Co., the Viennese Guitar of the 19th Century*, p. 94. Hofmann cites Anton Staufer's will from 1867, in which he describes himself as a man of private means and not an instrument maker.
[412] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age,* p 159. Fig. 42. Timmerman presents a seven-string guitar from 1827, labelled 'J. A. Stauffer. It and the Reiß eight-string guitar [Fig. 74 in this thesis] both have body shapes closely resembling Viennese six-single-string guitars from the first quarter of the nineteenth century: where the upper and lower bouts are of similar proportions.

his own workshop independently from the mid 1830s.[413] He appears to have moved his workshop several times, but for the most part staying in 'Margarethen', close to Vienna's city centre.[414] Timmerman suggests that, although instruments made by Schenk after setting up independently do identify him as the maker, it is likely that they continued to be sold through the Staufer workshop.[415] As neither Schenk nor Scherzer are mentioned as having a *Bürgereid*, this may give some credence to Timmerman's view.

[413] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, p. 143. His exact dates are unsubstantiated and are thought to be c1800-c1875. He had a son, the guitarist and singer Johann Decker-Schenk who lived between 1826 and 1899. This leads to the presumption that Friedrich Schenk was active as an instrument builder in the middle of the Nineteenth century, setting up independently during the 1830's.

[414] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, p. 143. For his different workshop addresses see Chapter 4, p. 113 of this thesis.

[415] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age,* pp. 116-120.

Fig. 58. Eight-String guitar by Friedrich Schenk, Vienna c1835 [Photo: Germanisches National Museum, Nurnberg]. MIR. No. 934.

Also from this period, Timmerman presents another eight-string Viennese guitar (two extra basses) [Fig. 74] built around 1840 by Georg Staufer's competitor Nikolaus Georg Reiß.[416] Reiß also claims Legnani's endorsement, supported by a red wax seal, on this and other instruments.

Fig. 59. Eight-string guitar by Nikolaus Georg Reiß, Vienna c1840. Private collection [Photo: Brigitte Zaczek].

[416] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age*, Fig. 36, p.156. Eight-string guitar in the private collection of Brigitte Zaczek.

Legnani was reported to have been living in Vienna in 1822 and to have returned again in 1833 and 1839 (being unanimously critically acclaimed on each occasion),[417] and is quoted by Bone to have visited the workshops of both Staufer and Reiß.[418] Evidence of Legnani's use of guitars with extra bass strings can be directly found in transcriptions of his repertoire published by Artaria & Comp. Instructions in the manuscript of three pieces specify performance on either the six or the eight-string guitar, where the two extra bass strings are tuned to *D* and *C* respectively:

> *Introduzione e tema con variazioni sopra un motivo della Norma, cantabile e finale, per chitarra (a sei o a otto corde) Oeuvre 201* (Vienna: Artaria & Comp.);
>
> *Dell 'Overtura 'nell Guglielmo Tell, Oeuvre 202* (Vienna: Artaria & Comp.);
>
> *Melodies nationales hongroises et thêmes originaux en forme de pot-pourri, pour la gitare seule à 6 ou 8 cordes, Oeuvre 203* (Vienna: Artaria & Comp.).[419]

Although these scores do not bear the date of publication, Legnani did visit Vienna in 1833 to perform, which coincides with the period when eight-string guitars (two extra basses) were in evidence. Whether he had a direct influence earlier on the design of Staufer's eight-string instrument, or conversely had been influenced by it, is not known. It is reasonable however to suggest that during his second Viennese visit, Legnani could have been performing on an eight-string instrument, and that during his third visit in 1839 he almost certainly was. Len Verret claims that Legnani's Op. 222 is estimated to date from 1846, which if correct, could chronologically place Op. 201, 202 and 203 as part of Legnani's repertoire in the late 1830s.[420] A review of a private performance by Caspar Johann Mertz, reported in the newspaper *Moravia* from 27 September 1841, mentions his use of a Staufer eight-string guitar, and indicates use of this form at this

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[417] Gazelloni, 'Luigi Legnani'. [Accessed 21 October 2007], http://www.grovemusic.com. His association with Niccolo Paganini is of particular interest. They had become friends, Paganini himself being an excellent guitarist, and planned to appear as a duo in concert. Some biographers have reported that they toured together although these claims appear to be unsubstantiated. 'They planned to play as a duo in a series of accademie …..three contracts, for 7, 16 and 23 August 1836…..cancelled by mutual agreement 30 October that year.

[418] Philip J. Bone, The Guitar and Mandolin: Biographies of Celebrated Players and Composers (Schott & Co.: London, 1929), p. 206.

[419] Luigi Legnani, 'Opus 201, 202 & 203', (Denmark: The Royal Library), http://www.kb.dk/en

[420] Len Verret, 'Luigi Legnani, 1790-1877', http://www.earlyromanticguitar.com/; Verret, 'Luigi Legnani, 1790-1877'.

time.[421] From Makarow's memoirs it is possible to correlate dates with the number of extra bass strings on each of his instruments: the guitar he ordered from Staufer in 1844 had two extra bass strings, and from his account of a meeting with Schultz in London later, his instrument then [one of those supplied by Staufer in 1849] also had two extra bass strings. The instruments he commissioned on his trip to Vienna in the early 1850s (one from Scherzer and one from Fischer) were both fitted with three extra bass strings.[422]

The seven-string Stauffer guitar from 1827 cited by Timmerman, and the Reiß eight-string guitar [Fig. 74] both have body shapes closely resembling Viennese six-single-string guitars from the first quarter of the nineteenth century: where the upper and lower bouts are of similar proportions. By the middle of the century Anton Staufer's instruments, along with those of Schenk and other contemporary guitar makers such as Anton Fischer,[423] had developed a larger lower bout, which then continues to increase noticeably on the larger nine and ten-string guitars made by Schenk and Scherzer. Hofmann claims Fischer (1794-1879) was once a pupil of Georg Staufer's who set up independently in 1821. Hypothetically, if he had spent the previous five years apprenticed to Staufer he would have started with him at the age of twenty-one, an unusually advanced age for a pupil. On the other hand, he could have started his apprenticeship at an earlier age and spent the intervening years between its completion and setting up independently as a journeyman. While the *Hauptregistratur* reports that he requested to trade as a violinmaker in 1820,[424] neither it nor the other archival sources surveyed by Prochart link him to Staufer. However Fischer's eight-string guitar (two extra basses) [Fig.75] from c1845 closely follows the form emergent from the Staufer workshop.

[421] 'Caspar Johann Mertz', in *Moravia,* 27 September 1841.
[422] Makarow, 'The Memoirs of Makaroff ', in *Guitar Review*, reprint, p. 59.
[423] Hofmann, *Stauffer & Co., the Viennese Guitar of the 19th Century*, p. 78.
[424] ASTW, *Hauptregistratur*, M 30136 (1820).

Fig. 60. Eight-string guitar by Anton Fischer, Vienna c1845. Private collection [Photo: Brigitte Zaczek].

Common to these instruments by Reiß and Fischer and the seven and eight-string Staufer workshop guitars, is the use of figured sycamore for the backs (usually 'one-piece') and spruce for the fronts. All feature ebonised necks and peg heads with a fingerboard raised above the upper bout and extended to the sound hole and are equipped with between 21 and 23 frets. Although ebony itself was sometimes used for bridges and fingerboards, often as not these too were of ebonised pear. With the exception of the two instruments purportedly made by Georg Staufer when he was at St Marx later, the seven and eight-string guitars shown from this era have friction tuning pegs, rear mounted into a figure-of-eight peg head, which is enlarged to accommodate the extra bass strings. At this stage in their development the extra bass strings are extended directly to the guitar's bridge, with no additional neck support at the heel.

While many of Scherzer's instruments from the 1860s do feature twenty-four frets, those of Georg and Anton Staufer guitars with extended and elevated fingerboards are usually fitted with between twenty-one and twenty-three frets.[425]

5.2 Schenk and Ivan Padovec

In around 1841, Georg Staufer's former pupil Schenk, built a specialist ten-string guitar (four extra basses) [Fig. 76] for the Croatian virtuoso Ivan Padovec. In his guitar method, 'Theoretisch-practische guitar-Schule, nebst der Anweisung zum Spiele einer zehnaitigen Gitarre', Padovec declares that Staufer built the instrument, but its label identifies Friedrich Schenk as the maker. Padovec's statement again suggests that although Schenk had his own independent workshop at this time, the instrument was supplied through the Staufer workshop. As well as featuring four extra basses, this instrument possesses a unique form of capotasto fretting system that allowed the free-floating strings, tuned diatonically, to function chromatically. Running parallel between the standard six-string and supporting sub bass necks is a long metal bar. When activated by the left [fretting] hand, a capotasto attached to the bar, presses down on the floating strings in the first fret position, thereby raising the pitch of each string by a semitone. Thus, if the seventh string is tuned to *D*, it can be raised to $D^{\#}$ allowing the semitone below the *E* of the open sixth string to be played. This is then consistent with the other extra bass strings [The eighth [*C*], can be raised to $C^{\#}$, the ninth [*B'*] to *C*, and the tenth [*A'*] *to* $A^{\#}$*'*, or other variants depending on tuning configuration]. The body of the instrument is particularly large: the upper bout is 295 mm wide, the waist 221 mm, the lower bout 372 mm; and the length is 456 mm. Its depth is 69 mm at the heel, 82 mm at the waist, and 71 mm at the tail. The instrument's total length is 937 mm, and the string length of the six standard strings as 629 mm. It is fitted with twenty-two frets and has a playing compass of *A' to d''*.[426] Padovec's instrument has a body shape that bears close resemblance to the eight-string guitar by Schenk [Fig. 73].

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[425] Makarow, 'The Memoirs of Makaroff ', in *Guitar Review*, reprint, p. 59. Makarow claimed that by specifying its inclusion on a guitar he commissioned in 1840, to have invented the extended fingerboard configuration of twenty-four frets, giving a playing range of two full octaves on the higher strings, and that Staufer and Scherzer subsequently adopted this improvement.

[426] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age ,* p. 116. Padovec's ten-string guitar, built by Schenk, is now in the Museum of Arts and Crafts in Zagreb.

Fig. 61. Padovec's ten-string guitar by Friedrich Schenk, Vienna c1841 [Photo: Museum of Arts and Crafts, Zagreb]. No. HGZ 56.

Padovec was based in Vienna between 1829 and 1837 and was one of the first virtuosos to concertize on a ten-string guitar (most likely this innovative instrument) in around 1842.[427] Timmerman, in referring to a review of a performance by Mertz in 1848, where he is described as using a *harfengitarre* with four extra bass strings, suggests that it too probably came from the Staufer workshop, and may well have been the forerunner to Schenk's ten-string *bogengitarre* [Fig. 62].[428] The name *bogengitarre* is derived from the instrument's hollow bowed arm, extending from the body on the bass side of the

[427] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age,* p. 115.
[428] Schenk was experimental in his instrument design and went on to make many, generically so-called, lyre and harp guitars.

fingerboard and ending in a round hollow headstock with its own sound hole. A plate fitted with metal tuners was set into the top of the headstock to fix all the strings. The six standard strings ran over the fingerboard from the bridge, while the additional bass strings passed over the extension. The extra sound chamber in the arm was intended to give the instrument a warm and sonorous sound.[429] Schenk often used built these guitars in *wappenform*. The *wappenformgitarre* had a body in the shape of a shield, with usually but not always, two triangular sound openings either side of the fingerboard in the upper bout.[430]

Fig. 62. *Bogengitarre* by Friedrich Schenk, Vienna c1850 [Photo: Münchner Stadtmuseum]. No. 41-42.

[429] The Schenk *bogengitarre* (Fig. 9), in the Berlin Musical Instrument Museum, was studied and reproduced by the maker Karl Müller in the early twentieth century and adverts for Müller as a string instrument maker, specialising in guitars with extra bass strings appear in *Der Gitarrefreund,* June 1904.
[430] As can be seen with the instruments in Figure 78, Schenk experimented with unconventional sound openings.

Figures 63 & 64 show variations of *bogengitarre* made by Schenk.

Fig. 63. Ten-string *wappenform-bogengitarren* by Friedrich Schenk, Vienna, mid-nineteenth century [Photo: M. G. Intelisano & Tiella].[431]

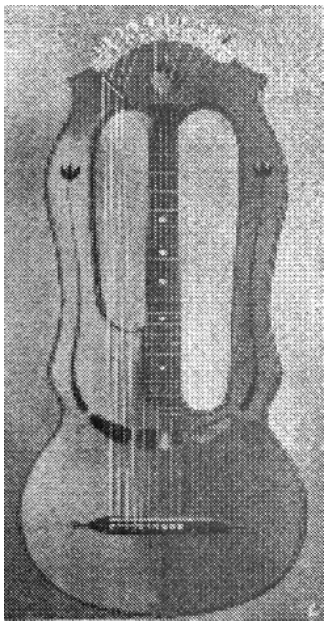

Fig. 64. Double-armed *bogengitarre* by Friedrich Schenk, Vienna, mid-nineteenth century [Photo: M. G. Intelisano & Tiella].[432]

[431] M. G. Intelisano & Tiella, 'Luigi Mozzani Chitarrista E Liutaio,' ed. Commune di Rovereto (Commune di Rovereto). From Otto Hammerer's guitar collection: Ten-string *wappenformbogengitarren* by Friedrich Schenk. Vienna, mid-nineteenth century.

Besides developing the *bogengitarre*, Schenk experimented with designs for mechanically operated capotastos and resonating tables. One such example, the *liraform-pedalgitarrre* [SAM 372 in the KHM] built by Schenk around 1850, is a ten-string instrument played in a standing position, mounted on a *resonaviztisch*: a device using a hollow table for extra resonance and fitted with a pedal mechanism. This mechanism controlled a moving clamp (or capotasto) operated by a foot pedal and capable of fretting strings between the fifth fret and bridge, thus eliminating awkward barré chords.[433] According to Timmerman, Johann Knaffl-Lenz (active between c1845 and c1885) built the first form of *pedalgitarre*, which Mertz used for the first time in 1845 (although later he played Schenk-built versions of this design). Newspaper articles from the same year report Schenk's son, Johann Decker-Schenk, concertizing on one.[434]

Gabriel Lemböck (1814-1892) was a contemporary of Schenk also making *bogengitarren*.[435] He initially studied with Peter Teufelsdorfer, followed by a period with Franz Geißenhof and then Johann Baptist Schweitzer. In 1841, as a qualified journeyman, he went to work for Anton Fischer.[436] In 1855 he became Bernhard Stoß's business successor, and in 1861 together with Fischer, was appointed to the position of stringed instrument supplier to the Royal Court.[437] Figure 80 shows a *bogengitarre* in *wappenform* shape made by Lemböck after the model pioneered by Schenk in 1850. Comparing the addresses inscribed on Lemböck's labels with his registered workshop dates, suggests it was made around 1855 and probably before 1860.

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[432] M. G. Intelisano & Tiella, 'Luigi Mozzani Chitarrista E Liutaio,' ed. Commune di Rovereto (Commune di Rovereto). From Otto Hammerer's guitar collection: Ten-string *wappenform bogengitarren* by Friedrich Schenk. Vienna, mid-nineteenth century.

[433] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age,* p. 118 & 165. Timmerman cites *Liraform-Pedalgitarre* in the Kunsthistoriches Museum, abteilung Alte Musikinstrumenten, Vienna, No. SAM 372.

[434] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age,* p.117.

[435] Lemböck is also known as a fine violinmaker.

[436] ASTW, *Hauptregistratur* 2952 (1841), p. 186. Fisher was at this time listed by archival records as a violinmaker.

[437] Bernhard Stoß was a cousin of Johann Martin Stoß, who in 1814 had been appointed violinmaker to the Royal Court, at the time when he and Georg Staufer were both being considered for the position.

Fig. 65. Ten-string *bogengitarre* by Gabriel Lemböck, Vienna c1855. [Photo: Harp Guitars].[438]

5.3 Scherzer and Makarow

Although Scherzer's guitars are generally larger than those of both the Staufers, he saw himself as the successor to the Staufer's principle of design, and illustrated this with the inscription of *vormals Stauffer* [formerly Stauffer] on his instrument labels.[439] , Like the Staufers, Sherzer used fine spruce for the soundboards of his guitars and sycamore for the backs and ribs, although these he frequently veneered with rosewood.[440] Lutgendorff claims that Georg Staufer, when he introduced a narrower, longer model of violin in 1832, was fitting them with a double back and laminating their sides. The double-back design was aimed at allowing freer vibration of the instrument's body by separating the

[438] Fig. 13. Ten-string bogengitarre by Gabriel Lemböck, Vienna, c. 1855. Private collection. *Harp Guitars* [Accessed 23 July 2011].
http://www.harpguitars.net/history/org_images/form3/lembock-mauro_carpiceci
[439] Timmerman, *Guitars with,* p.123.
[440] Southwell, 'Development of the European Guitar 1780-1880 and Its Relevance to Modern Guitar Design', in *American Lutherie*, 1998, pp. 26-39.

player from its vibrating surfaces. As these outer backs were made with no interior transverse braces to support their domed-shape, they were formed from laminating veneers. These designs when found later on Scherzer's guitars, therefore suggest a method of construction that was already in practice in the Staufer workshop.[441]

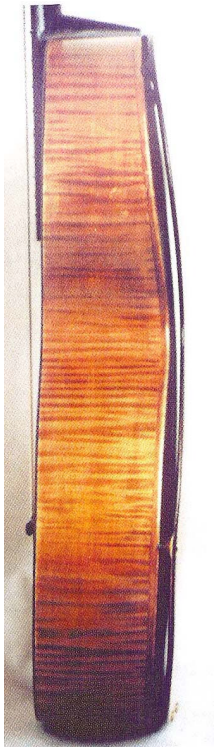

Fig. 66. Double back on a guitar by Johann Gottfried Scherzer, Vienna c1855. Private collection [Photo: Vladimir Khlopowski].

Scherzer made six-string guitars (commonly featuring the Persian slipper headstock) besides eight, ten, eleven, twelve and thirteen-string versions of *baßgitarren*.[442] Instruments with ten strings or less usually had their sub-basses tuned descending diatonically in tones, whereas the sub-basses of those with thirteen were tuned chromatically (the eleven or twelve-string instruments would probably be tuned to variants of both the diatonic and chromatic systems). Necks on Sherzer guitars come

[441] Lutgendorff and Drescher, *Die Geigen- Und Lautenmacher Vom Mittelalter Bis Zur Gegenwart*, p. 483. 'So baute er Geigen mit zweifachem Boden, damit der Ton nicht durch das Anliegen der Hand oder des Körpers gedampft werde, oder er belegte die Zargen innen statt der Bereifung ganz mit Ahorn. 1m Jahre 1832 baute er Violinen von einem schmalen, aber sehr langen Modell' (So he built violins with double backs, so the sound would not be dampened by contact with the hand or body, and laminated the sides instead of making them in solid maple. In 1832, he built a narrow but very long model of violin). Lutgendorff does not specify any different wood species to maple for the side laminations.
[442] Zuth, *Handbuch Der Laute Und Gitarre*; Zuth, *Handbuch Der Laute Und Gitarre*, pp. 224-225

together into a single headstock, are joined at the body into a single heel and incorporate Staufer and Ertl's adjustable design. Scherzer's best concert models have rosewood-veneered backs and sides, with necks that are veneered in ebony and fitted with enclosed mechanical tuners (on cheaper guitars the necks are simply lacquered black, and the tuners are wooden friction pegs). Fingerboards are usually ebony and often installed with twenty-four frets. In order to relieve some of the stresses exerted by the extra bass strings to the relatively thin soundboards (typically 2.2 mm in the centre and 1.8 mm on the bass side of the lower bout]),[443] an iron rod is inserted lengthwise between the neck and end blocks to keep the body in a state of compression.[444] Scherzer often used a bridge design with compensated individual saddles for better string intonation, and from the late 1850's, a small ivory finger rest started to appear attached to the front's treble side behind the sound hole (both devices sometimes appearing on guitars made by Anton Staufer).[445] Sherzer's guitars commonly have a scale length of 640 mm.

In 1862 Scherzer collaborated with Josef Petzval, a physicist and music theoretician, to develop the *Guitharfe*, which was about twice the size of a standard guitar and had two fingerboards; one, featuring twelve frets for the bass strings, the other, thirty-one frets for the standard strings.[446]

Makarow, realising Scherzer and not Staufer to be the actual source of his new larger guitars, began to champion him. On receiving the first Scherzer guitar he commissioned after discovering the truth concerning the origin of his previous two Staufer instruments, he made some profound observations: namely, that the instrument was larger than any he had previously seen, and that it was designed with 'two iron rods running the length of the body' to relieve the stress on the 'top plate, in the same way as

[443] Southwell, 'Development of the European Guitar 1780-1880 and Its Relevance to Modern Guitar Design', p. 37.
[444] Makarow, 'The Memoirs of Makaroff '. Makarow reports that the guitar he commissioned from Scherzer in 1852 had two internal iron compression rods. The instrument from 1861 in the possession of Mantanya Ophée has a single rod adjustable by means of a small screw protruding through the end graft at the base of the instrument, and tightened with a bolt that doubled as a strap button. However the adjustable feature could be a later addition.
[445] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age,* p. 124.
[446] Vannes, *Dictionnaire Universel Des Luthiers*. p. 319, & Lutgendorff and Drescher, *Die Geigen- Und Lautenmacher Vom Mittelalter Bis Zur Gegenwart,* vol. 2, p.443, & Zuth, *Handbuch Der Laute Und Gitarre,* p. 218. Preserved example in the collection 'Gelleschaft der Musikfreunde' in Vienna.

do iron straps under a piano's soundboard'. This, he extrapolated, allowed the top to vibrate freely, thus producing a rich and full tone. He continued by remarking on the instrument's double back, as a device to prevent a performer's clothing muffling the free vibrations of its integral back, and noted the improved facility and accuracy of the mechanical tuning system (the first on any instrument he had owned). He concluded that he considered all of these improvements to be 'the greatest achievement of guitar design in the last twenty years'.[447]

Makarow was worried that (unlike the pianoforte) not enough new technological advances were being made with guitar, and that the death of Giuliani would prove to be such a significant loss to the arena of new composition for the instrument that it would herald an imminent demise in its popularity. In an attempt to rectify this situation, he launched a competition in March 1856 to promote new guitar composition and instrument development, offering first and second prizes with substantial financial reward for both. Specific rules outlining the form of composition and type of guitar appeared, first in the *St Petersburg News*, then soon after in several German and French newspapers.[448] They were:

> RULES FOR GUITAR-MAKING:
>
> 1. The guitar must be large and preferably ten-stringed. The four extra strings are to be basses, contre D, C, contre B and contre A. The Terz-guitar will not be accepted.
> 2. The qualities of the guitar must embody the following: Strength of tone, depth and melodiousness; the tone must also be mellow, tender and sustained or singing, i.e., the longest possible continuity of sound. The instrument must lend itself to making good vibratos, legatos and portamentos.
>
> 3. The neck of the guitar must be perfectly flat, wide enough, particularly at the screw and comprise two full octaves. [Editor's note: The neck here described is that of the detachable type, popular at the time with German guitar makers. It is held in place by means of a screw at the heel of the neck, passing through it and the block inside the body of the guitar. This screw also performs an additional function, in that when the instrument is properly designed, it is possible to adjust for "action" by its means.]

[447] Makarow, 'The Memoirs of Makaroff ', in *Guitar Review*, reprint, pp. 59 &109.
[448] Makarow, 'The Memoirs of Makaroff ', in *Guitar Review,* reprint, pp. 110-113. Rules concerning composition included form and musical style, appropriateness for six or ten-string guitar, and that it must be actually playable and not theoretical. There was no limit on the amount of work a composer could put forward. Regarding the instruments entered in the composition; the guitar should be large and preferably ten-stringed. The four extra strings to be basses, contra D, and C, B and A. Terz guitars would not be accepted. Attention was to be paid to the 'singing' qualities, or sustain of the guitars. Necks were to encompass a span of two full octaves and the detachable varieties with an adjustable action were mentioned. Buzzing strings would be frowned upon.

4. The strings must be placed low yet not so low as to give rise to a "buzz" on being played, as is so often the case.

5. The pegs should be mechanical, however, wooden pegs will also be accepted.

6. The guitar must be marked by fine workmanship and graceful simplicity at the same time. Surface decorations, when they do not serve to improve the instrument musically, will not have any additional value for the competition.[449]

Performance of new pieces was encouraged, and Makarow received large numbers of entries from all over Europe. In October 1856 a select body in Brussels judged the competition, resulting in Mertz posthumously winning the first prize for composition, and Napoleon Coste coming second. Around six guitars were entered: one from Scherzer of Vienna, one from Eirich of Paris [the successor to Lacôte], one from Archusen of St Petersburg, one [unidentified] from Prague and two [unidentified] from Munich.[450] Others [also by unspecified makers] arrived from Vienna, but were too late to be included. Scherzer's guitar won first prize and Archusen's second, with Makarow buying both instruments, and as was his custom when pleased with the work, he paid both makers a bonus over their fixed price.[451] Makarow, whenever discussing Scherzer's guitars, praised their sonority, tone and volume, and wrote that 'other instruments sound like woven baskets beside them'.[452] According to Timmerman, the Polish guitarist Marek Sokolowski (1818-1883) was so taken with Scherzer's winning instrument that he ordered a fifteen-string *kontragitarre* from him, and claims that the Russian guitarist Alexander Petrowitsch Solowjew (1856-1911) later owned one of the guitars Scherzer built for Makarow.[453] Although with Makarow's patronage Scherzer's reputation as a maker grew in Russia, he didn't capitalise on this by relocating his business there, and died in Vienna in 1870 in relative poverty. According to the British guitar maker Gary Southwell, who has studied his instruments, Sherzer has 'Stradivari-

[449] Makarow, 'The Memoirs of Makaroff ', in *Guitar Review,* reprint, pp. 110-113.
[450] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age ,* p. 93 Timmerman says that Argusen is one Ivan Fedorovich Archusen (1795-1870), a Dane who had immigrated to St. Petersburg. He also suggests that Eirich is probably Lacote's successor Olry.
[451] Makarow, 'The Memoirs of Makaroff ', in *Guitar Review*, reprint, pp. 112-113. The first prizes in both cases amounted to a reward of 200 roubles or 800 francs. The second prizes to 125 rubbles or 500 francs. It is suggested that Makaroff paid the makers separately for the guitars after they had also won their prize money.
[452] Makarow, 'The Memoirs of Makaroff ', in *Guitar Review*, reprint, p. 57.
[453] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age,* p. 125. Timmerman cites Buek, 1926: p. 150 and Stempnik, 1990: p. 377 as sources for this information. *Kontragitarre* here, as opposed to *Bassgitarre*, is the name Timmerman uses for the instrument

like' status in Russia. He suggests that Scherzer's form of *baßgitarre* was readily adopted by Russian players as they were already using the seven-string guitar (tuned to an open *G* chord) that had its lowest string tuned to *D* below the *E*.[454] Certainly makers living in Russia such as the Archusens were greatly influenced by Scherzer, producing instruments that identically copy his form [compare Fig. 83 and Fig. 85], and his guitars with extra basses were made popular there among guitarists by players such as Decker-Schenk (1825-1899)[455] and Vassilj Petrowitsch *Lebedew* (1867–1907).[456]

The direct similarities in design between Anton Staufer's *kontragitarre* (SAM 1059) [Figs. 44 a-d] and the ten-string guitars made some ten to fifteen years later by Sherzer [Fig. 68] represent the influence that the Staufer workshop had on the development of this type of guitar. That Sherzer was keen to declare his association with the Staufers is evident in the inscription 'vormals Stauffer', meaning 'formerly [of the] Staufer workshop', shown on his instrument labels [Fig. 67].

Fig. 67. Label of *bassgitarre* by Johann Gottfried Sherzer, Vienna 1861. Private collection [Photo: Mantanya Ophée].

[454] Gary Southwell, 'Johann Scherzer', *Southwell Guitars* (England: 31/10/2002) [Accessed 20/02/2008] http://www.southwellguitars.co.uk; Southwell, 'Development of the European Guitar 1780-1880 and Its Relevance to Modern Guitar Design'. In the transcription of his presentation for the Guild Of American Luthiers, he likens Scherzer to having Stradivari-like status in Russia.
[455] Bone, *The Guitar and Mandolin: Biographies of Celebrated Players and Composers*, p. 262. Bone claims Decker-Schenk set up as a commercial guitar maker ca. 1849, having been taught by his father, Friedrich Schenk. He was an acclaimed tenor vocalist and guitarist, touring Russia with his first wife, also a musician. For some years he was engaged as a theatre director. From 1861, after the death of his first wife, he settled in St. Petersburg, where he remarried a Russian woman and earned his living as a virtuoso and teacher.
[456] Bone, *The Guitar and Mandolin: Biographies of Celebrated Players and Composers*. Bone, *The Guitar and Mandolin: Biographies of Celebrated Players and Composers*, p. 91 & p. 203.

Fig. 68. Ten-string *bassgitarre* by Johann Gottfried Sherzer, Vienna 1861. Private collection [Photo: Mantanya Ophée].

While the Scherzer instrument shown in figure 68 has the wide upper and lower bouts and tight waist of SAM 1059, it is shorter in length, giving it a more excentuated hourglass figure. Its string length is also some 5 mm shorter thab SAM 1059's (at 641.35 mm), and its ebony fingerboard is fitted with twenty-four metal alloy frets. The neck, heel, headstock and sub-bass support, are all made of sycamore with some parts ebony-veneered and others ebonised. As with the Staufer, the neck is adjustable and fitted with mechanical tuners.

Fig. 69 a.

Fig. 69 b.

Fig. 69 c.

Figs. 69 a-c. Headstock of *bassgitarre* by Johann Gottfried Sherzer, Vienna 1861. Private collection [Photo: Mantanya Ophée].

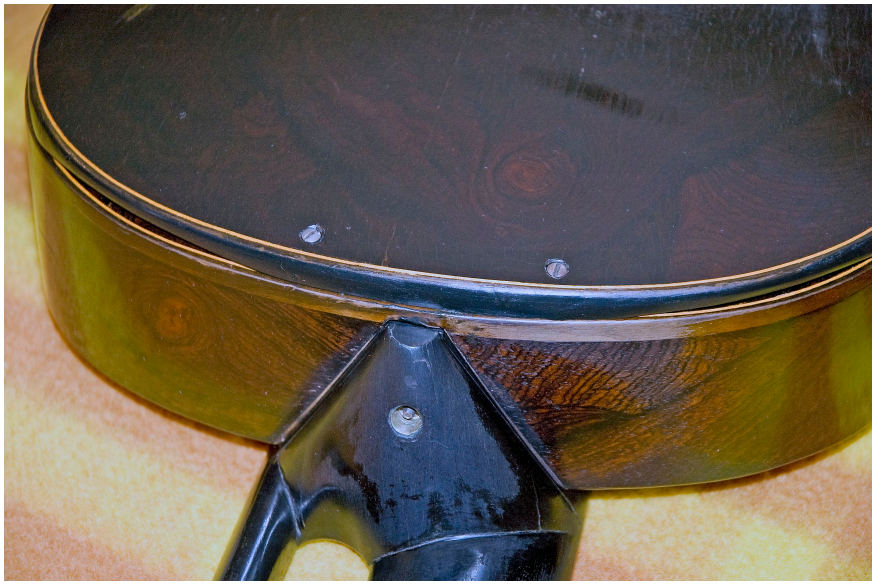

Fig. 70. Heel of *bassgitarre* by Johann Gottfried Sherzer, Vienna 1861. Private collection [Photo: Mantanya Ophée].

Like SAM 1059, and common to this and all of Sherzer's bass guitars, is the incorporation of the mild steel bar pioneered by Georg Staufer, running through the centre of the body from end block to neck block, which in the case of this instrument is adjustable by means of tightening the end-pin.[457]

Fig. 71 a.

Fig. 71 b.

Figs. 71 a-b. Details of internal compression rod in *bassgitarre* by Johann Gottfried Sherzer, Vienna 1861. Private collection [Photo: Mantanya Ophée].

[457] The ability to adjust the rod appears to be unique to this particular instrument, and therefore may be an alteration made later.

The soundboard of Sherzer's instrument is particularly thin, averaging between 1.8 and 2.00 mm. [This is considerably thinner than both the Staufers SAM 697 and SAM 1059]. Internally it is supported with five transverse braces, two above the sound hole and three below, with the middle of these angled towards the waist on the bass side (in the same orientation when the angling appears on Staufers). The two braces either side of the sound hole measure 12 x 6 mm, and the others 10 x 6 mm.

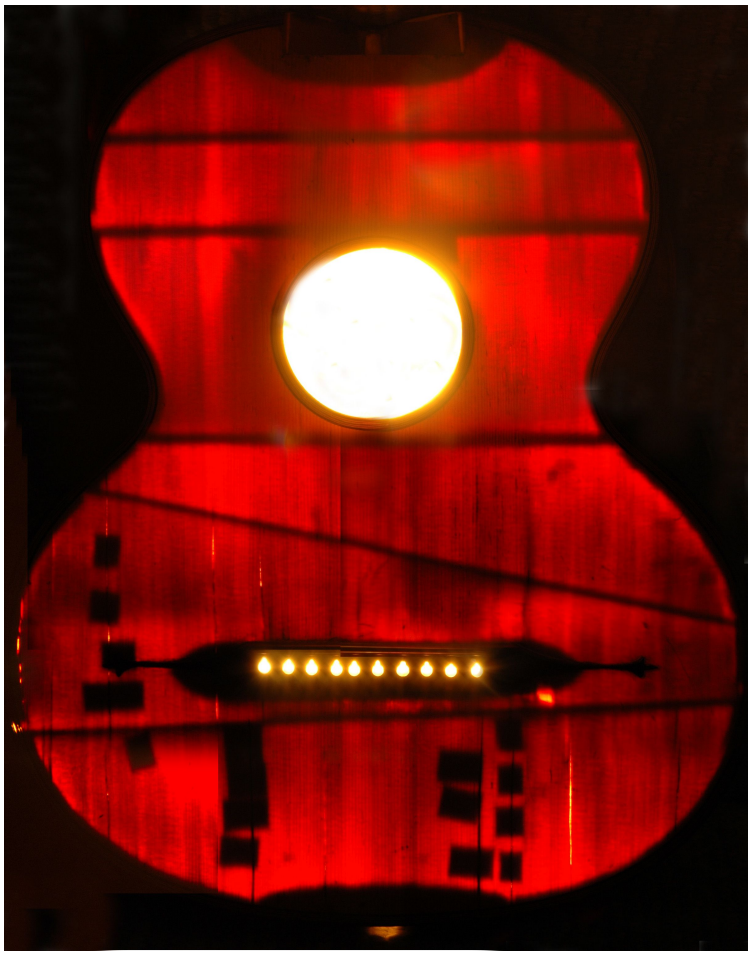

Fig. 72. Soundboard bracing pattern of *bassgitarre* by Johann Gottfried Sherzer, Vienna 1861. Private collection [Photo: Mantanya Ophée].

The back and sides of the instrument are laminated, with sycamore on the interior, rosewood the exterior. Three 17 x 17 mm transverse braces support the distinctly arched back and the whole body is further strengthened internally with large continuous linings laminated from lengths of spruce. This guitar also features the double-back design found on many of Sherzer's instruments. This 2.7 mm thick structure follows the parabolic curvature of the integral back and is made from laminations featuring an exterior face of rosewood. It is screwed to the blocks of the guitar but seperated from

the integral back by wooden stands. It functions to prevent the player from muffling the vibrations of the instrument's body.

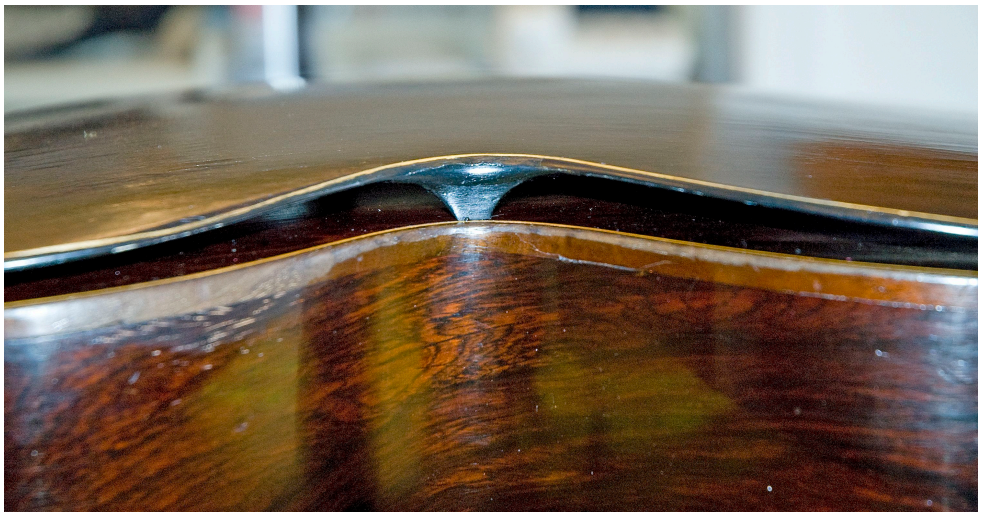

Fig. 73. Detail at waist of removable back of *bassgitarre* by Johann Gottfried Sherzer, Vienna 1861. Private collection [Photo: Mantanya Ophée].

Like SAM 1059, the neck of this instrument is angled forward, resulting in a relatively low bridge height of some 5 mm. The bridge is ebony with elegant long straight moustaches finished in fleur-de-lys. It is fitted with a non-compensated brass saddle and ebony bridge pins inlaid with a mother-of-pearl dot.

Fig. 74. Detail of bridge on *bassgitarre* by Johann Gottfried Sherzer, Vienna 1861. Private collection [Photo: Mantanya Ophée].

As with later Staufer instruments, its decoration is minimal with an alternating light and

dark five-ply pattern for the soundboard bindingss and rosette, and a three-ply binding pattern on both backs. Its only other decorative appointments are mother-of-pearl dots marking the fifth, seventh, twelfth, seventeenth and nineteenth frets, and a simple engraved design to the cover plates of the mechanical tuners. The visual aesthetic of this instrument of one that is concentrated in its form and choice of wood, and in common with Staufers from the mid 1820s reflects the simplicity of line seen in the Biedermeier movement in arts and crafts.

Sherzer, as an exponent of the guitar with extra bass strings (including those with up to five sub-basses), and by stating on his labels his association with Staufer, can be seen in the 1860s to have developed further a form of instrument that had its genesis in the Staufer workshop and was to find its epitome in the *Schrammelgitarre* of the late 1870s.

Fig. 75. Nikolai Petrovitch Makarow playing a Sherzer ten-string guitar [Photo: Harp Guitars].

Ivan F. Archusen, whose instrument was voted runner-up in Makarow's competition, was a contemporary of Scherzer's. Based in St Petersburg, he was a member of the

Archusen family of luthiers, who were of Danish origin, active in Russia during the nineteenth and early twentieth centuries. The instrument shown in Figure 85, although made by Archusen's son Robert Ivan, and dated 1911, is remarkably similar in design to Scherzer's instrument in Figure 68.[458]

Fig. 76. Ten-string *baßgitarre* made by Robert Ivan Archusen, Moscow 1911. Private collection [Photo: Harp Guitars].

5.4 The continuing influence of the Staufer Workshop and *Schrammel*

During third quarter of the nineteenth century, Mertz's pupil Johann Dubez, played a ten-string guitar (four extra basses) after the form of Scherzer, and Giulio Regondi is known to have used an eight-string Staufer instrument (two extra basses). Bone reports

[458] The Label reads *R. I. Archusen*, who, according to Oleg Timofeyev, was considered the best maker of this family of Danish origin.
http://www.harpguitars.net/history/org_images/form2/arhuzen1-ebay.jpg

that he had once possessed a Regondi-owned Staufer eight-string guitar, which the latter had previously presented to his pupil, T. Gaisford. According to Coldwell, sometime after World War One Akira Kawase (a Japanese guitar enthusiast) purchased this instrument from Bone. The description and photograph of the instrument, contained in a letter from Bone before the sale, are included here:

> SPECIAL
>
> Regondi's guitar made by Stauffer of Vienna and bearing his autograph and also the following inscription of Regondi - To his friend and pupil T. Gaisford Esq. M.D. from Giulio Regondi 15th April 1871. This is a very large instrument and in good condition with machine head. £30[459]

Fig. 77. Regondi's Eight-string *baßgitarre* by Anton Staufer, Vienna c1860. Private collection [Photo: Bone/guitarandluteissues].[460]

[459] Letter from Philip Bone to Akira Kawase in*:* Robert Coldwell, 'Clarification of Information in "an Introduction to the History of the Guitar in Japan"', in *Guitar and Lute Issues: The on-line magazine of Editions Orphée* (1997). http://www.guitarandluteissues.com/j-gnew. html [Accessed 26 June 2011]. Robert Coldwell, 'Clarification of Information in "an Introduction to the History of the Guitar in Japan"',' in *Guitar and Lute issues* (Editions Orphée, 1997), http://www.guitarandluteissues.com.

[460] Regondi's Eight-string *bassgitarre* by Johann Anton Staufer, Vienna c1860. Private collection, http://www.guitarandluteissues.com/influ-j.htm [Accessed 25 July 2011].

Bone claims that Madame Sidney Pratten bought this guitar for one of her students after Gaisford's death, and that he had then obtained it after the student's death. It can be deduced from the circumstances surrounding the later transactions by Bone that in 1920 a Staufer ten-string guitar could fetch £30. According to Coldwell, Kogoro Mizobuchi, the owner of this instrument after Kawase, removed the two added bass strings along with the bass headstock extension.[461]

David Bittner (1821-1887) was another Viennese maker producing a range of string instruments. While he is predominantly known for his violin making (in the Italian style of Stradivari, Amati, Guarneri, Maggini, Bergonzi and Guadagnini) he was not averse to experimentation, building a string zither, and in 1860 filing for a privilege to improve string instrument bow construction (apparently using a substitute [unspecified] for horsehair). At the Viennese World Exposition in 1873 he is reported to have presented alongside other instruments, 'guitars ... with excellent sound and perfected mechanics'.[462] Besides the ten-string guitar shown in Figure 88 (featuring mechanical tuners and following Scherzer's design), he was known to have made six-single-string guitars, both in standard and terz form [Fig. 89], the bodies of which feature similarly proportioned upper and lower bouts.

[461] Robert Coldwell, 'Clarification of Information in "an Introduction to the History of the Guitar in Japan", in *Guitar and Lute Issues: The on-line magazine of Editions Orphée* (1997), http://www.guitarandluteissues.com/j-gnew.htm [Accessed 26 June 2011]. Coldwell has also identified a Staufer terz guitar that was sold to another Japanese guitar player, Morishige Takei, by Bone, sometime soon after 1919.
[462] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, pp. 24-25.

Fig. 78. Ten-string *baßgitarre* by David Bittner, Vienna c1873. Private collection [Photo: Harp Guitars].[463]

Fig. 79. Terz guitar by David Bittner, Vienna 1860-1863 [Photo: Kurt Decorte].

By the last quarter of the nineteenth century, the zither had gained popularity as a solo instrument in Vienna with the guitar moving more towards a role of instrumental accompaniment. Lutgendorff suggests that Anton Kiendl's improved zither design was partly responsible for the guitar's declining popularity during the later years of Georg

[463] Ten-string bassgitarre by David Bittner, Vienna c1873. Private collection. *Harp Guitars* [Accessed 24 July 2011], http://www.harpguitars.net/history/org_images/form2/bittner1.jpg

Staufer's working life, suggesting that it may have been a contributory factor in his decision to concentrate on violin design.[464] However, Staufer had already started patenting his violin designs much earlier, from around the beginning of the 1830s. The waning popularity of the guitar, since its initial explosion into European salon society at the beginning of the nineteenth century, was one reason why Makarow organised his competition to raise awareness of the instrument. On the other hand this was not until 1856, and in the two preceding decades Georg and Anton Staufer, along with their pupils and contemporaries, continued to produce quantities of guitars that were used for duets and trios as well as solo performance. From around 1827 the Viennese guitar as a solo instrument was improved by the addition of extra bass strings, which by the time of Makarow's competition had expanded to four (Makarow determined that the rules of his competition would only allow for the ten-string guitar). Both Mertz, who won first prize for composition, and Napoleon Coste who came second, were guitar virtuosi player-composers. So that while the increasing popularity of the zither may well have supplanted the solo guitar in Viennese culture, during the third quarter of the nineteenth century the *baßgitarre* (with the addition of a fully chromatic range of seven and more sub basses) evolved into the *kontragitarre* and this instrument found a new, predominantly accompanimental role. Its use then becomes apparent within the context of the small instrumental ensemble groups playing *Schrammelmusik*.

Schrammelmusik owes its name to the *Alt-Wiener-Kammerquartet*, founded by the brothers and violinists Josef and Johann Schrammel, together with Anton Strohmayer playing a thirteen-string guitar, configured with six standard strings and seven additional sub-basses. In 1878, their line-up was expanded with the addition of the clarinettist, Georg Danzer, who occasionally joined the trio in performance. The group was formalised as a quartet in 1886, gaining wide popularity both in Vienna and abroad.[465] Josef Swosil (1) built the instrument Strohmayer played from 1879 [Fig. 90]. He may have been the son, but was more likely the brother, of the guitar maker and repairer, Johann Swosil (also active in the second half of the nineteenth century). Josef Swosil (1) operated from the same address as Johann's widow, Therese Swosil, who held the trading license of a *streichinstrumentenzeugung* (string instrument creator).

[464] Lutgendorff and Drescher, *Die Geigen- Und Lautenmacher Vom Mittelalter Bis Zur Gegenwart*, p. 483.
[465] Andrew Lamb, 'Schrammel, Johann', *Grove Music Online* [Accessed 27 June 2011].

Presumably this was inherited from her husband Johann, who had been a member of a string instrument making cooperative. [466] Timmerman believes that, Josef Swosil derived his model, nowadays categorised as *schrammelgitarren*, from the contra and bass guitars of Schenk and Scherzer.[467] The tuning of the instrument's seven additional basses descend chromatically from *D#* on the seventh string to *A'* on the thirteenth. On the playing technique of the extra basses, Zuth comments:

> To play, it requires that the free strings (especially during harmonic changes) be rapidly muted; usually accomplished by bending the thumb so that the knuckle mutes the plucked string. [468]

This particular instrument has wooden friction pegs [Fig. 90], whereas Scherzer, and many later makers of bass, contra and *schrammelgitarres*, usually fitted mechanical tuners.

[466] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, p. 162. This license was eventually handed over to Josef Swosil (2) and only expired in 1950, however Prochart suggests however that Joseph Swosil (2) probably only did repairs and operated as a dealer.
[467] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age,* p. 126.
[468] Zuth, *Handbuch Der Laute Und Gitarre*, p. 250. 'Das Spiel der Freisaiten bedingt (besonders beim Harmoniewechsel) ein rasches Abdämpfen; es wird gewöhnlich durch Abbiegen des Daumen in der Weise bewerkstelligt, das der abgebogene Knöchel die angeschlagene Saite steift'.

Fig. 80. Stohmayer's *Schrammelgitarre*, by Josef Swosil, Vienna 1879 [Photo: Germanisches National Museum, Nuremburg]. MIR. No. 935.

The influence of the Staufers on Viennese guitar making continued throughout the nineteenth century, not only immediately with the instruments of Schenk, Scherzer and the other pupils directly connected with the workshop, but also through the next generation of guitar makers and their pupils.

5.5 The Next Generation of Viennese makers

Ludwig Reisinger (1863-after 1938) was apprenticed to Ignaz Johann Bucher (1) who had been trained by his father Johann Bucher, a former student of Georg Staufer's.[469]. Reisinger set up his own workshop in 1887,[470] making guitars that continued to

[469] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, pp. 29-30. Both the guitar makers Ignaz Johann Bucher (2) and George Haid were also trained by Ignaz Johann Bucher (1).
[470] Magistratisches Bezirksamt (Magistrates District Office) Magistrat der Stadt Wien, *Gz.261461/Xx/Iii, Reg.Zi.5514.*

incorporate designs (such as the adjustable neck with floating fingerboard) pioneered by Georg Staufer. Although he made six-single-string guitars, he is better known for his *kontragitarren*, equipped with increasing numbers of bass strings, that expand upon Staufer and Scherzer's original form. Examples of these instruments have seven, eight, and even ten [Fig. 91], extra sub bass strings.

Fig 81. Fourteen-string *kontragitarre* by Ludwig Reisinger, Vienna late nineteenth century. Private collection [Photo: Harp Guitars].

Fig. 82. Sixteen-string *kontragitarre* by Ludwig Reisinger, Vienna late nineteenth/early twentieth century. Private collection [Photo: Harp Guitars].[471]

Contemporary to Reisinger was the Viennese maker Franz Feilnreiter (1791-1867), whose brother was probably Johann Feilnreiter (1789-1867).[472] Prochart reports that both were listed as violinmakers, but that extant examples from Johann are rare and considered as somewhat inferior, whereas those by Franz were carefully made and usually finished in a fine brown varnish (made by Nikolaus Savicki for the better instruments). In 1821 he was listed in the *Wiener Addreß-und Auskunftsbüchern* [Vienna's 'Yellow Pages'] as a violin and guitar maker[473] (the KHM has three of his surviving guitars together with a bass guitar).[474] Prochart thinks that another Feilnreiter, Georg (c1820-1878), is likely to have been Franz's son, but describes his violins as 'coarse and clumsy', adding that although he made acceptable double basses, he fared better as a singer for the Royal Court. However, Georg had a son, Leopold, who took over his workshop when he died. Leopold Feilnreiter started as a violinmaker but then

[471] Ludwig Reisinger, *Sixteen-String Kontraguitarre*, Vienna. Private Collection. *Harp Guitars* [Accessed 24 July 2011], http://www.harpguitars.net/history/org_images/form2/reisinger_10-bass-meulle-stef.jpg Late nineteenth century), http://www.harpguitars.net/history/org_images/form2/reisinger_10-bass-meulle-stef.jpg
[472] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, pp. 46-47. Prochart gives Johann's death as, 26 October 1867, and Franz's, 27 October 1867, one day later!
[473] Franz Heinrich Böckh, *Merkwürdigkeiten* vol. 1 (1821), p. 420.
[474] Hopfner, *Wiener Musikinstrumentenmacher 1766-1900: Adressenverzeichnis Und Bibliographie*, pp. 125-126. Guitars: SAM 470, 471 and 472; and a bass guitar, SAM 473.

turned to guitars, making *baß* and *kontragitarren*, and some repair work. Active at the same time in Vienna (1849-1890), another Feilnreiter, Ferdinand, was making violins, double basses and guitars. Leopold and Ferdinand teamed up together and produced *kontragitarren*, and both are reported to have taught Franz Angerer (2) (1851-1924), another important maker of *baß* and *kontragitarren* (as well as zithers),[475]

Fig. 83. Twelve-string *kontragitarre* attributed to Feilnreiter, Vienna late-nineteenth century Private collection [Photo: Harp Guitars].

Franz Angerer (2) was born on 20 January 1851 in Vienna, and died there on 16 February 1924.[476] According to Prochart, in his childhood he was an acquaintance of Scherzer. Besides training as an instrument maker, Angerer was cognoscente with

[475] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, pp. 46-47. His father, also called Franz, was known as a violinmaker.
[476] Vannes, *Dictionnaire Universel Des Luthiers*, p. 10.

playing the violin, harmonica and guitar, and from 1875 until 1885 was a member of Johann Schrammel's quartet.[477] He presented both six-string and thirteen-stringed guitars (seven extra basses) (and a *kontrabässe*) at the International Exhibition of Viennese Musical and Theatrical Life in 1892,[478] and in then 1893, five guitars and two *baßgitarren* at the Chicago World's Fair [479] (for which he was awarded a gold medal).[480] From 1894-1895, he was located at XIV, Reindorfgaße, Nr. 44, listed as a maker of violins, harps and guitars, specialising in *kontrabaßgitarren*.[481] In 1898 he presented at the Jubilee Exhibition in Vienna.[482] From 1895 until his death in 1924, he was elected to various committees of the different Viennese cooperative, trade, and health and safety boards that governed string musical instrument making. From 1888-1910 he performed as a guitarist with the Vienna Court Opera alongside Josef Dubez, and as a member of the *Burgtheater Josef Krempl Orchester*.[483] He died of a stroke, leaving a workshop legacy that included his son and other journeymen and pupils, all of who continued his workshop practice into the twentieth century, specialising in contra-guitars and instrument repair,

[477] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, pp. 17-18.
[478] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*; Musik-und-instrumentenmacher and Internationale, *Zetschrift Für Die Gesamt-Interessen Der Musikalischen Welt*, vol. 3 (Wien: 1892/1893), p. 4.
[479] *Musik-und-instrumentenmacher, Internationale, Zetschrift Für Die Gesamt-Interessen Der Musikalischen Welt,* vol. 8 (Wien: 1893), p. 12.
[480] Vannes, *Dictionnaire Universel Des Luthiers*, p. 10.
[481] Lutgendorff and Drescher, *Die Geigen- Und Lautenmacher Vom Mittelalter Bis Zur Gegenwart*.
[482] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, pp. 17-19. Prochart cites from, *Neue musikalische Presse* (Wien: 1897).
[483] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, pp. 17-19.

Fig. 84. Thirteen-string *kontragitarre* by Franz Angerer (2), Vienna late nineteenth to early twentieth century. Private collection [Photo: Harp Guitars].[484]

Although Enzensperger used its shape in 1832 for his *akustik gitarre* [Fig. 59], the *wappenformgitarre* became increasingly popular in Austria and its surrounding territories during the second half of the nineteenth-century.[485] Timmerman by high lighting an early eight-string *wappenformgitarre* (two extra basses) made by Robert Lotz in c1840 demonstrates the adoption of this model to guitars with extra bass strings. As this form of guitar (at least for the six string) was known in Vienna from the 1830s or before, that Lotz was resident in the German town of Gotha, some three hundred and

[484] Franz Angerer and (2), *Thirteen-String Kontraguitarre*, Vienna, Late nineteenth century. Private Collection. *Harp Guitars* [Accessed 24 July 2011], http://www.harpguitars.net/history/org_images/form2/angerer-ebay.jpg

[485] Bernhard Enzensperger was a contemporary of Georg Staufer, and as such is reviewed in *Staufer's Pupils & Contemporary Viennese Makers* in this thesis.]

fifty kilometres to the north, indicates just how popular its shape had become. Timmerman believes the body design of Schenk's *bogengitarre* is derived from the *wappenform*, and proposes that the resulting demand in Poland and Russia for instruments from both Schenk and Scherzer, led to the *wappenformgitarre* being exported there during the mid-nineteenth century.[486]

Fig. 85. Sergei Alexandrovich Belanovsky holding an original Scherzer guitar in 1905 [Photo: Gary Southwell].

The *wappenform* shape then, was in use for standard six-single-string and terz guitars, as well as for the larger *baß*, or *kontragitarre.*

Towards the end of the nineteenth century and continuing into the twentieth, Munich and Augsburg in southwest Bavaria, emerged as centres for the guitar culture that had previously been dominant in Vienna. The Viennese influence can be seen in the guitars used and collected by players such as Otto Hammerer, Edward Bayer and Heinrich

[486] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age,* p. 119; Gary Southwell, 'Johann Sherzer,' Southwell Guitars. Photographic evidence suggests that the *baß*- or *kontra-wappenformgitarre* was popular in Russia: Southwell, who has studied Scherzer's work first hand and replicated one of his most popular ten-string models was sent Photographic evidence [Fig. 32] from a Russian family of one of their relatives playing such an instrument; the Photograph [Fig. 33] of Vassily Lebedew (1867-1907), a Russian associate of Decker-Schenk's, shows him also holding a Scherzer *baß-wappenformgitarre.*

Albert, and in the work of makers such as Amberger, Halbmeyer and Raab.[487] Further evidence of the *wappenformgitarre's* popularity can be found in the classified advertising and editorials of *Der Gitarrefreund*, the leading guitar publication at this time. An article by Otto Edelman in the December 1903 edition entitled 'Our Instrument', argues that constructional aspects of the *wappenformgitarre* are superior to more conventionally shaped guitars. In particular it suggests that the large surface area of the soundboard functions more efficiently with two small sound openings either side of the fingerboard in the upper bout, rather than with a sound hole in middle. Edelman declares that the *wappenformgitarre's* unified body shape is acoustically best, and that the sound hole in the middle of a figure-of-eight shaped guitar, detrimentally separates the lower from the upper bout in the narrowest part of the instrument. He also comments unfavourably on the extended sound chamber found on *bogengitarren*: 'in some bass-guitars the top is prolonged along the bass strings in the form of square tubes. It is evident that this does not increase that sound which is wanted, [and] the sound of the tubes can prove a disturbance'.[488] In further praise of the *wappenform*, he considers that its corners at the upper bout are ideally suited to balancing the instrument on the knee whilst playing. He finishes by remarking on the elegance of 'a very good old guitar in scutiform', owned by Otto Hammerer, the former president of The International Guitar League.

These criticisms reflect his view (shared by other players at the time) that the *wappenform* was a thoroughly modern and superior design of guitar, claiming, when used with extra basses, to preclude the need for the extended sound chamber present with *bogengitarren*.

The influence of Schenk's *bogengitarre* however, is not diminished by this view. Not only can it be seen to continue in Europe but is also evident in Chris Knutsen's making in America in the 1890s and remains so there well into the twentieth century with the Dyer Symphony Harp Guitar.

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[487] Raab was the son of Bernhard Enzensperger (2) from a period when the latter had been living in Munich studying musical instrument making, and was therefore directly related to the Viennese guitar making fraternity.

[488] Dr Otto Edlemann, *Der Guitarrefreund,Mitteilungen Des Internationalen Guitarristen-Verbands (eV) 5.* 1(December 1903), pp. 4-5.

Otto Hammerer (1834-1905) was a leading guitar player, enthusiast, and one of the founding members of the *Internationale Gitarristen-Verband* (International League of the Guitarists) of Germany. Coming from Augsburg, he was a former pupil of the Bavarian guitar and zither virtuoso Edward Bayer (1822-1908),[489] and a collector of musical manuscripts, associated guitar ephemera, and a number of Viennese instruments from earlier in the nineteenth century. He encouraged the influence of Viennese guitar design on contemporary makers of his period, and so according to Huber, lent his collection of important Viennese guitars, to the Augsburg and Munich guitar societies specifically for copying purposes.[490] His collection included three *bogengitarres* by Schenk (two in *wappenform* shape), a ten-string guitar after Scherzer by Hans Raab of Munich, as well as a Staufer six-string copy by Johann Anton Haff of Augsburg.

Hans Raab (1) (1855-1912) was a son of Bernard Enzensperger (2), the son and pupil of Bernard Enzensperger (1).[491] During his twenties Enzensperger (2), had spent time training first with George Tiefenbrunner in Munich, and then with Ludwig Christian August Bausch, after which he was with Theophil Black in Strasbourg and then Auguste-Sebastien Bernardel Philippe in Paris.[492] He then returned to Munich to set up his business there. According to Timmerman, Raab initially learnt his trade from his father, then after a period working in Salzburg, returned to Munich and in 1885 set up independently.[493] Zuth claims that in 1902 Raab took over the workshop of Tifenbrunner's widow (the wife of his father's former teacher).[494] According to Huber, Raab was interested in making copies of historical guitars, such as the ten-string Viennese *wappenformgitarre*, which he then first advertised in 1901.[495] Although advertisements from Raab, declaring his specialization in *baßgitarren*, appear in *Der Gitarrefreund* from September 1900, it is not until June 1902 that they become illustrated and show instruments in both figure-of-eight form and *wappenform* [Fig. 97].

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[489] Bone, *The Guitar and Mandolin: Biographies of Celebrated Players and Composers*, pp. 23-25. Bayer also came from Augsburg in Bavaria.
[490] John Huber, *The Development of the Modern Guitar*, Rev. ed ed. (Westport,Conn: Bold Strummer, 1994), p. 140.
[491] Enzensperger (2)) eventually inherited his father's business in Vienna after his death in 1865.
[492] Lutgendorff and Drescher, *Die Geigen- Und Lautenmacher Vom Mittelalter Bis Zur Gegenwart*, p. 123.
[493] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age,* p.127.
[494] Zuth, *Handbuch Der Laute Und Gitarre*, pp. 226-227.
[495] Huber, *The Development of the Modern Guitar*, p. 145.

Fig. 86. Advertisement for Hans Raab in *Der Gitarrefreund*, June 1902.[496]

Advertising in *Der Gitarrefreund* from September 1900 reveals other makers of *baßgitarren* that include Franz Halbmeyer in Munich, Ignaz Mettal in Schönbach, and Robert Ivan Archousan in Moscow. Halbmayer's advert states that he was making 'prim, terz, und bassguitarren in den verscheidensten Ausstattungen und nach alten Wiener und Italienischen Modellen' (Standard, terz and bass guitars [sic] with various Special Features and according to old Viennese and Italian models).[497]

Fig. 87. Advertisement for Halbmeyer in *Der Gitarrefreund*, September 1900, p. 14.

[496] The spelling for the journal changes over the course of its publication. In the early years it is spelt *Der Guitarre-freund*, whilst in latter years, *Der Gitarrefreund.* The spelling has been standardised as the latter in this dissertation.
[497] Franz Halbmayer, *Der Gitarrefreund* (September 1900), p. 14.

Fig. 88. Advertisement for Mettal in *Der Gitarrefreund*, September 1900, p. 14.

Fig. 89. Advertisement for Archousan in *Der Gitarrefreund*, September 1900, p. 14.

Adverts from Robert Ivan Archousan show him making ten-string *baßgitarren* in the same Viennese style of both his father and Scherzer (whose instruments had respectively won second and first prize in Makarow's competition some fifty years earlier),[498] and an advert three years later in 1903 shows Ignaz Mettal offering six-string guitars featuring a Persian slipper headstock, and fifteen-string *schrammelgitarres* (nine extra basses), also in the Viennese style.

Fig. 90. Advertisement for Mettal in *Der Gitarrefreund*, December 1903, p. 19.

[498] See also Figure 85.

Fig. 91. Advertisement for Amberger in *Der Gitarrefreund*, June 1902, p. 40.

Makers such as Mettal, Halbmeyer and Max Amberger, besides offering a variety of models (often in *wappenform*) that included standard six-string, terz and bass [sic] guitars, were also producing concert zithers. More rarely, others such as August Schulz, who only promoted his 'Wappenform-Guitarren' [Fig. 103], seem to have specialized in one model.

Fig. 92. Advertisement for Schulz in *Der Gitarrefreund*, December 1903, p. 18.

Fig. 93. Advertisement for Raab (1) in *Der Gitarrefreund*, December 1903, p. 19.

Raab (1) placed an advert *Der Gitarrefreund* in December 1903 that illustrates a double *bogengitarre* in lyre shape [Fig. 106], reminiscent of some of Schenk's instruments from mid-nineteenth century. Raab's contemporaries, Karl Müller and Georg Tiefenbrunner, also continued to advertise their *baßgitarren* and *wappenformgitarren* in *Der Gitarrefreund* well into the second decade of the twentieth century. Raab's son (also called Hans) placed an advert in *Der Gitarrefreund* in March-April 1913, clearly claiming the legacy of the Viennese *bogengitarre* by showing an image of an enlarged *model* in the Schenk form, and declaring his continuation of the Tiefenbrunner business.[499]

[499] As reported, Enzensperger (2), Raab's father, trained with Tiefenbrunner, and Raab's son continued Tiefenbrunner's business when he died.

Fig. 94. Advertisement for Raab (2) in *Der Gitarrefreund*, March/April 1913, p. 22.

Adverts for Müller as a string instrument maker specialising in guitars with extra bass strings, appear in *Der Gitarrefreund* in June 1904. That, in the early twentieth century Müller studied and reproduced Schenk's *bogengitarre* in Figure 77, shows just how important his influence was on contemporary design at that time.

Fig. 95. Advertising for Müller. *Der Gitarrefreund* (Munich, June 1904), p. 59.

By the end of the nineteenth century, Munich in particular, became the focus of the popular guitar culture that had previously been centred on Vienna. Guitar clubs emerged from within the *Internationale Gitarristen-Verband*.[500] Allan Morris identifies some of the prominent guitarists and guitar pedagogues active at this time throughout Germany and Austria as: Heinrich Albert and Hans Bischoff in Munich; Karl Henze in Berlin; Georg Meier in Hamburg; Margarete Müller in Dresden; and Jakob Ortner, Joseph Zuth, Viktor Kolon, and Louise Walker in Vienna.[501] He highlights the formation of the Munich Guitar Quartet in 1907, which was founded with the intention of pursing a repertoire that would carry the prestige awarded a chamber quartet, and to free the guitar from its association with purely solo, duet or trio pieces, or as vocal accompaniment. The quartet's original members were the amateur guitarists, Fritz Buek, Hans Ritter, Hermann Rensch, and Karl Kern. According to Morris, 'Later, in an endeavour to add some musical credibility and leadership to the ensemble, Buek recruited the most famous concert guitarist in Bavaria, Heinrich Albert, to join the quartet, replacing Hans Ritter before their first public concert in 1909'.[502] However, there is now some question as to whether Albert joined the group later. Andreas Stevens, who is currently the leading authority on the life of Heinrich Albert (with access to his diaries and other testimonial evidence), suggests Ritter was never in the group, which was actually founded prior to 1906, and that previous accounts of its formation by Buek exist on information supplied by Buek himself to his own journal, *Der Gitarrefreund.* According to Stevens, Buek and Albert had a falling out in 1920, resulting in Albert leaving the quartet and Buek subsequently discrediting him. Albert was succeeded in the group by Herman Hauser, who as well as building respected guitars in the Spanish style, also made guitars in the Viennese style after Staufer.[503] A Photograph of the Munich Guitar Quartet [Fig. 108] from around 1914 in which the Viennese influence in design is clearly apparent, represents their musical aims by documenting their preferred combination of multi-strung guitars for playing the repertoire of a chamber quartet,

[500] The *Internationale Gitarristen-Verband* was a large organization of guitarists set up earlier in the nineteenth century, who had made Munich the focal point of German guitar activity.
[501] Allan Morris, 'Heinrich Albert and the First Guitar Quartet', in *Guitar and Lute Issues*, http://www.guitarandluteissues.com/morris/heinrich.htm [Accessed, 16 July 2011].
[502] Morris, 'Heinrich Albert and the First Guitar Quartet'.
[503] Morris, 'Heinrich Albert and the First Guitar Quartet'.

Fig. 96. The Munich Guitar Quartet c1914. *Der Gitarrefreund*, January 1914.

According to Stevens, the Photograph depicts from left to right: Heinrich Albert with a *bogengitarre* made by Schenk, c1848; Fritz Buek with a *lyra* guitar made by Schenk in 1839; Herman Rensch with a *quintbaßgitarre* made by Halbmayer, c1911; and Karl Kern with a *wappenformgitarre* bass guitar made by Scherzer (date unknown).[504] Morris claims that Albert's *bogengitarre* was tuned a minor third higher [terz], and that Rensch's *quintbaßgitarre* was tuned a fifth lower than standard guitar.[505]

The guitar with extra bass strings can be witnessed in three distinct forms, all first finding popularity from the middle of the nineteenth century throughout central Europe and adjoining Russian territories: the traditional figure-of-eight shaped body with extra floating bass strings, the *bogengitarre* and the *wappenform-baßgitarre*.

The design of the guitar with extra bass strings, first appearing in the Staufer workshop in the late 1820s and then refined through the Staufers themselves and their pupils Schenk and Scherzer in the mid-nineteenth-century, spread North, West and East. This form (commonly with ten strings) was popular in Eastern Europe and Russia, appeared

[504] Greg Miner, 'Heinrich Albert and the World's First Harp Guitar Quartet ' http://www.harpguitars.net/players/month-player,7-04.htm [Accessed 16 July 2011].
[505] Morris, 'Heinrich Albert and the First Guitar Quartet'.

in Saxony [Markneukirchen] and was embraced again at the end of the century in Bavaria [Munich and Augsburg]. With its four sub bass strings tuned diatonically, it remained a popular model and further expanded into the *kontraguitarre* that saw its popular rise in Vienna during the last quarter of the century. Martin, as the most direct link to the Staufers' designs migrating to North America, was already settled there when this model of guitar was developed in Vienna, but he too made some ten-string guitars with extended basses in the early 1860s. Although the body shape conforms to his guitars of this period rather than that of his contemporary Scherzer, the configuration of four sub basses tuned diatonically are identical, and again emanates from the Staufer workshop. Martin, with these instruments, was fulfilling a commission that in its existence evidences use of the ten-string guitar [four extra basses] in America at that time. The appearance of the designs of Staufer's pupil Schenk in the North American instruments of Knutsen and others is addressed in chapter *The Nineteenth-Century North American Guitar* of this thesis: Chapter 7.4.

Chapter 6 Nineteenth-Century American Guitar Design

Many features originating in the Viennese workshop of Staufer still reside in contemporary American steel-string guitar making, and were in evidence there throughout the nineteenth century. Immediately apparent visually, is the flat scroll design of Staufer's Persian Slipper headstock that was taken up by both Leo Fender and Paul Bigsby. Staufer's early use of mechanical tuners, as either in-line or as butterfly pegs, was also pioneering. A radiused fingerboard, common to both acoustic and electric steel-string guitars, found its origins in Viennese guitars of the second quarter of the nineteenth century, their makers applying certain principles learned as violinmakers. Staufer's adjustable neck with its elevated fingerboard extension allowed easier access to higher playing positions, and this was augmented on some instruments with slope shoulders. Arch top guitars are built with a similar floating fingerboard extension, and both acoustic and electric guitars sometime feature cutaway upper bouts for improved fingerboard access.

In the quest for a thinner and more resonant soundboard, another Staufer device was commonly used in designs throughout the nineteenth century into the next: an interior supporting rod running lengthwise between the neck and end blocks to hold the body in compression and relieve of unwanted stress.

While there was undoubtedly a major Spanish influence on American guitar making in the 1840s, with certain constructional features differing from the Austro-German: style of soundboard bracing, narrower upper bout, flat fingerboard construction, it is the synthesis of these two forms that become embodied in the American guitar. Staufer's instrument designs did not become outmoded in the wake of guitars constructed in the Spanish style taken up by 'classical' players, but rather, heralded the modern flat top guitar.

Martin, Schatz and their German immigrant colleagues, are the most direct link to Staufers' designs migrating from Austria to North America in 1833. Martin and Schatz's declaration on their instrument labels that they were pupils of the celebrated Staufer of Vienna, suggests (at least in the minds of Martin and Schatz) Staufer's fame

as a maker had spread wide beyond Vienna. It also points to the Austro-German form of guitar in use at that time in North America. Staufer's particular influence on Martin's first guitars after moving to New York will be discussed in more depth in chapter 7.2 of this thesis. This chapter, in contrast, seeks to explore and examine the dominant features of Staufer's designs as they were adopted in North American guitar making starting in the 1830s.

6.1 Soundboard Bracing

Bacon singles out a Martin guitar c1850, still sporting the distinctive Persian Slipper style of headstock associated with Staufer, as, 'may be the first X-braced steel string guitar Martin made'.[506] This is a bold statement considering that the guitar in the nineteenth century was commonly strung with gut trebles and overwound silk-core basses. Johnston reports that the Martin company did not include steel-strung guitars in its instrument catalogues until nearly 1920, although sales ledgers do show that some were made on special order as early as 1900.[507] However the importance of the development in bracing design that Bacon is highlighting, although not realised at the time for the stringing he mentions, in hindsight cannot be underestimated: namely that the introduction of an X-bracing system, fitted to the underside of the soundboard, provided the strength needed to give the vibrating front surface of the guitar adequate support when the instrument was later strung with higher tension steel, and that this design was indeed first utilised (albeit for different reasons) by C. F. Martin in the mid-nineteenth century.

According to Dick Boak, Martin first made an X-braced guitar for Madame Dolores de Goni in 1843.[508] He wasn't the only guitar maker to use this form of soundboard bracing

[506] Tony Bacon, *The History of the American Guitar: From 1833 to the Present Day* (New York, N.Y.: Friedman/Fairfax Publishers, 2001); Bacon, *The History of the American Guitar: From 1833 to the Present Day*, p. 9. Caption to Martin guitar c1850s.
[507] Johnston, Boak, and Longworth, *Martin Guitars: A History*. Longworth originally authored this work in 1988.
[508] Johnston, Boak, and Longworth, *Martin Guitars: A History*. See also Martin & Co. official history, timeline, http://www.martinguitar.com/1796-1873.html [Accessed 5 May 2013], which claims that: Between 1842 and 1843, C. F. Martin created the very first Size 1 model and the earliest X-braced guitar ever documented, supporting Martin's longstanding claim as the inventor of X-bracing, a primary innovation in the evolution of the modern American guitar. The Martin Museum describes the instrument

during the period though, and early evidence of X-bracing is also present in American-made guitars of the 1840s by Louis Schmidt and George Maul.[509] Although Martin may not solely be credited with its invention, he certainly did develop and standardize its use; thereby creating a template in soundboard construction that has subsequently become universally employed by practically all makers of steel-strung flat top acoustic guitars since the late nineteenth century.

Why did Martin implement this form of bracing in the manufacture of his guitars? Certainly his teacher, Georg Staufer had previously experimented with the acoustic response of soundboards by varying both their thickness and rigidity and this attitude to experimentation might well have influenced Martin's own approach. Staufer's first guitars generally conform to the early nineteenth-century policy of bracing the underside of the soundboard (typically 2.1 mm - 2.5 mm thick overall) with a series of lateral transverse braces. (Watchorn claims they usually had two braces above and two or three below the sound hole). In later models the braces below the bridge were sometimes angled towards the tail, so allowing the area of the soundboard on the treble side to vibrate more freely.[510] Some Legnani models have the diagonal brace in the lower bout but not the third transverse brace nearest the tail, as found on earlier models. Staufer was therefore trying out different bracing configurations, resulting in the *Legnani* model guitars from his second period of making having the fewest braces. His aim was to allow freer soundboard movement, while at the same time preserving structural integrity. This later design feature is characteristic of both Staufer's instruments, and with certain modifications, Martin's early guitars. Conversely a Staufer guitar does exist from 1809 that deviates from his usual form of ladder bracing by including two diagonal braces running from the outer edges of the bridge position,

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as 'Earliest X-braced Guitar, Martin & Schatz Label, July 1843.For: Madame Delores Nevares de Goñi.
After entertaining her in his home, C. F. Martin made the special X-braced guitar for Madame Delores N. De Goni, who was probably the finest professional guitar soloist of her time. Her performances were widely popular throughout the Americas between 1841 and 1892. She pronounced Martin guitars to be "superior to any instruments of the kind (she had) ever seen in this country or Europe for tone, workmanship and facility of execution!"'

[509] Robert Corwin, 'Vintage Martin Guitars', www.vintagemartin.com/; Johnston, Boak, and Longworth, *Martin Guitars: A History*. Schmidt & Maul were early employers of C. F. Martin who formed a partnership and independently carried on making guitars of a similar style to Martin when he moved from New York to Cherry Hill, Pennsylvania in 1839; Johnston, Boak, and Longworth, *Martin Guitars: A History*, p. 10.

[510] Watchorn, 'Inventing the Modern Guitar - Johann Georg Stauffer and the Viennese School of Guitar Making'.

either side of the sound hole to the rim of the upper bout.[511] Braces with the same orientation, making a V-shape to the outer perimeters of the bridge position, can also be found in English guittars made by Preston in the last quarter of the eighteenth century. The English guittar, although too a plucked chordophone, is a very different instrument to the Spanish, Italian, German, French [or later American] guitar, whether they be six-single-string, or double-course as in their baroque predecessors. The wire-strung English guittar, resembling visually the earlier cittern but with different tunings and repertoire, was popular with amateur players of the English and American upper classes. It shares no method of instruction or performance with the gut-strung guitar. The extension of this V, resulting in an X (sometimes continuous at the bridge position, sometimes interrupted), is then present in English guittars made by Longman and Broderip from 1782.[512] Pangiotis Poulopoulus has highlighted two English guittars from the late eighteenth century that have a soundboard bracing pattern consisting of one transverse brace in the upper bout, and two braces forming an X below the sound hole, with a diagonal brace on either side running above in parallel to the lower part of the X.[513] This is remarkably similar to the way the braces are laid out on an early Martin X-braced guitar, apart from the orientation of the diagonal braces, which run parallel to the upper part of the main X, and the further addition of a lower diagonal brace on the bass side of the lower bout.

While ladder bracing continued to be used throughout the nineteenth century and is still in use today, it is the fan-bracing system developed by Antonio de Torres in the middle of that century that has become the preferred choice of makers of the gut-strung (and later, nylon-strung), Spanish guitar now favoured for use in classical guitar music. Torres typically employed seven braces[514] running from below the sound hole in a fan

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[511] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries',in *Ivan Padovec (1800-1873) and His Age*, p. 143, Fig. 11.
[512] Pangiotis Poulopoulus, 'The Guittar in the British Isles, 1750-1810' (Edinburgh, 2011), pp. 311-317. Poulopoulus suggests that Martin may have been familiar with the Guittar from its use in the Moravian church. It should be mentioned that when he first moved to Cherry Hill, on the outskirts of Nazareth, in 1839, the Martin family were not yet members of that church.
[513] Poulopoulus, 'The Guittar in the British Isles, 1750-1810', p. 317. One of these guitars is owned by David Killlpatrick in Scotland, It was found in Ontario and is dated c.1770; the other is in the collection of Andrew Rutherford in New York.
[514] Soundboard braces in the fan configuration commonly used by makers of the *Spanish* classical guitar are often referred to as 'struts'.

configuration.[515] The number of braces in this design varies between makers, with Spanish guitars variously constructed using three, five or seven, while in the 1840s Martin made some guitars with five, some with only three. Peter Szego and his colleagues[516] hypothesise that the transition from the ladder-braced design Martin first used came about c1840 from his adoption of Spanish guitar making from Cadiz: David Laplante [in Szego][517] compares a guitar by Antonio de Lorca (Malaga) from 1839 featuring three fan, or radial, braces to the soundboard with a Martin & Coupa, c1841-1843, with the same configuration. Richard Johnston [in Szego][518] presents a Martin & Schatz, c1839 that shows the transition in soundboard bracing between Lorca's bracing to that of the later Martin & Coupa. While the configuration on the Martin & Schatz is the same as the Lorca, its radial braces extend only to the bridge plate, and the outer braces appear to dissect at a wide angle similar to the X found on English Guittars from the end of the previous century. At the beginning of the 1840s Martin's guitars show close similarities in body profile, heel construction (which Martin imitated in the method of neck attachment with a faux Spanish foot), rosette decoration and headstock shape to guitars from Cadiz. European professional touring guitarists in America were of often using Spanish-style instruments in performance, and the popularity of Spanish guitar culture signifies this form of the instrument's societal standing. It is possible that Martin and his colleagues simply adopted and copied the Spanish guitar's soundboard fan bracing system, and within the space of three or four years, altered it to emerge with a new X- braced design. It is also conceivable that while repairing instruments, both the bracing patterns apparent in English Guittars as well as other types of guitars, including Spanish, were known to Martin and his colleagues, who then when about creating a synthesis of design. While Martin did adopt the Spanish attributes of heel design,

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[515] William R. Cumpiano and Jonathan D. Natelson, *Guitarmaking, Tradition and Technology : A Complete Reference for the Design & Construction of the Steel-String Folk Guitar & the Classical Guitar* (San Francisco: Chronicle Books, 1994).

[516] Peter Szego, *Sunday at the Met—Early American Guitars: The Instruments of C. F. Martin* (New York: The Metropolitan Museum of Art, 16 March 2014). http://www.metmuseum.org/metmedia/video/lectures/early-american-guitars. [Accessed 29 June 2014]. Szego refers to research and opinion of himself and his colleagues. Contributing to his book, *Inventing the American Guitar, The Pre-Civil War Innovations of C.F. Martin and his Contemporaries*. Eds. Robert Shaw & Peter Szego (Milwaukee, WI: Hal Leonard, 2013). Essay contributions: David Gansz, Richard Johnston, David Laplante, Arian Sheets and James Westbrook.

[517] David Laplante, 'The Cadiz Guitar and its Influence on C. F. Martin', *Inventing the American Guitar, The Pre-Civil War Innovations of C.F. Martin and his Contemporaries*. Eds. Robert Shaw & Peter Szego (Milwaukee, WI: Hal Leonard, 2013), pp. 76-87.

[518] Richard Johnston, 'C. F. Martin in Pennsylvania, 1839-1850: A Period of Transition', *Inventing the American Guitar, The Pre-Civil War Innovations of C.F. Martin and his Contemporaries*. Eds. Robert Shaw & Peter Szego (Milwaukee, WI: Hal Leonard, 2013), pp. 88-93.

internal foot and multi-ring rosette decoration, he also continued to make guitars with distinctly Viennese features such as the adjustable neck with conical heel and a headstock fitted with mechanical tuners. Again, although instruments were made with the tie-on bridge design associated with Spanish guitars, it was the pin bridge of his earlier Viennese influence that became standard on his instruments from 1843. [Like Staufer, who synthesised aspects of Italian and French guitar making at the beginning of the nineteenth century to then produce a distinctly Viennese guitar, so too did Martin combine aspects of Staufer's design with the Spanish form to create a distinctly American form].

A clue as to the reason for the development of X-bracing and its subsequent adoption by Martin, could lie in the opinion found in the pages of the BMG periodicals and musical instrument merchandise catalogues (albeit expressed later in the last two decades of the nineteenth century) that American-made guitars were more suitable for the harsh climatic conditions of that continent, while European-made instruments were not made strongly enough to withstand them. Lyon & Healy, in their 1884 catalogue guaranteed that their American-made rosewood Washburn guitars would not warp or crack,[519] and in the 1889 catalogue they go further, announcing under the heading 'Guitars – American':

> Appreciating the fact of Imported Rosewood Guitars being unreliable, through their failure to withstand the effects of climate, we have sought to produce Instruments of AMERICAN MANUFACTURE that can be sold with a guarantee against cracking, and with confidence on the part of the dealer of their proving satisfactory to his customer. To this end we have perfected special arrangements for the sole use and control of all the patterns and improvements of the celebrated WASHBURN GUITARS, and established a factory for their production at which, with our many years' experience in the business, and with manifold facilities for their manufacture, we are now making as perfect instruments of this kind as it is possible to produce. Every guitar bearing the name of GEORGE WASHBURN has a scale that is *absolutely* correct, and is guaranteed not to split or crack.[520]

At the same time as promoting the virtues of American-made rosewood Washburn guitars over European rosewood models, Lyon & Healy also offered the range in

[519] The Washburn brand is named after George Washburn Lyon, who together with Patrick Joseph Healy founded the Lyon & Healy musical instrument and merchandise company. See John Teagle, *Washburn: Over One Hundred Years of Fine Stringed Instruments* (New York: Music Sales Corp, 1996).
[520] Lyon and Healy, *Catalogue of Musical Merchandise* (Chicago, Ill: Lyon & Healy, 1889), p. 26.

mahogany, a wood they considered more favourably suited to the North American climate. They note:

> We can supply and highly recommend Washburn Guitars made of Mahogany. This wood fully equals Rosewood for tone, and is much more reliable. The latter is fast losing popularity on account of its tendency to check, which, in many cases, cannot be prevented – under the most favourable circumstances. With our manner of finishing the Mahogany we supply equally as handsome instruments, and those that can be thoroughly relied upon. Manufacturers in all lines are rapidly discarding Rosewood.[521]

In the same catalogue they presented The New Arion Guitar as a budget model with a body made exclusively from mahogany, and with the same scale length as the Washburn. Again the promotion emphasises the American-made nature of the instrument, constructed in a more reliable timber, and guaranteed neither to warp nor crack.[522] While to a degree this promotion of mahogany over rosewood may well be seen as hyperbole intended to furnish a sales pitch from Lyon & Healy, the widespread debate at this time regarding shrinkage in wood that led to cracking and warping, draws attention to the climatic effect of very dry winter months on delicately built wooden guitars.

The inherent structural strength or weakness of the guitar was also used as an argument for keeping it tuned below concert pitch. The following letter from Jesse J. Hamilton of Madison, Kansas, printed in the *F.O.G. Mandolin, Banjo and Guitar Journal* of January-February 1903, is headed, 'The Guitar And Its Tuning':

> This article is written in the interest of those who have good instruments and are daily pushing them to ruin by high tuning. The guitar is naturally a low pitch instrument, and must never be tuned high to play easy, or sound well, because where it is tuned high the fingering is much more difficult, and often when executing quick passages in combinations, it is almost impossible to render them with satisfaction, and soon the instrument becomes untrue and worthless. I do not believe there is any guitar of any manufacture that will retain its trueness in tone in all positions if kept tuned to concert pitch (high). The instrument is not made sufficiently strong to bear it.
> I find occasionally teachers who advocate this method of tuning, whose scholars are instructed to keep the guitar tuned up to piano or organ (probably old style), which are tuned or pitched to high concert. Scholars do not progress under such difficulties, and teachers should not advocate high tuning for the solo guitar. The instrument is no longer regarded only to accompany the voice, but for the playing of instrumental music it is one of the sweetest instruments now in use.

[521] Lyon and Healy, *Catalogue of Musical Merchandise*; Lyon and Healy, *Catalogue of Musical Merchandise* (1889).
[522] Lyon and Healy, *Catalogue of Musical Merchandise* (1889).

> Of course there are will be some who will differ from me in this matter of tuning the guitar. But, however, that does not refer directly to those who play a form of accompaniment at country-dances, but those, also, may apply with profit this valuable information.[523]

The debate over how robust a successfully produced American-made guitar needed to be to withstand the effect of climatic conditions, continued throughout the second half of the nineteenth century. This issue may well have had an influence on the guitar design of Martin and his contemporary American makers, providing the impetus for the development of the stronger X-braced system. Certainly this type of bracing was not adopted by makers of the Spanish guitar in Europe, and it was only when players started to experiment with steel strings on American instruments, that its potential for strengthening the soundboard of a guitar strung in this manner was recognised. The X-bracing found in mid-nineteenth century gut strung Martins for example, is significantly lighter than that used in the twentieth century when the company first commercially produced guitars strung with steel. Unlike Spanish style fan bracing, which has not changed substantially since the third-quarter of the nineteenth century, the size of X-braces in flat top acoustic guitars has increased to offset the stress of higher-tensioned steel strings. In short, earlier X-braced guitars were relatively lightly built compared to their successors, however when beefed up, their bracing design lent itself to the new steel-strung guitar.

Besides Martin and Schmidt & Maul, other American guitar makers who readily adopted the X-bracing system included Charles Stumcke [a German immigrant and former working partner of Martin's] who worked with Heinrich Schatz;[524] the maker Joseph Bini [who filed a patent for an X-braced design in 1867];[525] and a little later, Joseph Bohmann in Chicago. According to Plejsier, while Lyon & Healy did not advocate the use of steel strings for their premium Washburn guitars until after 1915 (although some of their cheaper range of instruments were constructed for the use of steel from 1896), models constructed to take steel strings could be specially ordered from 1889, implying they were fitted with X-braces and a steel section in the neck. He

[523] F. O. Gutman, *The F. O. G. Mandolin, Banjo and Guitar Journal* (Cleveland, Ohio: F, O, Gutman, 1900).
[524] Gura, *C.F. Martin and His Guitars, 1796-1873*.
[525] Josef E. Bini. 1867 Improvement in Bracing the Sounding-Boards of Guitars. US Patent 72,591, filed 24 December 1867.

reports that his examination of many larger Washburn size 3 (Auditorium) and size 4 (Grand Auditorium) guitars from before 1915 shows a proportion were X-braced.[526] At the end of the nineteenth-century, Knutsen also generally used an X-bracing system for his harp guitars, as did the Larson Brothers at the dawn of the twentieth century.

6.2 Design Improvements

Concurrent to developments being made in string-winding technology and (stemming from the ability to manufacture plated steel)[527] the materials used to produce strings, from the 1840s there was a move by American guitar makers to produce more strongly built instruments. Initially, as has been suggested, this may have been to counteract harsher climatic conditions, but as performance practice and the role of the guitar shifted, culminating in the latter part of the century with a desire for more volume, experiments with acoustic response and a changing stringing practice emerged, evidenced in the many patents applied for in guitar design.

In addition to the information regarding instrument and string manufacture obtained from Gura's examination of Ashborn and Hungerford's accounts, more details of Ashborn's instrument design can be found in his patents. Although the first of these incorporates a capotasto design, both are primarily concerned with tuning mechanisms. In describing the benefits of his innovations, Ashborn emphasizes not only the precision of his mechanisms and their ability to provide fine tuning, but also their light weight in relation to the instrument's overall vibrations. He concedes that mechanical tuners afford more precise tuning than standard wooden pegs, but he considers that their metal composition hinders the vibrations in the wooden headstock, and that they are overly heavy. To this end he suggests two different designs of wooden tuning peg. In the first patent from 1850 [Fig. 109] he specifies the use of an extra 'spindle' of a greater diameter than the shaft of the peg, with the string being wrapped around the two devices. Most of the tension is taken up on the 'spindle' thus preventing backward slippage and allowing finer tuning from the peg itself. The capotasto described in the patent has a concentric roller that runs along the back of the neck for quick application

[526] Hubert Pleijsier, *Washburn, Prewar Instrument Styles, Guitars, Mandolins, Banjos and Ukeleles 1883-1940* (Anaheim Hills: Centerstream, 2008), p. 55.
[527] See Chapter 9 in this thesis.

and release of the device. When not in use the capotasto is to be positioned between the headstock and the nut, so as not to interfere with playing in the first fret position.[528] The second patent, from 1852 [Fig. 110], describes a tuning peg design where the part of the peg that fits into the headstock is of a greater diameter than its extending shaft on which the string is wound. Ashborn's claim is that this improves fine-tuning to the degree obtainable with mechanical tuners, but without using metal.

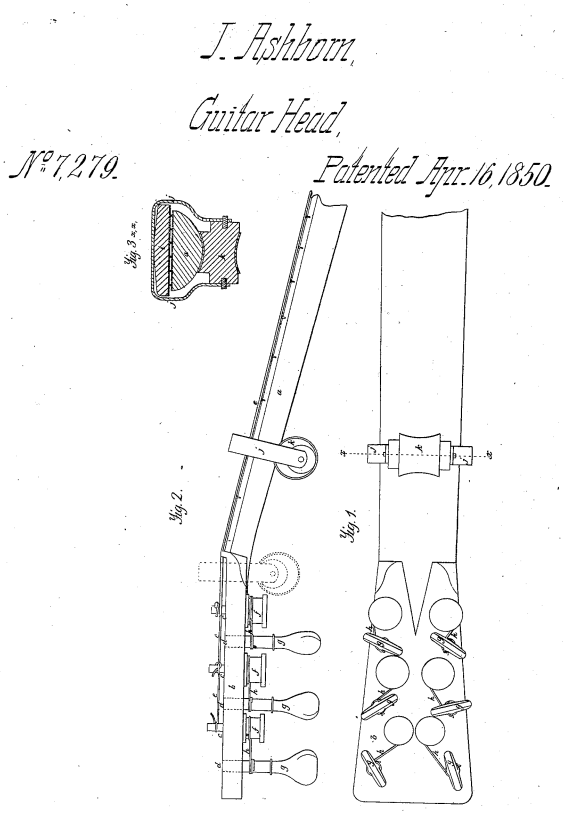

Fig. 97. Guitar Head by James Ashborn, USA 1852. US Patent no. 7,279.

[528] James Ashborn. 1850 Guitar Head. US Patent 7,279, filed 16 April 1850.

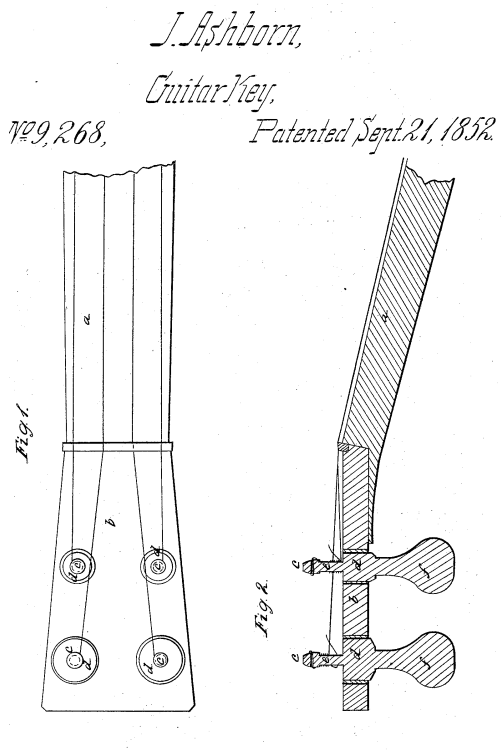

Fig. 98. Guitar Key by James Ashborn, USA 1852. US Patent no. 9,268.

Other makers who lodged patents during the mid to late-nineteenth century include William H. Towers, William B. Tilton, Joseph E. Bini, H. Seehausen, George D. Reed and Rudolph Knaffl.[529] Of these, the patents of Towers and Tilton are primarily concerned with increasing the vibrating power of the soundboard through improving the way strings are fixed to the instrument's bridge, thereby augmenting volume and tone, while Bini addresses improved soundboard response through bracing design.

William H. Tower's patent of 16 May 1854 specifies a system where the saddle of the bridge is replaced by the use of hollow fixing pins through which the six individual strings pass, and described as then 'cantilevering' over a rounded upper lip to avoid cutting into the body of the string. He claims that the design allows for the use of a bridge with a smaller surface area, making it less inhibiting to the vibration of the soundboard. Two central pins fix the bridge then extend through the body to the back of the guitar, imitating a violin sound post. [530]

[529] For information on patented bridge designs refer to Chapter 9.5 of this thesis.
[530] William H. Towers. 1854 Guitar. US Patent 10,934, filed 16 May 1854.

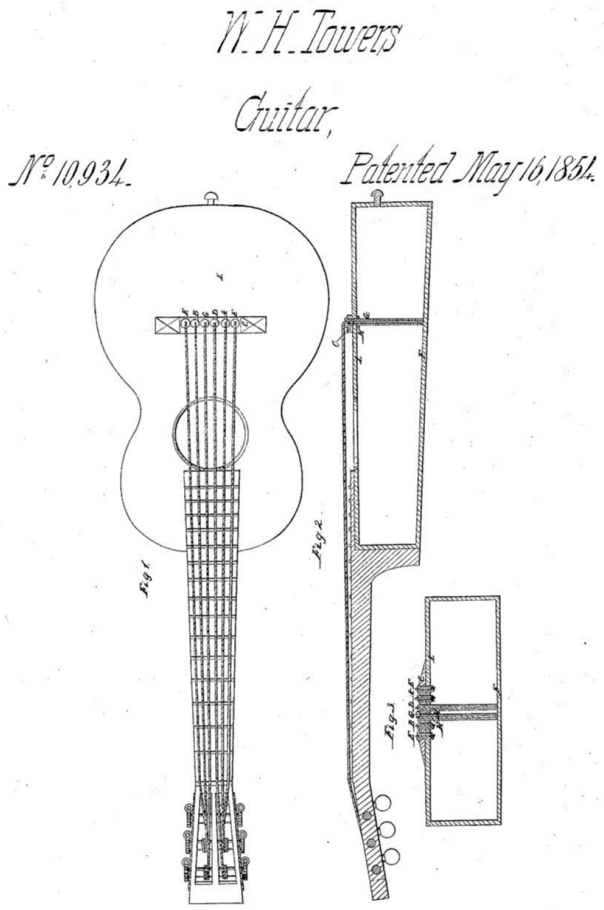

Fig. 99. Patent for guitar improvement. W. H. Towers, May 16 1854. US Patent No. 10934.

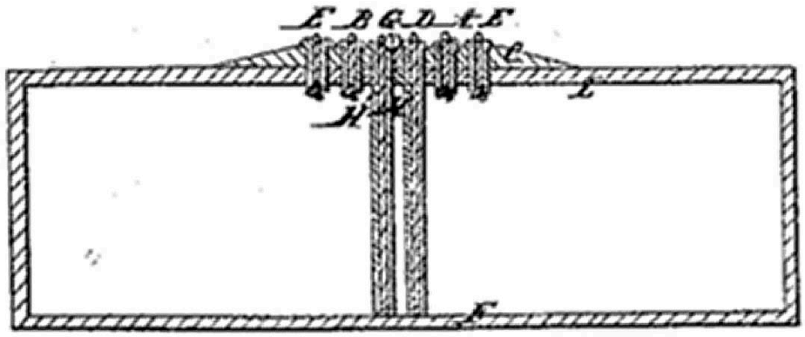

Fig. 100. Detail of patent for guitar improvement. W. H. Towers, May 16 1854. US Patent No. 10934.

On 2 September 1851 William B. Tilton received a patent for the 'Construction of Violins &c'.[531] The invention described was designed to be used in other 'Musical Stringed-Instruments' equally, and as such was widely incorporated into his guitar designs. Tilton specifies a wooden dowel to be used between the neck block and end block of his instruments [Fig. 112], thus relieving the compressive force of the string tension exerted on the soundboard, while allowing the use of smaller-sized end and neck blocks. He suggests that the smaller blocks, together with a reduction in soundboard thickness, which the strengthening dowel could now enable, would allow for increased vibration. The Staufers and their successors also used this device in their guitars with extra bass strings.

[531] William B. Tilton. 1851 Violin. US Patent 8,338, filed 2 September 1851.

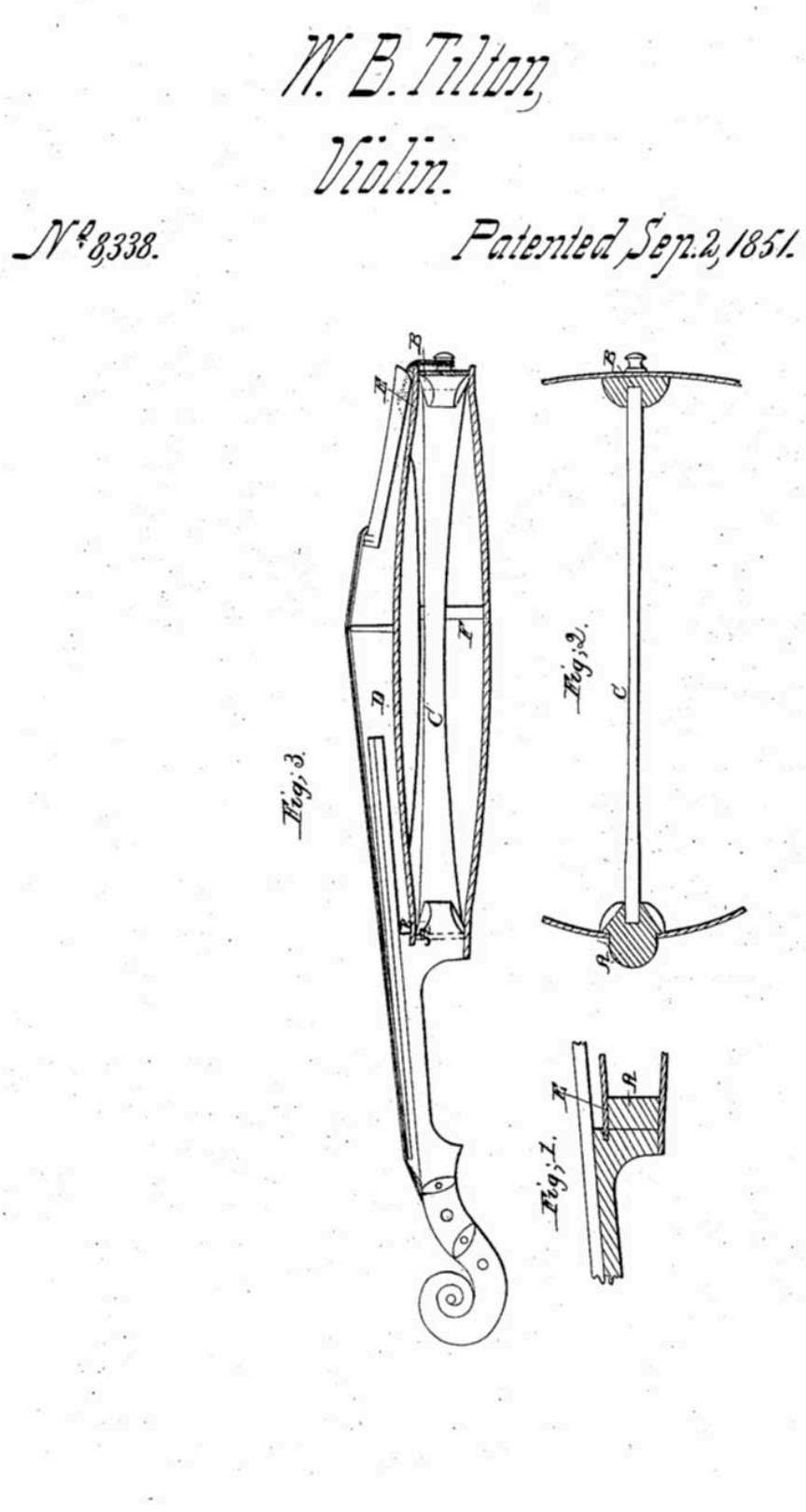

Fig. 101. Patent for internal strengthening dowel. William B. Tilton, 2 September 1851. US Patent No. 8338.

Tilton's later patent, dated 3 January 1854, claims a new design that 'precludes the necessity of the bracing usually required under the sounding board [presumably in the area where the bridge is located], which always has a tendency to injure the tone'.[532] This patent is presented in Chapter 9.5.

In the last two decades of the nineteenth century John C. Haynes sold guitars not only under the brands of Ditson and Bay State but also Excelsior and, on acquiring the patent rights, its own Tilton line of instruments. In about 1880, Swedish-born maker Pehr A. Anderberg, then resident in Massachusetts, was sub-contracted to produce both the Excelsior and Tilton models, which according to Ayars, he did so from a shop on Freemont Street, Somerville (Mass.).[533] Anderberg in the 1860s had been working for Charles F. Bruno in New York, but in about 1870 moved away to Mount Vernon (New York) to set up his own business. After which, according to Ayars, he returned briefly to Sweden, before moving back to Boston in America in 1880.

Joseph E. Bini's 24 December 1867 patent [Fig. 114] concerns 'improvement in bracing the sounding-boards of guitars'.[534] Although approximately twenty-five years after the introduction of X-bracing as standard on most Martin guitars, this patent is nevertheless evidence of the use of similar systems by other American guitar manufacturers by the 1860s. Bini claims his design to be an improvement on the lateral ladder-braced systems commonly found previously in nineteenth-century guitars. He emphasises the strength and flexibility that his design gives to the soundboard, allowing the resultant lightly built top to produce a superior tone. Bini conceives that a system of diagonal bracing not only tightens and amplifies the treble response, but also, with the braces interconnecting at an angle following the direction of the soundboard's longitudinal grain, enhances its vibrations. The consequent adoption of Bini's patent by guitar

[532] William B. Tilton. 1854 Guitar. US Patent 10,380, filed 3 January 1854.
[533] Christine Merrick Ayars, *Contributions to the Art of Music in America by the Music Industries of Boston, 1640 to 1936* (New York: The H.W. Wilson company, 1937), p. 274; Gura and Bollman, *America's Instrument: The Banjo in the Nineteenth-Century*. Haynes bought out Anderberg's business and workshop, making him foreman of Haynes' guitar works. He held this position until 1892, when he left to set up independently once again.
[534] Bini, *Improvement in Bracing the Sounding-Boards of Guitars*.

manufacturers can be found later in Foote's continued endorsement of the design in his Bini range of guitars, which he marketed later in the early 1880s.[535]

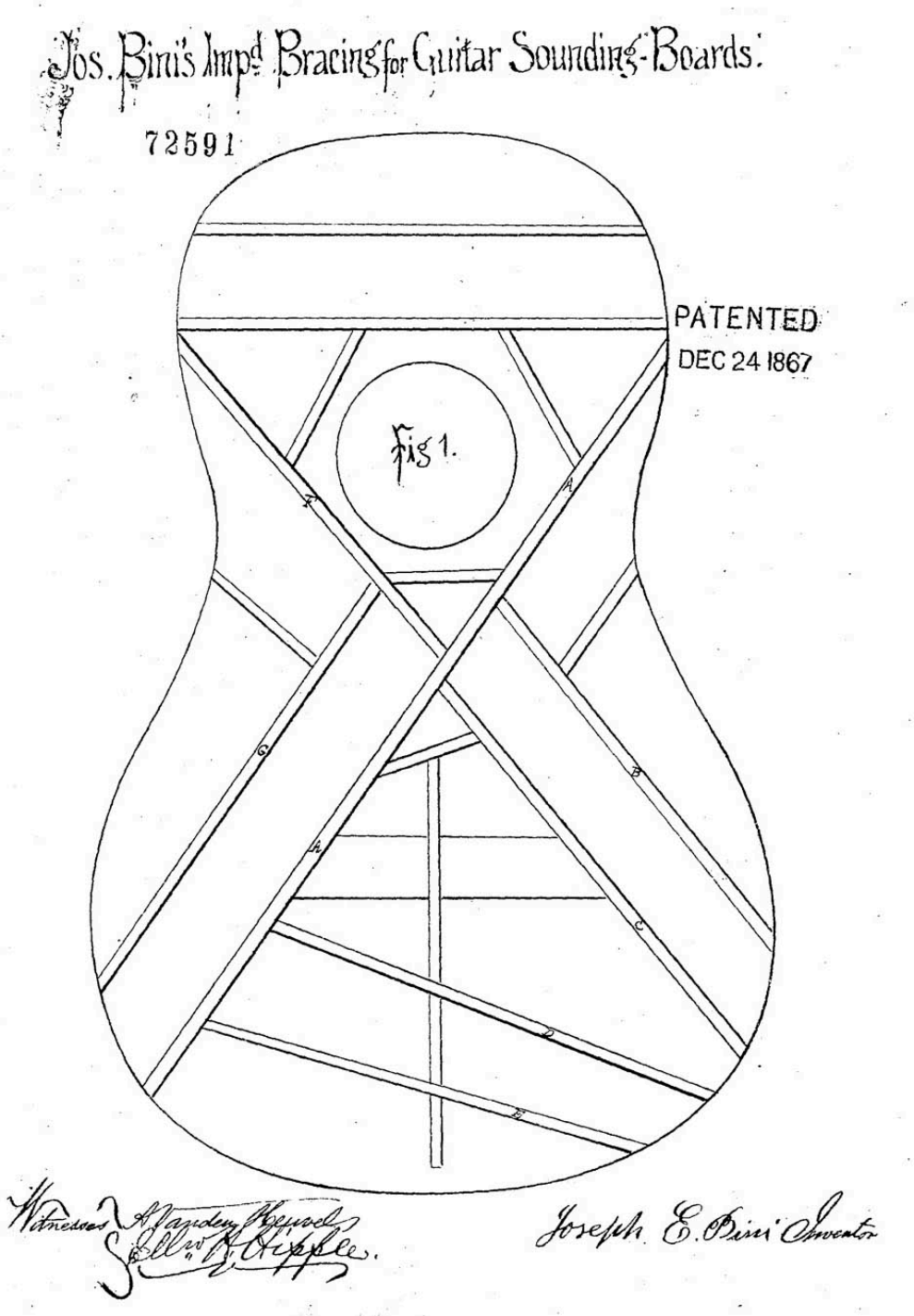

Fig. 102. Patent soundboard bracing. Joseph Bini, 24 December 1867. US Patent No. 72591.

[535] J. Howard Foote, *J. Howard Foote's Catalogue of Musical Instruments, Strings, Musical Boxes, and General Musical Merchandise. Complete Ed.* (New York: J. Howard Foote, 1882).

Besides his own brand of American guitar, Foote also offered his flagship range of Bini Guitars, which he claimed were made by him, following Bini's patented soundboard design, and described as:

> The patent is based on a peculiar system of bracing on the inner surface of the sounding-boards. The braces are placed as to secure strength and durability, while the sounding-boards, being much thinner than in the old method, are more sensitive to sound. The whole arrangement has the effect to equalise the entire scale, producing every note full and perfect. The braces act as *conductors of sound*, conveying the vibratory effect of each tone over the entire sounding-board, which prolongs the vibrations, and gives a sustaining power to the harmony never before attained in the Guitar.[536]

Besides developments in soundboard bracing and the introduction of larger bodied instruments, the last quarter of the nineteenth century in America saw the introduction of metal used as a constructional material for guitars, with both George D. Reed patenting an all-metal guitar in 1873,[537] and later in 1894, *The Merrill Aluminum Musical Instrument Company* manufacturing metal guitars, banjos, mandolins and lutinas.

[536] Foote, *J. Howard Foote's Catalogue of Musical Instruments, Strings, Musical Boxes, and General Musical Merchandise. Complete Edition*, p. 57.
[537] Reed, *Guitars*. This patent was originally applied for on 4 November 1872. For further details see *Strings, Advertising & Tailpieces* in this thesis.

Chapter 7 The Nineteenth-Century North American Guitar

7.1 Martin's early years and production

Although there are references to the use of the English guittar in America during the late eighteenth century,[538] and to the importation of the European six-single-string guitar in early nineteenth century newspaper advertising,[539] it is from the immigration to America of Christian Friedrich Martin in 1833 that the birth of a distinctively American guitar can be traced. Martin followed in the footsteps of Heinrich Schatz, a fellow guitar maker and friend who had immigrated from their hometown of Markneukirchen, in Saxony, to New York, a year earlier. Their moves had been prompted by a long ongoing dispute between the Markneukirchen cabinetmakers' guild, of which they were members, and the violinmakers' guild.[540]

On arriving in New York, Martin initially set up as an importer of musical instruments and related merchandise.[541] Sourcing his goods from Europe, primarily from his native

[538] Doc Rossi, 'The Cittern and English Guitar [Guittar] in Colonial America' (2002). An advertisement placed by Jacob Trippell, on 12 November 1764 in the *New York Gazette* announced that he 'makes and repairs all sorts of Violins, Base and Tenor Viols, English and Spanish Guittars, Loutens, Menthelines, Mandores and Welsh Harps at reasonable rates'. At this time a 'Spanish Guittar' would have been a five-course instrument.

[539] Gura, *C.F. Martin and His Guitars, 1796-1873*, p. 33. Around 1825 the instrument dealer Samuel C. Jollie & Co. of New York was advertising an 'Elegant Assortment of French and German Guitars, with Plain Patent Heads, of the Latest Pattern'.

[540] See also Chapter 4.2.6 of this thesis, 'Christian Friedrich Martin'. The violinmakers objected to the cabinetmakers producing guitars, which they had been doing successfully for some time, and petitioned in court to have them stopped, claiming that they lacked formal training as musical instrument makers. The violinmakers' argument was intended to protect both their status and trade: they wished to capitalise on an increasing demand for guitars, and considered that as stringed instrument makers accredited by their guild, they had the sole right to do so. Along with Carl Friedrich Jacob, Carl Gottlob Wild, August Paulus,[540] Johann Georg Martin (the father) and a Seifert (described as a native of Wohlhaußen), Schatz and Christian Friedrich Martin were named in the dispute. As part of their defence against the violinmakers' accusations of incompetence, the cabinetmakers presented to the court as testimonial evidence of their skill, the example of Christian Friedrich Martin's training and employment by Staufer, then one of the most respected and successful guitar makers in Vienna. Schatz, in a written deposition, claimed that he too had spent two years in Vienna pursuing his craft as a guitar maker, although at that point he doesn't affirm with whom. However, later in the 1830s, when both Martin and Schatz were in business together, labels on their guitars proclaimed that both were pupils of the 'celebrated Staufer of Vienna', so it is reasonable to conclude that Schatz also may have spent some time with Staufer. Martin and Schatz's claim to have trained and worked in Vienna reinforces the importance of that city as a centre of nineteenth-century guitar making, and in proclaiming their connection to Staufer, suggests that he in turn was known and respected, both in Europe and to their guitar-buying customers in New York.

[541] Gura, *C.F. Martin and His Guitars, 1796-1873*. I would like in particular to refer the reader to Philip Gura's extensive research, and account of the life and business of Christian Friedrich Martin; Johnston,

Saxony, these included guitars, violins and other string instruments, brass instruments, accordions, sheet music, consumables such as strings, and spares such as tailpieces and bridges for violins. Martin's address, 196 Hudson Street, was probably typical of a craftsman residence in this area of the city: a two or three story building containing a front room, which acted as a retail shop, opening on to the street at ground level and a workshop to the rear with living quarters for the family on the floors above.[542] As is common practice today in a shop specializing in instrument sales, a repair trade in these goods was customary and helped provide a steady income. Besides offering this service, Martin started making guitars for sale alongside his other goods.

Gura reports that although Martin's accounts show that he was offering guitars as early as 1834, they are only recorded as sold and not manufactured, so it is impossible to identify the precise date of Martin's first New York-made guitars. While it is conceivable that these sales could have been of imported guitars, no record corroborates this, so it is equally feasible that they were sales of Martin's own. That the accounts between March and May 1835 show purchases of materials (wood and other items such as varnishing supplies) suggests that by then Martin was already manufacturing his own guitars. This is further consolidated with the acquisition of guitar making tools in 1836:

> On October 13 he debited his account for the following: "1 stove for the store-$20.00, 1 stove for cooking-$23.00, 2 store lamps-$6.00, 1 large double plane- $1.65½, 1 large single plane-$.87½, 1 tooth plane-$1.00, 1 sash saw- $1.25, 1 hatchet-$1.65½, 1 large chisel-$.43¾, 1 hammer-$.43½, 1 machine for saw setting-$2.00." A year later he purchased a few more tools: two files and handles for them and "1 pack blades". On a regular basis now he also bought glue; copal, shellac and "spirits" (usually from Bromberger) for varnishing the instruments; and flannel, presumably for polishing the instruments, or perhaps to line cases.[543]

In 1836 he sold forty-six guitars, in 1837 thirty-three, and in 1838 thirty-nine, with a maximum of nine completed in any one month during this period. The average time

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Boak, and Longworth, *Martin Guitars: A History*; Johnston, Boak, and Longworth, *Martin Guitars: A Technical Reference*. As chroniclers past and present of the history of the Martin family and their musical instrument making company, see the work of Mike Longworth, Richard Johnston and Dick Boak,

[542] Gura, C.F. Martin and His Guitars, 1796-1873; Nancy Groce, Musical Instrument Makers of New York: A Directory of Eighteenth and Nineteenth Century Urban Craftsmen (Stuyvesant, NY: Pendragon Press, 1991); Elizabeth Blackmar, Manhattan for Rent, 1785-1850 (Ithaca ; London: Cornell University Press, 1989); Richard Briggs Stott, Workers in the Metropolis : Class, Ethnicity, and Youth in Antebellum New York City (Ithaca, N.Y.: Cornell University Press, 1990), pp. 124-25.

[543] Gura, *C.F. Martin and His Guitars, 1796-1873*, p. 56. Gura cites from Martin's Journal, 1836-1837, 13 October 1836.

between ordering and delivery was six to eight weeks. Ledger entries from as early as 1834 show wages for those who were doubtless needed to help achieve this output: Louis [Schmidt] and one Jacob; and in 1835 to Heinrich [Schatz].[544] Gura speculates that Jacob was a relative of one of the Hartmanns (family relations and business associates of Martin, of whom C. F. Hartmann later in 1867 would become a partner in the business along with Martin and his son, C. F. Martin jnr.).[545]

Soon after arriving in New York, Martin formed a partnership with Schatz. An entry on 13 November 1835 in the account book of Friedrich Traugott Merz, a musical instrument dealer in Markneukirchen, shows that he shipped guitar tuners (single-sided 'Vienna Screws') wound guitar strings, violins, woodwind and brass, to Martin & Schatz.

[544] Gura, *C.F. Martin and His Guitars, 1796-1873*, pp. 52-64.
[545] Johnston, Boak, and Longworth, *Martin Guitars: A History*, p. 19. J. W. Hartmann was Johann Georg Martin's brother-in-law and his name appears, listed as a trader, on the passenger manifest alongside the Martin family when they travelled to New York in 1833.

Fig. 103. Freight-Forwarding Book of Merz, Markneukirchen, 13 November 1835, Martin & Schatz in New York (Musical Instrument Museum Markneukirchen), I. 25, p. 61v.[546]

Translation of order from *Speditionsbuch der Firma Merz*, Markneukirchen, 13 November 1835, Martin & Schatz in New York:[547]

[546] F. T. Merz, *Speditionsbuch 1828* (Markneukirchen1827-1844).

[547] Merz, *Speditionsbuch 1828.* Details of order from *Speditionsbuch der Firma Merz*, Markneukirchen, 13 November 1835, Martin & Schatz in New York: Nov. 13. | Sende ihnen mittelst M. C. Sommer in Altona mit Fuhrm [ann] Christ. Räßer von Adorf im Lohne a 3 ngr.[…] in 18 a 20 Tagen zu liefern [Preise in Taler und Neugroschen]: 1 Kiste No. 16 […]

Nov. 13 | MC summer means of transmitting them in Altona with Fuhrm [ann] Christ. Provide Räßer of Adorf in wages ngr. a 3 [...] in 18 a 20 days [prices in dollars and Neugroschen]: 1 Case no. 16 [...]:

6 ff Guitar screws, single-sided	29.8
2 f Chromatic trumpets in G, 3 valves, 5 arc	24
1 Ditto F, 2-valve, 5 sheets of train	10.12
12 Flagelots yellow finish	9
6 Ditto, black finish	4.12
8 Octave flutes black finish, ivory fittings, 4 keys	5.8
6 Ditto, black finish, ivory fittings, 1 key	2.6
6 Ditto, yellow finish, horn fittings, 1 key	1.12
6 f Pernambuco bows, German silver-bolts and washers ... golden fish disks?	7.12
3 Ditto, somewhat shorter	3.18
3 Ditto Cello Bows	4.6
13 Logwood cello bow, ebony frog, pearl slices	9.18
4 dozen overwound guitar-strings E, no. 9	
6 dozen overwound guitar-strings A, no. 11	
8 dozen overwound guitar-strings D, no. 16	8
4 dozen overwound guitar-strings, third E, no. 10	
4 dozen overwound guitar-strings, A third, no. 12	
4 dozen overwound guitar-strings, third D, no. 17	4.2
1 double-scale violin	1.20
3 ¾ scale violins	4.12
3 ½ scale violins	3.16

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6 ff Guitarrenschrauben, einseitig	29.8
2 f chromatische Trompeten in G, 3 Ventile, 5 Bogen	24
1 do. F, 2 Ventile, 5 Bogen mit Zug	10.12
12 Flageoletts, gelber Buchs	9
6 do., schwarzer Buchs	4.12
8 Octav-Flöten schwarz do., Elfenbeingarnitur, 4 Klappen	5.8
6 do., schwarz do., Elfenbeingarnitur, 1 Klappe	2.6
6 do., gelb, Horngarnitur, 1 Klappe	1.12
6 f Fernambuck-Bogen, Argentan-Schrauben u. … Goldfischscheiben	7.12
3 do. do. etwas kürzer	3.18
3 do. Cello-Bogen	4.6
13 Blauholz Cello-Bogen, Ebenholzfrosch, Perlen Scheiben	9.18
4 Dutzend übersponnene Guitarren-Saiten E, No. 9	
6 Dutzend übersponnene Guitarren-Saiten A, No. 11	
8 Dutzend übersponnene Guitarren-Saiten D, No. 16	8
4 Dutzend übersponnene Guitarren-Saiten, Terz E, No. 10	
4 Dutzend übersponnene Guitarren-Saiten, Terz A, No. 12	
4 Dutzend übersponnene Guitarren-Saiten, Terz D, No. 17	4.2
1 doppelt eingelegte [anglegete?] Geige	1.20
3 eingelegte [anglegete?] ¾-Geigen	4.12
3 eingelegte [anglegete?] 1/2 -Geigen	3.16
6 eingelegte [anglegete?] Geigen	6
1 ½ [Zentner]… Argentandraht	4
3 Dutzend Violinstege a 6	0.18
3 Dutzend Violinstege a 5	0.15
3 Trompeten-Mundstücke	0.11
½ Dutzend Tyroler Geigen	4.2

6 full-scale violins	6
1 ½ [cwt] ... Argentandraht Silver wire?	4
3 dozen violin bridges a 6	0.18
3 dozen violin bridges a 5	0.15
3 trumpet mouthpieces	0.11
½ dozen Tyrolienne violins	4.20

In 1836 Martin was trading with Heinrich Gottlob Gütter in Bethlehem, who besides acquiring musical instruments from local craftsmen, was like Martin, also importing them from Europe. Martin bought guitar strings, violins, and occasionally guitars and in return sold him brass instruments.[548] Gütter's family background in Markneukirchen was in wind instrument making and he had immigrated to Bethlehem in 1817 and traded in musical instruments from 1819. His uncle, Christian Gottlob Paulus also from Markneukirchen, had immigrated there earlier in 1795, and introduced him into the town's otherwise closed Moravian community. Both the Gütter and Paulus families had a long history in the musical instrument business of Markneukirchen: their familial union was formed when Gütter's father, Heinrich Ferdinand Gütter married Johanna Christiana Paulus the sister of Christian Gottlob Paulus and daughter of the violin string maker Johann Georg Paulus.[549] The Martin and Paulus relationship is also a familial one: Eva Regina Paulus was Christian Friedrich Martin's mother. While the Paulus family of Markneukirchen is numerous with various members trading as violinmakers, in the church records of the marriage between Eva Regina Paulus and Johann Georg Martin [C. F. Martin's father][550] her father, Johann Adam Paulus is described as a cabinetmaker and not an instrument maker. On the other hand her mother, Maria Schuster,[551] was part of the Schuster family of musical instrument dealers.[552] The Markneukirchen violinmakers named one August Paulus as a journeyman to whom they objected making guitars, and included him alongside the Martins and others in their

[548] Gura, *C.F. Martin and His Guitars, 1796-1873*.
[549] Stewart A. Carter, 'The Salem Cornetts', *The Historic Brass Society Journal* 14 (2002); Stewart A. Carter, 'The Gutter Family: Musical Instrument Makers and Dealers to the Moravian Brethren in America', *Journal of the American Musical Instrument Society*, vol. 27 (2001).
[550] Church book Markneukirchen, *marriages*, vol. 10 (1793), p. 112. The Köthener Hofkapelle in 1776, listed in its inventory, a violin by Balthasar Paulus from 1746.
[551] Church book Markneukirchen, *baptisms*, vol. 43 (1768), p. 274: 'Eva Regina Paulusin den 29. Oct: nat:; den 1. 9br: ren:, Eva Regina, Mstr. Joh: Adam Paulusens, B. u. Zimmermanns aufn Berg, filia; mater: Maria, geb: Schusterin Kirchenbuch Markneukirchen, Tote 1788/26'.
[552] In the Guild dispute, it was Christian Wilhelm Shuster who, as a respected (musical instrument) *händler*, or dealer, provided the court with the statement that Christian Friedrich Martin had worked for Staufer in Vienna.

dispute with the cabinetmakers. It seems likely that August Paulus was from a branch of the family involved with the music instrument trade in Markneukirchen that was separate to activities of the violinmakers guild,[553] much in the same way as were the Martins, with them all being caught up in a conflict that's bitterness, through family associations on both sides of the dispute, may well have become even more personal.

In 1836, Schatz moved from New York to Millgrove, Nazareth (near Bethlehem) in Pennsylvania, but continued to supply Martin's New York business with guitars and guitar cases. Later in 1839, wishing to become part of the rural community of German immigrants living around Bethlehem, and again seeming to follow in the footsteps of Schatz, Martin resettled in the nearby Cherry Hill area of Nazareth.[554] By this time however, Schatz had moved again, further afield to Boston. Gura, in noting that transactions with Schatz in Martin's accounts end in March 1837, suggests that this may indicate the date of the move.[555] Thus it can be deduced that instruments labelled Martin & Schatz date from 1835-37, and it is likely that while Schatz was living in Pennsylvania Martin was his New York agent.

That Charles Stumcke, another immigrant German maker living near Bethlehem, was at that time connected to Schatz (Martin recorded the cost of posting a letter to Mess's. Schatz and Stumcke in 1838) makes it probable that he too worked for Martin, either directly, or indirectly through Schatz.[556] Stumcke also moved to Boston where he and Schatz carried on their association, although he later relocated to San Francisco where

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[553] Richard Petong, *The Arts and Crafts Book of the Worshipful Guild of Violin-Makers of Markneukirchen, from the Year 1677 to the Year 1772*, trans. Edward & Marianna Heron-Allen (London: H. S. Nicholls & Co., 1894), p. 41. Three families named Paulus are mentioned as violinmakers, but are not entered into the Guild proper until 1772. Petong suggests that they would have been employed in other trades as well before that time, particularly string-making, which he notes they were occupied with until the end of the eighteenth century. He considers that they had probably arrived in Markneukirchen by the middle of the seventeenth century.

[554] The Martins lived at first in Cherry Hill on the edge of Nazareth. Ownership of property in the main part of Nazareth was restricted to only members of the dominant Moravian community.

[555] Gura, *C.F. Martin and His Guitars, 1796-1873*, p. 64; Gura and Bollman, *America's Instrument: The Banjo in the Nineteenth-Century*; Boston City Directory, 1846: Henry Schatz is listed as a guitar and violinmaker, and Charles Stumcka (note spelling) as a guitar maker.

[556] Gura, *C.F. Martin and His Guitars, 1796-1873*, p. 45. Martin recorded the cost of posting a letter to Mssrs. Schatz and Stumcke in 1838; Gura and Bollman, *America's Instrument: The Banjo in the Nineteenth-Century*. p. 48. Gura cites *The New York Musical World* (2 May 1857) in which was reported 'among the many interesting manufactures carried out in San Francisco' was that of 'Making Guitars, Violins, banjos and Stringed Instruments generally' and that these were made by 'Mr. Charles Stumcke, an old gentleman of Bremen, who had learnt his trade 35 years ago in Verona, Italy', gives 1853 as the year Stumcke moved to California.

he continued to build guitars. According to David Bradford, Stumcke was awarded a bronze medal for a Scherr-style *harp guitar* at the First Industrial Exhibition of the Mechanics' Institute of the City of San Francisco in 1857.[557] The example of Stumcke's version of this instrument shown in Figure 116, unlike Scherr's own, sports the distinctive slipper headstock also found on early guitars made by Martin, Schatz, Schmidt and Maul.

Fig. 104. Guitar in the style of Scherr's *harp-guitar* by Charles Stumcke. [Photo: Harp Guitars].[558]

[557] David K. Bradford, 'Martin's German Contemporaries ', in *The Unstrung History of the American Guitar: The Guitar and 19th Centuey American Music* (2009), http://www.19thcenturyguitar.com.

[558] Fig. 116. Guitar in the style of Scherr's *harp-guitar* by Charles Stumcke. Private collection [Photo: Harp Guitars]. The label is faded but appears to be dated 1853. According to Greg Miner, the back, sides and neck veneer were long thought to be flame koa but may be flame mahogany. David Bradford, giving evidence of the high regard awarded Stumcke's enterprise in San Francisco, cites the *Daily Evening Bulletin*, San Francisco, vol. 3, issue 139 (20 March 1857), p. 3.: 'The business is as yet small and limited, but the mere fact that it is carried on – that we have a manufactory for stringed musical instruments – is well worth noting; and … deserves the attention and encouragement of the public '. The report went on to comment on Stumcke's use of snake wood, imported from the Sandwich Islands, for his guitar making. If Stumcke was using this wood for his instruments after having

Louis Schmidt, another German guitar maker, also appears as an employee in Martin's accounts between 1834 and 1836, after which he set up independently. After Martin's move to Pennsylvania, Schmidt continued in New York, forming a partnership with the guitar maker George Maul. Maul is also recorded in Martin's accounts as having received substantial (although un-detailed) payments, suggesting he too may have worked for him directly or under sub-contract.[559] Schmidt & Maul's own successful partnership existed from 1839 until it was dissolved in 1858.[560]

Fig. 105. Persian slipper headstock of guitar by Schmidt & Maul, New York c1840s. Private collection [Photo: Fred Oster].

During his last year in New York Martin was in a partnership with Charles Bruno, who had previously been employed as his bookkeeper (unlike Schatz, there is no evidence

moved to San Francisco, it is also reasonable to suggest that Koa may well also have been a species of his choice as it was also imported from the Sandwich Islands, now known as Hawaii.

[559] Gura, *C.F. Martin and His Guitars, 1796-1873*, pp. 62-63.

[560] Groce, *Musical Instrument Makers of New York: A Directory of Eighteenth and Nineteenth Century Urban Craftsmen*, p. 137.

that he made guitars himself). Although Bruno had received wages from as early as 1836 it from 1838 that he became Martin's business partner, lasting until Martin's move to Pennsylvania.[561] His address was 212 Fulton Street, which accounts for some labels on Martin and Martin & Schatz guitars carrying that address at a time when Martin himself was at 196 Hudson Street. During this period [1838] one William Rasche was employed at 212 Fulton Street and was paid for both storekeeping and inlaying pearl. The accounts also show one-off payments to a Mr. Kretchmann[562] for polishing a guitar and repairing string instruments including a double bass, and to an un-named man on 21 April 1838 for 'Turning the string machine'.[563] The sales invoice in Figure 115 shows that earlier in 1835 Martin and Schatz were importing wound *E*, *A* and *d* strings from Merz in Markneukirchen, and even up until the end of the nineteenth century gut treble strings were still usually imported to America from Europe, making it likely therefore that the string machine Martin was using in 1838 was for winding the covered basses, an activity he had started doing in-house.

Martin's move to Cherry Hill signalled the end of his business as an importer, and in turn allowed him to concentrate fully on his trade as a guitar maker. Although having moved out of the New York and sold the inventory of his shop to Ludecus & Wolter at 320 Broadway, he continued to market his guitars through other outlets in the city; his first main agent being John Coupa. Martin's association with the guitarist and music teacher Coupa, dates from 1837. To begin with Martin sold him guitars, cases, strings and music books, but their business relationship evidently blossomed, for in 1840 city directories listed the firm of Martin & Coupa as registered at 385 Broadway. Martin's ledgers, which would likely have provided more precise information on their joint business dealings during this decade are lost, however when they recommence in 1849 they continue to show this address as the one Martin used for his New York outlet, and with Coupa still as his agent.[564] Theirs was a mutually beneficial relationship with

[561] Gura, *C.F. Martin and His Guitars, 1796-1873*, pp. 64-67.
[562] It may be that Mr Kret[s]chmann was related to one Eva Regina Kretschmann, who was a godparent to C. F. Martin. The family name of Kretschmann appears in the Markneukirchen Violinmakers Guild records: see Enrico Weller, "Studiengang Musikinstrumentenbau Markneukirchen: Quellen Zu Christian Friedrich Martin in Markneukirchen," in *Studio Instrumentorum Musicae* (Studiengang Musikinstrumentenbau Markneukirchen, 2006); Petong, *The Arts and Crafts Book of the Worshipful Guild of Violin-Makers of Markneukirchen, from the Year 1677 to the Year 1772*.
[563] Gura, *C.F. Martin and His Guitars, 1796-1873*, p. 65. Gura points out that this is the only mention of string making activity by Martin whilst still in New York.
[564] Gura, *C.F. Martin and His Guitars, 1796-1873*, p. 74.

Coupa sending Martin repair work as well as orders for instruments and Martin maintaining a showroom through Coupa. Extant letters show that besides being business partners their families were close, with Martin staying at Coupa's when visiting New York City. These letters also reveal that a friendship still existed between Martin and the maker George Maul, whose business was in the same street at 388 Broadway.[565] Although Coupa died sometime in 1851 or 1852, Martin's guitar depot in New York remained at 385 Broadway.

From when he first arrived in America, Martin had kept close business ties not only with Markneukirchen through his trade with Merz, but also the German communities of the Bethlehem area of Pennsylvania through Gutter. Even after his client base increased, his business expanding to supply cities and states outside of New York, his immediate circle of friendships remained rooted in the milieu of German immigrant craftsmen, and his partnerships echoed that familial relationship.

7.2 Staufer's influence on Martin

Martin's first guitars clearly show the influence of Georg Staufer: they are almost identical to the Staufer model of the mid to late 1820s, both visually and structurally. In actuality, Martin left Staufer's employ in 1824, although he remained in Vienna. He is then known to have worked there with Karl Khüle,[566] during which time he married Khüle's daughter Ottilie. He returned to Markneukirchen sometime after his daughter's baptism in 1827. However in 1835, some ten years after leaving Staufer's employ, and when his accounts identify his self-manufactured guitars in America, he still adhered to the model of Staufer that had emerged while he was living in Vienna. Staufers from the mid 1820s appeared as often with a figure-of-eight peg head and wooden friction pegs, as with a slipper headstock fitted with mechanical tuners (although both forms carried a label with Legnani's endorsement and a red wax seal) Martin's earliest American

[565] Gura, *C.F. Martin and His Guitars, 1796-1873*, pp. 74-78. Letter from Coupa to Martin, 28 August 1849, mentions leaving the (house) keys with Maul, in Coupa's absence.
[566] Lutgendorff and Drescher, *Die Geigen- Und Lautenmacher Vom Mittelalter Bis Zur Gegenwart*. Lutgendorff descrides Khüle as a cabinetmaker who also made musical instruments, including harps.

guitars, on the other hand, nearly always featured a Persian slipper headstock with mechanical tuners.[567]

At first Martin used woods with the same properties and visual characteristics common with Staufer guitars: spruce for the soundboard, and maple (readily available in North America) substituted for European sycamore for the back and sides. The neck and headstock assembly on the earliest extant Martins is usually maple, with the heel and back of the neck often veneered, either in ebony or alternating longitudinal strips of ivory and ebony. Comparisons between Staufer guitars from the second half of the 1820s, and those made by Martin soon after his arrival in New York show many similarities. Both SAM 489 built by Staufer in 1829 [Fig. 22] and the Martin from c1834 in the Martin museum [Fig. 118] incorporate certain features first mentioned in the Staufer and Ertl *privilege* of 1822.[568] Their necks are of the same design, joining the body at the twelfth fret (which had become standard in Staufer's second period of making), and both are adjustable with a fingerboard elevated above the soundboard.

[567] This model of Staufer is often referred to as the *Legnani*. However, as has been pointed out in this thesis, both Staufers with and without mechanical tuners, and slipper or figure-of-eight peg heads, contain labels with the Legnani endorsement. The guitar [Fig. 130], in the collection of R. Corwin, however, is an early Hudson Street Martin, whose slotted headstock is thought to be original.
[568] See Chapter 2 for details of the 1822 *privilege*, and Chapter 3 further details on the guitar, SAM 489.

Fig. 106. Guitar by C. F. Martin, New York 1834 [Photo: courtesy C. F. Martin & Company Archives].

Where the bridges on both guitars are similarly simple and elegant with fine moustaches orientated towards the tail of the instrument, their decorative rosette and bindings differ. Those of SAM 489 are a four-ply pattern for both, while the Martin has a more elaborate rosette, inlaid with pearl, and herringbone stringing inside the ivory edge binding, although this level of higher decoration could imply it was a presentation model rather than a plainer instrument.

Another guitar from the second half of the 1820s [Figs. 122 & 123 right],[569] previously attributed to Staufer but unlabelled, shows not only the same style of patterned veneering to the adjustable neck as the Martin, but also the decorative herringbone stringing inside the soundboard edge binding, an appointment still to this day associated with Martin rather than Staufer. Many of the Staufers from this period have shorter

[569] The instrument featured on the right in figures 122 & 123 is now in the private collection of Robert Corwin.

string lengths,[570] but that of SAM 489 at 645 mm is longer, and as such can be compared to the 642 mm length of the unlabelled instrument. On the other hand, the Martin Company's presentation model is closer to Staufer's 610 mm average at 612 mm, and while the unlabelled guitar appears to be the twin of the Martin both visually and in construction, it does not carry a Martin stamp and is unlabelled.

Fig. 107. Staufer-style guitar by C. F. Martin, New York c1834 (left), guitar attributed to J. G. Staufer, Vienna c1820-30 (right) [Photo: R. Corvin].[571]

Fig. 108. Rear View of Staufer style guitar by C. F. Martin, New York c1834 (left), guitar attributed to J. G. Staufer, Vienna c1820-30 (right) [Photo: R. Corvin].[572]

[570] See chapter *Examination of Staufer's Instruments*: Shorter Georg Staufer string lengths of 559 mm, 561 mm, 564 mm, 595 mm, 608 mm and 632 mm are all known.
[571] Robert Corwin, 'Early Martin Guitars', www.earlymartin.com. [Accessed 9 December 2011]; Illustrated on p. 7 of *Trynka, The Chinery Collection: 150 Years of American Guitars*; Bacon, T., *History of the American Guitar,* p. 7; Washburn and Johnston, *Martin Guitars: An Illustrated Celebration of America's Premier Guitarmaker*, p. 12; Gura, *C.F. Martin and His Guitars, 1796-1873*., plate 2-1; Reproduced as an enlarged Photograph in a display in the Martin Museum.
[572] Robert Corwin, 'Early Martin Guitars' [Accessed 28 December 2011].

A further comparison to these can be made with another early Martin from c1834 [Fig.109] featured in Westbrook's *The Century that Shaped the Guitar*.[573] This instrument, like the Edinburgh Staufer, has a string length of 608 mm with an adjustable neck, slipper headstock and mechanical tuners, and (apart from being between 2 mm to 3 mm deeper and 3 mm longer) has the same body proportions. Its decorations, both to the body and back of the neck are the same as the Martin and the unlabelled guitar [Figs. 122 & 123] but with the addition of a pearl half-button inlay around the top rim, often found on other early Hudson Street Martins.

Fig. 109. Guitar by C. F. Martin, New York c1833/4 [Photo: J. Westbrook].

[573] Westbrook, *The Century That Shaped the Guitar: From the Birth of the Six-String Guitar to the Death of Târrega*, p. 114.

7.2.1 Comparative Table of Staufer and Martin string lengths [Table 2]

Maker	Cat. No.	Year	String no.	String length
G. Staufer	SAM 487	c1805-15	6	634
G. Staufer	SAM 488	c1805-15	6	647.5
G. Staufer	SAM 486	c1805-15	6	611
G. Staufer	SAM 512	c1805-15	6	564
Ertl	SAM 469	1821	6	648
G. Staufer	SAM 513	1829	6	559
G. Staufer	SAM 489	1829	6	645
G. Staufer	EUHCMI 3838	1829	6	608
G. Staufer	SAM 490	1830	6	561
A. Staufer	SAM 674	c1825	6	606.5
A. Staufer	SAM 484	c1845	6	642
A. Staufer	SAM 484	c1845	6	606
A. Staufer	SAM 697	c1840-42	6 + 3	642
A. Staufer	SAM 1059	c1848	6 + 7	646.5
Scherzer	Ophée	1861	6 + 4	641.35
C. F. Martin	Martin Museum	1833-1840	6	611
C. F. Martin	Westbrook	c1834	6	608
Martin & Schatz	Martin Museum	c1834	6	606.5
Unidentified	Corwin	c1834	6	642
Martin & Coupa	Martin Museum	1835	6	609.5
Martin & Coupa	Martin Museum	1850	6	611

Unless otherwise mentioned they are as follows:

Soundboards are of quarter-sawn Spruce (*Pinus spp.*) and usually two-piece and book-matched.

Internal bracing is of spruce, as are the continuous linings.

7.2.2 Staufer and Martin soundboard bracing patterns

Like Staufer, Martin supported the backs of his first American guitars with three transverse braces, and employed the same type of continuous linings. Their soundboards are also supported in the same manner, with three or four transverse braces, two in the lower bout and one or two in the upper. Whereas both the Staufers from 1829, 3838 in Edinburgh [Fig. 24] and i420 featured in Westbrook, have two uniformly transverse braces in the lower bout: one above and one below the bridge; and the Staufer from c1836 in Fig. 126[574], has the lowest below the bridge angled towards the tail on the treble side,[575] it seems Martin preferred slight angling of the lowest brace towards the tail on the bass side [Fig. 126][576] (thereby increasing the flexibility of the soundboard in the area of the bass end of the bridge). Hofmann, on the other hand, presents interior photographs of an earlier Georg Staufer guitar (1818) and a later one by Anton Staufer (1838), which both show three braces in the lower bout: two below the sound hole above the bridge, where the first is straight across and the second angled towards the treble, with a third angled towards the bass below the bridge.[577]

Fig. 110. View of soundboard bar, angled away from bass end of bridge, of Staufer-style guitar by C. F. Martin, New York c1834 [Photo: R. Corvin].[578]

[574] This instrument is in the Musikhistoriska Museet, Stockholm [cat. 29].
[575] Westbrook, *The Century That Shaped the Guitar: From the Birth of the Six-String Guitar to the Death of Târrega*.
[576] This feature can also be seen in the X-Ray of the Martin Staufer-style guitar in Westbrook, *The Century That Shaped the Guitar: From the Birth of the Six-String Guitar to the Death of Târrega*, p. 145.
[577] Hofmann, *Stauffer & Co., the Viennese Guitar of the 19th Century*, p. 87.
[578] Robert Corwin, earlymartin.com (2009) [Accessed 28 December 2011].

Fig. 111. Soundboard bracing, the lowest bar angled away from bass end of bridge, of a Staufer guitar, Vienna c1836. Stockholm, Musikhistoriska Museet, No. 29 [Photo: Heck].[579]

A deviation by Martin from Staufer's standard bracing pattern, apparently more consistently applied, is the addition of a longitudinal bar or buttress, housed in and extending from the neck block in the same direction as the fingerboard extension, to provide support in this area of the soundboard [Fig. 128].[580]

[579] Thomas F Heck, 'Stalking the Oldest Six String Guitar', *Gendai Guitar* 9, no. 3 (1975).
[580] The buttress is present in the Martin in Martin's museum, the Martin featured in Westbrook's *The Century That Shaped the Guitar: From the Birth of the Six-String Guitar to the Death of Târrega*, and in Corwin's unlabelled guitar, giving further creedence to the possibility the latter is in fact a Martin. Anton Staufer's six-single-string guitar, 4656, KHM SAM 484, has a rounded low-profiled spruce support re-enforcing the soundboard centre seam either side of the sound hole. While running in the same direction as the longitudinal brace present in the upper bout of the Martin, it is noticeably of smaller proportions and not designed for that same specific purpose.

Fig. 112. Longitudinal bar, parallel to neck extension, under soundboard of Staufer style guitar by C. F. Martin, New York c1834 [Photo: R. Corvin].[581]

Staufer claimed that his design for an adjustable neck with an elevated fingerboard extension allowed the soundboard greater vibration in the upper bout. Martin's addition of a buttress here, while useful in giving support to a fingerboard extension flush with the soundboard, would also have had a dampening effect, thereby changing the instrument's resonance in this area. While Staufer's design was adopted by a number of Viennese makers, Francesco Barthioli in his method published by Diabelli in 1832,[582] maintained that the effect of a floating fingerboard on extra resonance in the upper bout was minimal, and argued the case for a fixed neck and flush fingerboard. So while Staufer's adjustable neck and elevated floating fingerboard enabled easy regulation of string height and eased access to higher playing positions, the benefit of a soundboard that vibrated more freely in the upper bout was not appreciated by all.

[581] Robert Corwin, earlymartin.com (2009) [Accessed 28 December 2011].
[582] Francesco Barthioli, *Guitare-Flageolett-Schule Mit Bemerkungen Über Den Guitarebau* (Wien: Anton Diabelli & Comp., 1832).

Fig. 113. Guitar made by C. F. Martin, Hudson Street address. Private collection [Photo: R. Corvin].[583]

The guitar in Figure 130, made while Martin was still resident at Hudson Street in New York, appears to have a larger body more proportionally akin to the guitars of Anton Staufer, whereas most of his first instruments stylistically echo Georg Staufer's work of the late 1820s to early1830s. Unusually, it features a slotted headstock, equipped with three-a-side mechanical tuners, rather than the usual Staufer figure-of-eight peg head (with friction pegs) or the Persian slipper headstock (with six-single-sided mechanical tuners). According to Robert Corwin that although previously thought to have been a later modification as the Persian slipper had commonly been considered a definitive characteristic of all the earliest Martins, the slotted headstock on this particular guitar is in fact an original feature. This instrument can be compared with another Martin made

[583] Robert Corwin, earlymartin.com (2009) [Accessed 28 December 2011].

at Hudson Street during the same period [Fig. 131].[584] Both have the same proportions and decorations, however the one in Figure 131 is currently fitted with a slipper headstock, which is now thought by Oster and Corwin [and others] to be a later addition, probably replacing an original slotted headstock.

Fig. 114. Guitar made by C. F. Martin, Hudson Street address. Private collection of Fred Oster.

The high level of decoration, exemplified by the half-button abalone border inlays found on these instruments and on others from Martin's early New York period, suggests that these particular instruments were built as presentation models or as special orders, and it is for that very reason that a higher proportion of these exist today rather than the plainer guitars he also made.

All of these first Martins had soundboards that were ladder-braced, but around 1843, in what was to become a major departure for him from that design, Martin introduced two new soundboard-bracing patterns: firstly, a variation of the fan-braced design common to Spanish guitars,[585] and secondly an X-bracing system,[586] where the braces intersect in the lower bout some 30 mm from the trailing edge of the sound hole.[587] His fan-braced instruments have three, although on occasion five braces, whereas most Spanish guitars typically feature between five and seven.

[584] This instrument [Fig.131], previously in the Chinery collection, is now in the private collection of Fred Oster, Philadelphia.
[585] See Chapter 6.1 of this thesis, 'Soundboard Bracing'.
[586] See chapter 6, *Nineteenth Century American Guitar Design*, where Dick Boak gives July 1843 as the first X-braced size one Martin, made for Madame de Gôni.
[587] The X was usually an inch (25mm) to an inch and a quarter (31mm) behind the sound hole, but has moved in its position over the years is currently, unless on a model replicating the earlier placement, about two inches (50mm) from the sound hole.

Fig. 115. Martin fan-bracing pattern, 1840s. Private collection of Fred Oster.

The X-braced design, without being overly heavy, provides good support to the soundboard in the bridge area and was in standard use on his instruments by the 1860s. X bracing was to become, later in the twentieth century, a key element in the structural make-up of the steel-strung acoustic flat top guitar.

When first in New York, Martin's main connections to Europe were with Markneukirchen, but it is probable that he was aware of developments in guitar design also taking place in Vienna, and considering his former association there, new ideas emanating from the Staufer workshop. Besides having been party to design innovations when in Staufer's employ, it is possible too that he was aware of the early example of Georg Staufer experiment with conventional soundboard bracing, present in a guitar from 1809.[588] In this instance Staufer deviated from the commonly accepted ladder-bracing pattern by adding two braces that ran longitudinally at an angle from the outer

[588] See chapter 2, p. 12 in this thesis.

edges of the transverse bar above the sound hole to meet the underside area of the bridge location [Fig. 133].

Fig. 116. Experimental bracing pattern on guitar by Johann Georg Staufer, Vienna 1809. Private collection [Photo: Timmerman & W. Gans].

The same air of experimentation by Martin and his fellow German guitar makers can be seen in the development of X-bracing as a way to reinforce the soundboard. This form of bracing was not standardised at first and the position of the intersection of the braces [where they form the X] varied, not only in distance between the sound hole and bridge on a, but sometimes by also having a placement offset from the central axis, as found for example in a guitar by Schmidt & Maul from 1847 [Fig. 134].

Fig. 117. View of X-bracing pattern in a guitar by Schmidt & Maul, New York 1847 [Photo: Robert Corwin].[589]

The X here, is formed under the treble side of the bridge as an extension of one of the radial braces crossing an angled lower brace, whereas in a Martin from the same period, the X is positioned centrally, but with a radial brace either side emanating from the sound hole [Fig. 135].

[589] Robert Corwin, www.vintagemartin.com/xbraces.html [Accessed 3 January 2012]. Guitar by Schmidt & Maul, 1847, USA. The small offset X-bracing pattern on the treble side is formed where one of the main radial brace intersects with a smaller 'harmonic' bar.

Fig. 118. View of X-bracing pattern in combination with radial braces, in a guitar by Martin & Coupa (undated), New York 1840s [Photo: Robert Corwin].[590]

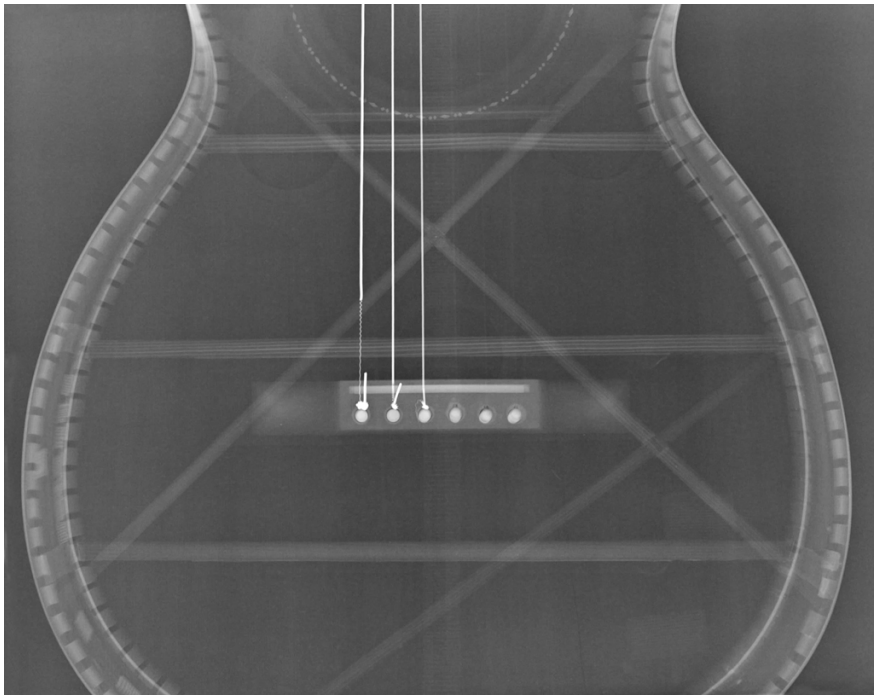


Fig 119. View of bracing pattern, where a smaller X is formed from the intersection of the lower brace in the treble side on the main X bracing. Martin (undated), New York 1840s. Private collection [Photo: The Unofficial Martin Guitar Forum].

[590] Robert Corwin, www.vintagemartin.com/xbraces.html [Accessed 3 January 2012]. Martin & Coupa guitar, 1840s (undated). This instrument has a main central X-bracing pattern, with a smaller X formed below the bridge on the treble side where the main pattern intersects with a smaller 'harmonic' bar.

According to Corwin the following are known variations in bracing patterns, both with that of the X and fan design, to have been found in early Martin and Schmidt & Maul guitars:

- The half fan/half X on the Lark St., 1845, Schmidt & Maul, and on a hybrid-X Martin.
- The fan with a tone bar below the bridge plate crossing the treble blade of the fan, forming a small X on the treble side of an 1847 Schmidt & Maul.
- A large X brace with the tone bar below the bridge plate crossing the treble side of the X to form a second smaller X.
- The double X on Fred Oster's Martin illustrated in the new Longworth.
- The diamond around the bridge plate on the Martin that appeared on the Martin Guitar Forum.[591]

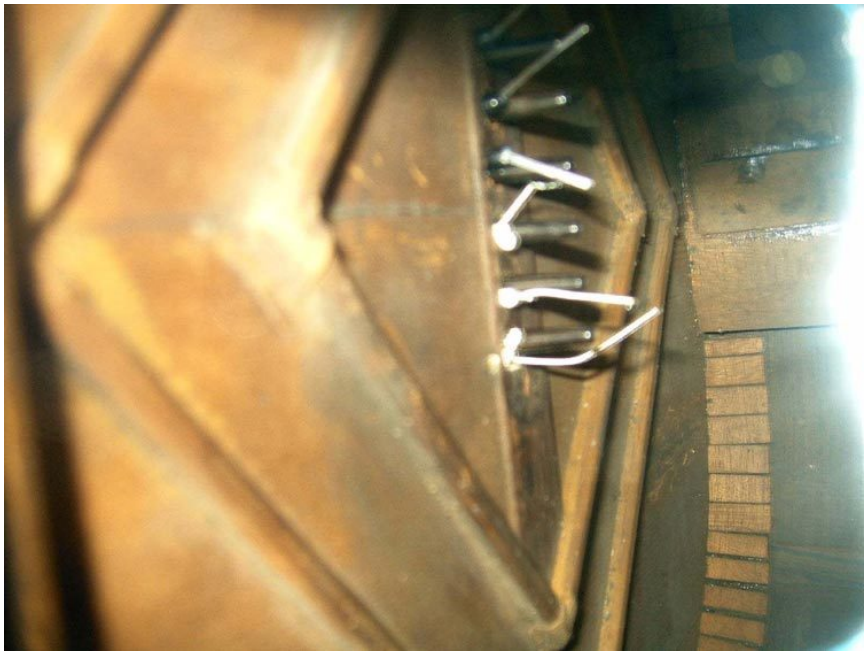


Fig. 120. Diamond-bracing pattern on guitar by C. F. Martin & Co., Nazareth (1860s), [Photo: The Unofficial Martin Guitar Forum].[592]

[591] Robert Corwin, www.vintagemartin.com/xbraces.html [Accessed 3 January 2012]. The diamond-bracing pattern, thought to be original, is unusual and has not been found on any other Martin guitar.
[592] 'Martin Bracing Library', in *The Unofficial Marrtin Guitar Forum* (2009). [Accessed 29 March 2013]. http://theunofficialmartinguitarforum.yuku.com/topic/847/MARTIN-BRACING-LIBRARY?page=20#.TwLWx0qqPZN

Between the mid 1840s and late 1850s Martin, Schmidt & Maul, Schatz and Stumcke all moved away from ladder bracing, making guitars that employed variations of either X, or fan bracing designs. While the barring of the Staufer from 1809 could be considered either a variation on a fan design, an early development of an X, or simply experimental, it was though an early departure from the usual bracing pattern generally found on Staufers and other Viennese guitars.

7.2.3 Martin in the mid-nineteenth-century

With Martin's move to Cherry Hill and his concentration on making guitars full-time, other design characteristics besides soundboard bracing patterns began to evolve. Most noticeably the width of the upper bout narrowed and the shape of the bridge changed, both from the moustache style associated with Staufer, and the oval shield found on many early New York Martins, to a rectangular design that usually featured chamfered 'pyramid-like' ends carved on the treble and bass side. Bridges appeared in both ebony and ivory, as either the 'tie-on' design favoured by makers of the Spanish-style guitar (where the strings are tied on to the bridge), or the 'pin' type (where the strings pass through the bridge into the soundboard and are held in place with [bridge] pins), a design commonly used in Vienna and its neighbouring European territories.

While it might seem that Martin guitars in the 1840s adopted a more Spanish style (with fan-bracing internally), in practice Martin was using X-bracing in his manufacture equally, and many of his fan-braced instruments were fitted with pin-bridges. Although most of his instruments were now made with a neck fixed to the body (usually by a dovetail, although sometimes with a Spanish heel) the screw-adjustable and detachable design continued to be offered as an option, even up until 1898.[593]

Even though narrowing of the upper bout appeared to become standardised on Martins from around this time, and as such was a move away from the figure-of-eight *plantilla* typically associated with Staufer, two extant instruments (one from the mid 1850s, the other from 1860) seem to buck this trend. Generally referred to as a 'Renaissance-style

[593] Johnston, Boak, and Longworth, *Martin Guitars: A History*, p. 6.

guitar' by Martin historians [Figure 138],[594] the instrument features an upper bout whose shape directly echoes the sloping shoulders found on the later form of guitar made by Georg Staufer [Figure 28]. In comparison, both instruments feature upper bouts cut-away to provide easier playing access to the highest part of the fingerboard, and have ribs that are scalloped from soundboard to back, following the the angle of the neck's conical heel.

Fig. 121. 'Renaissance-style' guitar by C. F. Martin, Nazareth c1840 [Photo: C. F. Martin & Company Archives].

[594] Johnston, Boak, and Longworth, *Martin Guitars: A History*, p. 13. This guitar is in the Martin museum in Nazareth, and is referred to as a 'Renaissance-style guitar' there.

The sloping shoulder design was used again in the ten-string guitar (four extra bass) made by Martin in c1860 [Fig. 140].

Fig. 122. Ten-string guitar (four extra bass) by C. F. Martin, Nazareth c1860 [Photo: Frank Ford].

This instrument has a distinctive peg head, fashioned from two Staufer-inspired Persian slippers echoing each other and forming a lyre shape in unity, which is then equipped with friction pegs rather than the mechanical tuners usually found with the slipper design. The width of its lower bout and the length of its body make it comparable to a size 1 guitar (Martin's then largest), whose soundboard at that time was commonly X-braced. This particular instrument though, has an altered fan-bracing design [Fig. 141], with additional braces reminiscent of the diamond pattern present in the Martin from the 1860s [Fig. 137].

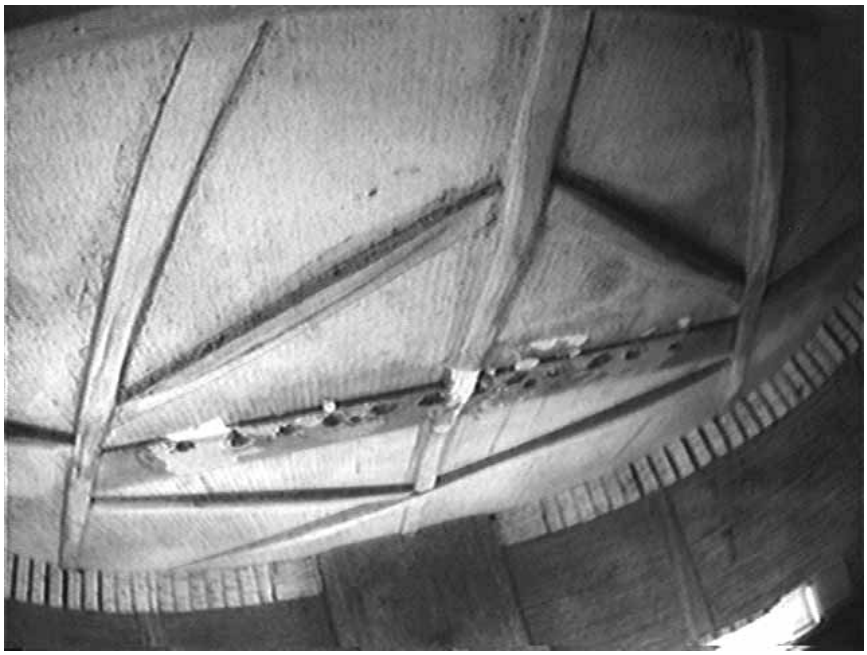


Fig. 123. Internal view on soundboard bracing on ten-string guitar by C. F. Martin, Nazareth c1860 [Photo: Frank Ford].

Visually, with its sloping shoulders and double Persian slipper peg head, it might seem to reflect the influence of Staufer, and although strung in the same way as the *bassgitarren* made by Anton Staufer and Scherzer during the mid-nineteenth century, it is smaller and more lightly constructed. This Martin instrument is likely to be one of four identified in Martin's ledgers ordered between September 1859 and May 1860 by Olaf Ericson, a music teacher of Richmond, Virginia.[595] They were in all probability commissioned for his students, indicating that Ericson had a particular interest in the musical culture of the ten-single-string guitar (popular in central Europe during the mid-nineteenth century), and that his pupils, who were after all investing in the acquisition of these specialist instruments, respected his influence as a teacher. No other extant Martin guitars with extra bass strings are known from the date of this order [1860] until the turn of the twentieth century when examples with the larger 000 size body begin to appear from around 1902. Although these later instruments were usually fitted with

[595] C. F. Martin Ledgers, *Entries*, 26 September 1859, 21 December 1859, January 5 1860, 16 May 1860. The instruments are described as both 'ten-string' and 'twin-neck' guitars, priced at $32 each in 1859, rising to $35 each in 1860; Johnston, Boak, and Longworth, *Martin Guitars: A History*, p. 13.

four extra basses, one extant example from that year features twelve extra bass strings, suggesting a full chromatic octave descending below *E*.[596]

Fig. 124. (Harp) Guitar 000-21 by C. F. Martin & Co., Nazareth 1902 [Photo: C. F. Martin & Company Archives].

Together, from the mid 1830s, Schmidt & Maul in New York, Schatz and Stumcke in Boston,[597] and Martin himself, represented a group of North American makers demonstrating a high level of craftsmanship embodying Viennese guitar design that reveal the direct influence of the Staufers.

The geographical axis of Boston, as the commercial centre of operations for Schatz and Stumcke, and New York for those of Schmidt, Maul, and Martin [with his depot there],

[596] Johnston, Boak, and Longworth, *Martin Guitars: A History*, p.46. These instruments were X-braced unlike the ten string guitars made in 1859/60.
[597] Ayars, *Contributions to the Art of Music in America by the Music Industries of Boston, 1640 to 1936.*, Appendix: IV, F., Ayars records Schatz's registered addresses between 1845 and 1851.

indicates that these makers' respective businesses were tailored to meet the demands of clients living in the population centres of America's north-eastern seaboard that also included Philadelphia to the south. Although New York may have been considered the focal point for musical culture in the first half of the nineteenth century, Martin's accounts show that from 1850 with the death of Coupa (his then agent there) he expanded his own client base by supplying also to dealers and music teachers in the southern, central and western United States, capitalising on the burgeoning rail, river, canal and coastal steamer transportation systems. In 1850 Martin was producing around 250 guitars a year,[598] with orders being shipped to Baltimore and Washington, Richmond and Norfolk in Virginia. Martin's ledgers reveal the growth of his enterprise at this time:

> But the Ohio and Mississippi River valleys represented Martin's most important new market. His ledger for the early 1850s, for example, shows a great expansion of business, first through such commercial centres as Louisville, Cincinnati and St. Louis, and then, by the middle and later 1850s, north to Columbus and Cleveland, Ohio, and Chicago, and south to Nashville, Memphis and New Orleans, all areas served by the Adams Express.[599]

7.3 Ashborn and Tilton

Measured in terms of manufacturing numbers during the 1850s, two other significant American guitar makers besides Martin and his colleagues were James Ashborn and William B. Tilton. Between April 1851 and December 1855, Ashborn, in his Connecticut factory produced some 3,152 guitars (an average of 54 per month), far higher than Martin's production numbers during the same period.[600] He supplied exclusively to two large New York music houses, William Hall & Son and Firth, Pond & Company, which unlike Martin, who besides having a relationship with large dealerships such as Horace Waters in New York and the Oliver Ditson Company in

[598] US Censor, 1850, Manuscript Returns, Northampton County, Pennsylvania, National Archives, Washington, D.C.
[599] Gura, *C.F. Martin and His Guitars, 1796-1873*, p.96.
[600] Philip F Gura, *The Crossroads of American History and Literature* (University Park: Pennsylvania State University Press, 1996). In spite of Ashborn's factory only existing from the late 1840s to around 1856, an average production of 54 guitars a month, making 648 a year, far outstripped Martin's which was listed in the United States Census of 1860 as only 33 a year.

Boston,[601] also supplied to smaller clients. In most cases Ashborn's instruments were stamped only with the name of the music house to which he supplied and as a maker he remained anonymous,[602] whereas the name *Martin* associated its clients with a handcrafted product from a family-based operation. Originally from England, with a background in engineering, Ashborn set up what could be considered the first factory that mass-produced guitars in North America. Although his enterprise only lasted for a relatively short time (the late 1840s to around 1856), his form of manufacture allowed the construction of large numbers of quality instruments, which could be offered at a lower price than his main competitor Martin, and which at the same time enabled his distributers to increase their profit margin. To a large extent his production was mechanised and his workforce's labour divided into specialist tasks. While Ashborn's guitars were very well made with fine materials, they show none of the obvious Viennese influence that was to some extent still present in some Martin instruments.

[601] *Musical Courier* (New York) See Peter Adams transcription of 'History of Oliver Ditson Company' rept. in .*The Musical Courier*, vol. 70 #8 (Feb 24 1915), p. 8. [Accessed 10 February 2012], http://peterhadams.com/history_of_oliver_ditson_company.htm#_ftn1

[602] This was not exclusively the case and the author would like to thank Darcy Kuronen, Musical Instrument Curator at the Museum of Fine Arts, Boston, for bringing to his attention the addition of a second stamp on the Ashborn guitar in their collection with the maker's name.

Fig. 125. Style 2 guitar by James Ashborn, Wolcottville, Ma. c1850s [Photo: MFA, Boston].

Tilton, on the other hand, did market both his instruments and his improvements under his own name. He first registered a patent [No. 8338] on 2 September 1851, while living in Carrellton, Alabama, after which in 1853 he moved to New York and began manufacturing guitars in a large factory financed by the businessman James E. Smith.[603] Outwardly, Tilton's guitars bear no immediate resemblance to the Viennese school either, however one of the devices he patented: the addition of an interior dowel running from end block to neck block, is the an improvement remarkably similar to one first conceived of by Georg Staufer and implemented in the production of *bassgitarren* by Anton Staufer and Scherzer. As with the Staufer design, the rod was intended to provide greater structural integrity to the body of the instrument, while at the same time allowing the soundboard to vibrate more freely. Tilton's addition to this improvement appears to have been that by reducing the size of the internal blocks he diminished the

[603] David K. Bradford, 'William Tilton', *The Unstrung History of the American Guitar: The Guitar and 19th Century American Music* (2009), http://www.19thcenturyguitar.com.

area deadened by their attachment, thus allowing even freer soundboard movement. He also patented a further improvement to this design that incorporated the use of a tailpiece and lighter soundboard bracing.[604] Besides initially making guitars featuring his improvements, Tilton also retrofitted these devices to those from other manufacturers. He registered two more patents for guitar improvements in 1854 and 1856 respectively, but then went on to sell the rights to all three. Zogbaum & Fairchild of New York first acquired them around 1860, and began producing guitars under their own name, but also continued to stamp them with Tilton's. Although not directly mentioned in Tilton's patents, many of his guitars feature soundboards with the grain running diagonally as opposed to the conventional longitudinal direction. [Figures 144 a-b.] This is intentional, and it is probable that this was an extension of his theories regarding unhindered soundboard vibration expressed in his patents. Later in the decade John C. Haynes, then head of Oliver Ditson's music division, secured the rights to the 1856 patent and began manufacturing guitars that incorporated it, using the name *Tilton* as a major selling point.[605]

Fig. 126 a. Tilton guitar produced by Zogbaum & Fairchild, 1860s. Private collection of Fred Oster.[606]

[604] Tilton's patents are further outlined in t chapter 5 *Nineteenth Century North American Designs* (Internal rod and tailpiece), and in chapter 9, *Strings, Advertising and Tailpieces* (tailpiece], found in this thesis

[605] Gura, *C.F. Martin and His Guitars, 1796-1873*, pp. 127-133; David K. Bradford, Tilton guitars sold under the Haynes name were made by Swedish luthier Pehr A. Anderberg.

[606] Figs. 144 a-d. Tilton guitar produced by Zogbaum & Fairchild, 1860s. Note the diagonal direction of the grain of the soundboard on this model, an improvement Tilton specified.

Fig. 126 b. Tilton guitar produced by Zogbaum & Fairchild, 1860s. Private collection of Fred Oster.

Fig. 126 c. Detail of Tilton guitar produced by Zogbaum & Fairchild, 1860s. Private collection of Fred Oster.

Fig. 126 d. Patent stamp on guitar by W. B. Tilton, 1850s. Private collection of Fred Oster.

As distributers of the guitar, the large music houses played an important role in the deployment of its culture. With the exception of smaller firms such as Martin and certain independent makers, it was through major retailers that the work of certain makers reached the public. In New York these major retailers include William Hall & Son, Firth, Pond & Company, and J. W. Foote, while John C. Haynes, the John Church Company and Lyon & Healy all emerged from Ditson's franchises in Boston and Philadelphia. Some firms, like that for instance of Haynes, created their own guitar making facilities, but it was still through individuals they employed, such as the Swedish guitar maker Pehr Anderberg,[607] or in the case of Lyon & Healey their factory superintendents and designers, George Durkee and Walter Kirk, that music houses were initially supplied with the instruments and designs that bore the hallmarks of the evolution that was current in nineteenth-century American guitar making technology.

7.4 The Guitar with Extra Bass Strings in America

Georg Staufer's ingenuity and the air of experimentation that surrounded much of his work, was continued in the approach of his pupil Friedrich Schenk, whose invention of the *bogengitarre* in the mid-nineteenth century was central to the form of the Symphony Harp Guitar that became popular in North America towards the end of that century.[608]

7.4.1 Schenk

Georg Staufer's ingenuity, and the air of experimentation that surrounded much of his work, was continued in the approach of his pupil Friedrich Schenk, whose invention of the *bogengitarre* in the mid-nineteenth century was central to the form of the Symphony Harp Guitar that became popular in North America towards the end of that century.

[607] As mentioned in this thesis in the chapter, *Nineteenth Century North American Strings and Design,* the Swedish-born luthier Pehr A. Anderberg, in the 1860s, had been working for Charles F. Bruno in New York, moving away to Mount Vernon, New York in about 1870 to set up his own business. Bruno had in the 1830s worked as bookkeeper to C. F. Martin, and, for a period of about a year, they had been in partnership, evidenced by their joint authorship on the labels of Martin guitars.
[608] See Chapter 4.2.7 for further information on Schenk and his instruments.

Schenk (c1800-c1865), after serving his apprenticeship, set up independently around 1835 or 1836, initially making guitars with extra basses after the Staufer form.[609] Later, at the end of the 1840s, Schenk developed the ten-string *bogengitarre* (four extra basses), which was highly experimental in its design. The name *bogengitarre*, literally meaning bowed guitar, is derived from the construction of a hollow curving, or bowed, arm extending from the body on the bass side of the fingerboard, that acted as an additional sound chamber. This extension ended in a round, hollow headstock, to which was mounted a plate fitted with metal tuners. Six strings ran over the fingerboard to the bridge, while the additional bass strings passed over the extension. The design was copied by Schenk's Viennese contemporary, Gabriel Lemböck, and again later, in the early twentieth century, finding itself in vogue with a resurgence of interest in Viennese guitar culture taking place in the prominent guitar clubs of Southern Germany, was then reproduced by the makers Karl Müller and Hans Raab amongst others.[610]

According to Timmerman, at the same time in Northern Italy, the concert guitarist, maker and guitar teacher, Luigi Mozzani (1869-1943), had been so impressed with a Schenk Lira terz-guitar, which in 1906 had come in to the possession of his friend, the painter and guitarist, Fritz Buek, he decided to copy it.[611] Schenk's original instrument, with both left and right hollow arms coming together in to a single headstock, and which was first presented in Vienna at the *Ausstellung österreichischer Gerwerbeerzeugniss* in 1839,[612] was the inspiration for the various guitars with extra bass strings and hollow-armed acoustic chambers that Mozzani then started to produce.

[609] See Chapter 4.2.7 for further information on Schenk and his instruments.
[610] See Chapter 5.5.
[611] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age*, p. 129; Greg Miner states that it was on a trip to Vienna in 1909 that Mozzani first came in to contact with Schenk's work. *Harp Guitars* [Accessed 31 January 2012], http://www.harpguitars.net/history/mozzani/mozzani1.htm
[612] Prochart, *Der Wiener Geigenbau Im 19. Und 20. Jahrhundert*, p. 143.

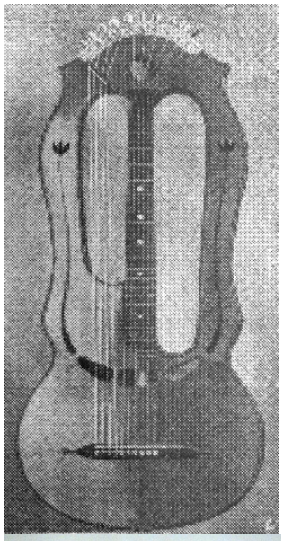


Fig. 127 a

Fig. 127 b

Fig. 127 c

Fig. 127 a. *Double-arm bogengitarre* by Friedrich Schenk, Vienna c1839 [Photo: Harp Guitars].[613]
Fig. 127 b. *Chitarra lyra a due bracci* by Luigi Mozzani, Cento, c1910-20 [Photo: Harp Guitars].[614]
Fig. 127 c. *Double-arm bogengitarre* by Friedrich Schenk, Vienna, adapted and repaired by Luigi Mozzani, Münchner Stadtmuseum [Photo: Harp Guitars].[615]

Figures 127 a to 127 c compare a *double-arm bogengitarre* by Schenk; the model to first inspire Mozzani, with the latter's *chitarra-lyra*, and an original instrument he adapted and repaired. Mozzani also made instruments after Schenk's *single-arm bogengitarre* design. Although *chitarra lyra a due bracci* is used to describe Mozzani's model and *lira terz-guitar*, these are terms referring to the visual appearance of the

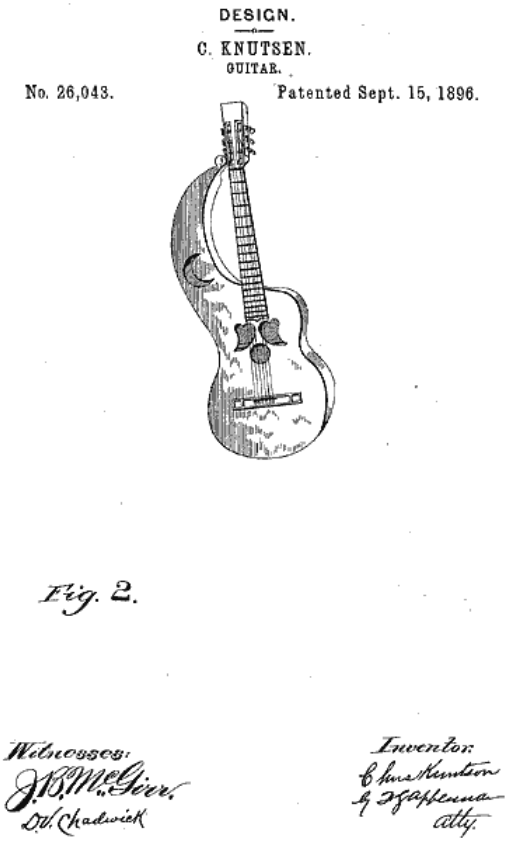
[613] *Double-armed bogengitarre* by Friedrich Schenk, c1839, Vienna. Harp Guitars, http://www.harpguitars.net/history/org_images/form3/schenck-stevens.jpg [Accessed 31 January 2012].
[614] *Chitarra lyra a due bracci* by Luigi Mozzani, Cento c1910-20. http://www.harpguitars.net/history/mozzani/mozzani4.htm
[615] *Double-armed bogengitarre* by Friedrich Schenk, Vienna, adapted and repaired by Luigi Mozzani, Münchner Stadtmuseum. http://www.harpguitars.net/history/mozzani/mozzani4.htm

instruments, and are not, associating any descent on their part from the lyre guitar. Invented in the third quarter of the eighteenth century and particularly popular in France, the lyre guitar, with a scale length of 490 mm, was more akin to the harp lute or guittar than the gut-strung guitar.[616] With its two wings being decorative rather than having the function of the one-arm, or continuous and two-arm, acoustic chamber of Schenk's *bogengitarren*, it is, unlike that instrument, designed to be played in the upright position,

7.4.2 Knutsen

Although at the end of the nineteenth century the far northwest of America was geographically remote from the contemporaneous guitar culture in Southern Germany or Mozzanni's Italian workshop, as well as from the music scene that had first developed around America's Eastern seaboard, it was there that Chris Knutsen began making instruments with both extra bass strings and hollow-arm acoustic chambers that owe their form to Schenk's *bogengitarre*. Knutsen (1862-1930), christened Johan Christian Kammen,[617] was a Norwegian immigrant who arrived in North America in 1866. He first settled in Minnesota, but in 1895 moved to Port Townsend in Washington State, where he began making guitars. He received his first patent (US pat. No. 26,043) [Fig. 146] for a 'one–armed' guitar in 1896, and in 1898 his second patent (US pat. No. 28,300) [Fig. 147], a variant on the first but also incorporating a design to support additional bass strings.[618]

[616] Mantanya Ophee, 'Lyre-Guitar', in *Grove Music Online*; Greg Miner, 'Lyre Guitars and Related Instruments', www.harpguitars.net.
[617] Jean Cammon Findlay, 'What's In a Name', in *The Knutsen Archives*. Harp Guitars [Accessed 30 January 2012], http://www.harpguitars.net/knutsen/what'sinaname.htm
[618] Knutsen originally applied for this patent No. 28300 on 17 May 1897, it was granted 15 February 1898. The first patent, No. 26043, was applied for on 23 July 1896 and granted on 15 September 1896. The English patents for these same instrument designs, respectively numbered as 19232 and 19233, were applied for on 19 August 1897 and both received on 27 November 1897. The Canadian versions of the same were applied for at the same time. See http://www.harpguitars.net/knutsen/patents.htm.


DESIGN.

C. KNUTSEN.

GUITAR.

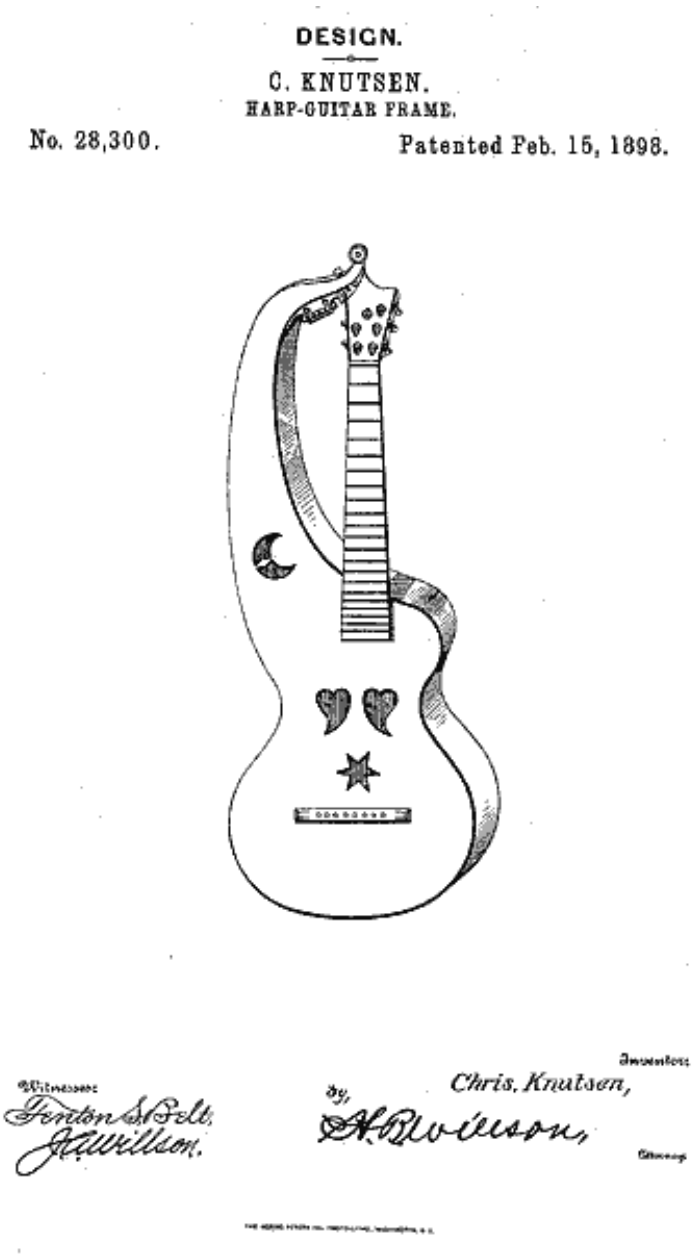
No. 26,043. Patented Sept. 15, 1896.

Fig. 2.

Witnesses:
J. B. McGirr.
D. Chadwick

Inventor:
C. Chris Knutsen
by Dyrenforth & Dyrenforth
Atty.

Fig. 128. US. Pat. 26,043. Guitar by Chris Knutsen, Port Townsend, Washington State, 1896.


DESIGN.

C. KNUTSEN.

HARP-GUITAR FRAME.

No. 28,300. Patented Feb. 15, 1898.

Witnesses: Fenton S. Belt, H. Willson.

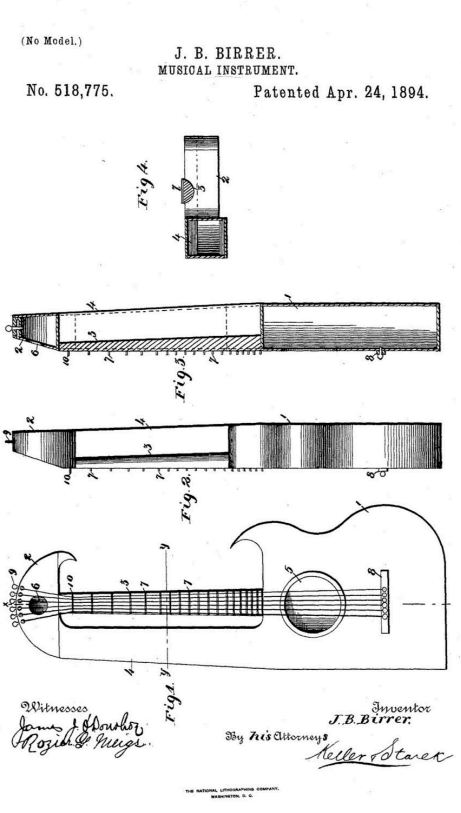
Inventor: Chris. Knutsen, by H. Willson, Attorney.

Fig. 129. US. Pat. 28,300. Harp-Guitar Frame by Chris Knutsen, Port Townsend, Washington State, 1896.

The exclusive rights to these patents were granted for fourteen years. Unfortunately in one instance, from an act of deception, this time period worked unfavourably for Knutsen: one month after receiving his first patent, Ernest Livermore, one of the witnesses the patent, filed for a design that was granted on 22 December 1896 (US pat No. 26,424). It was identical to Knutsen's except that it related to a mandolin, effectively preventing Knutsen from making any one-arm mandolins until 1910.

Although instruments with extra theorboed bass strings (such as the harp-lute) were in use in Sweden, from the eighteenth century, there is no particular history in the years immediately preceding Knutsen's migration to America, of Schenk's *bogengitarre* there or in Knutsen's neighbouring Norway. Yet the resemblance of the extended acoustic chamber, characteristic of Knutsen's hollowed-arm instruments, to those of Schenk is undeniable [Fig. 62].

Knutsen was not the only American at this time making instruments that incorporated hollow-arm acoustic chambers. Predating Knutsen by two years, John B. Birrer was awarded a patent [24 April 1894] for an instrument that is also remarkably similar to the design Schenk's *bogengitarre*, not only in the shape and function of its additional acoustic chamber, but also in the manner of its tuning mechanism [Fig. 149].


(No Model.)

J. B. BIRRER.

MUSICAL INSTRUMENT.

No. 518,775. Patented Apr. 24, 1894.

Fig 4.

Fig 3

Fig 2.

Fig 1.

Witnesses

Inventor

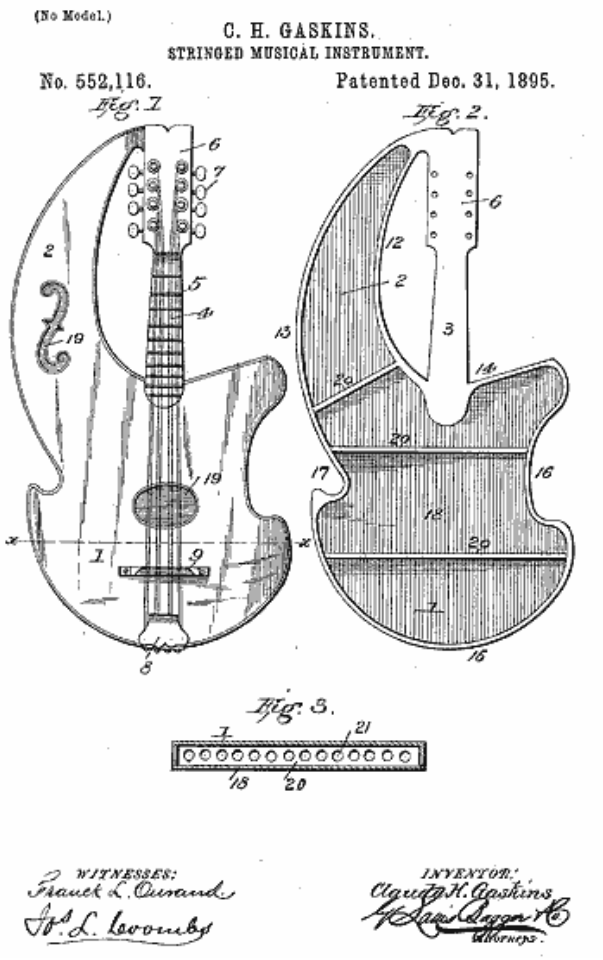
J. B. Birrer.

By his Attorneys

Keller & Starck

Fig. 130. US. Pat. 518,775. Musical Instrument by John B. Birrer, Newtown, Kansas 1894.

Then a year later in 1895, Claude Gaskins received a patent for a mandolin also featuring a hollow-arm [Fig. 150].[619]


(No Model.)

C. H. GASKINS.

STRINGED MUSICAL INSTRUMENT.

No. 552,116. Patented Dec. 31, 1895.

Fig. 1.

Fig. 2.

Fig. 3.

WITNESSES:

INVENTOR:

Fig. 131. US. Pat. 552,116. Stringed-Musical Instrument by Claude H. Gaskins, Shamokin, Pennsylvania 1895.

In 1898/9, after producing his original one-arm guitars and one-arm harp guitars, Knutsen developed his Symphony Harp Guitar model.[620] Although awarded the patents

[619] One of these instruments, built for Gaskins by the Martin guitar company in 1901, is on display in their museum. There might appear to be a conflict over patent rights between Gaskins and Livermore. The most likely explanation as to why both patents are allowed within a year of one another is that Livermore's was filed as a visual design, while Gaskin's as a utility design. It is also quite possible that both Livermore and Knutsen, living in the North West in Washington State, were unaware of Gaskin's design, who himself was based in Pennsylvania in the East.

[620] George T. & Daniel L. Most Noe, *Chris J. Knutsen, from Harp Guitars to the New Hawaiian Family* (Washington: Noe Enterprises, 1999); Noe, *Chris J. Knutsen, from Harp Guitars to the New Hawaiian Family*., p. 19. A Photo, dated 1900, is printed here of Knutsen, his wife and two daughters, where

for these early instruments, there is some question as to whether Knutsen made the first versions or sub-contracted the work out to his colleague Otto Anderson. In 1900 Knutsen moved to the larger township of Tacoma, and then in 1906 to the city of Seattle, at which time he formed the Harp Guitar Company with John W. Bourn, a representative of the W. J. Dyer & Brother Company of St. Paul, Minnesota. From this time onwards Dyer marketed the Symphony Harp Guitar, under license from Knutsen but made by the Larson Brothers. However, there is some evidence to suggest that from as early as 1898, and prior to the Larsons making these instruments, Knutsen had formed a relationship with Dyer, and may well already have been supplying him with the model directly.[621]

Fig, 132.

Fig. 133

Fig. 132. Label from Knutsen Harp Guitar c1906 [Photo: Harp Guitars].
Fig. 133. 11-string harp guitar by Chris Knutsen, Tacoma, 1904-1906. Private collection [Photo: Harp Guitars].

husband and wife are both holding Symphony style harp guitars, obviously manufactured before that date.

[621] Greg Miner, *The Knutsen Archives*, Harp Guitars [Accessed 2 February 2012], http://www.harpguitars.net/knutsen_images/porttownsendad.gif. Miner points to a flyer from Knutsen's years in Port Townsend, which shows his connection to Dyer, and pre-dates Larson-made Symphony Harp Guitars.

7.4.3 The Larson Brothers

William James Dyer was the head of a musical merchandise store that included his brother Charles Edward, and later his other brothers Samiel H. and David Martyn. Dyer sub-contracted to the Chicago-based string instrument makers Carl and August Larson,[622] although their names did not appear on Dyer instrument labels. The Larson brothers were Swedish immigrants, with Carl coming first to America in 1886, followed soon after by his brother, August. The brothers' first employment was with Edwin J. Cubley at his drum factory at Ravenswood, Illinois, where they remained until it was destroyed by a fire in 1893. According to Robert Hartman, they then worked at the Maurer Mandolin Company, which August with two additional shareholders, purchased in 1900 [later the Larsons were registered as the sole shareholders and employees, evidently having bought the other parties out].[623] All Larson Brothers' instruments (not only those made under contract to Dyer) were marketed with brand names and not labelled with their family name. As well as W. J. Dyer (who they built for exclusively) these include Euphonon, Prairie State, W. M. Stahl and Stetson guitars, and occasionally instruments for Leland, the Southern California Music Company, Charles Bruno, H. F. Meyer and Regal.[624]

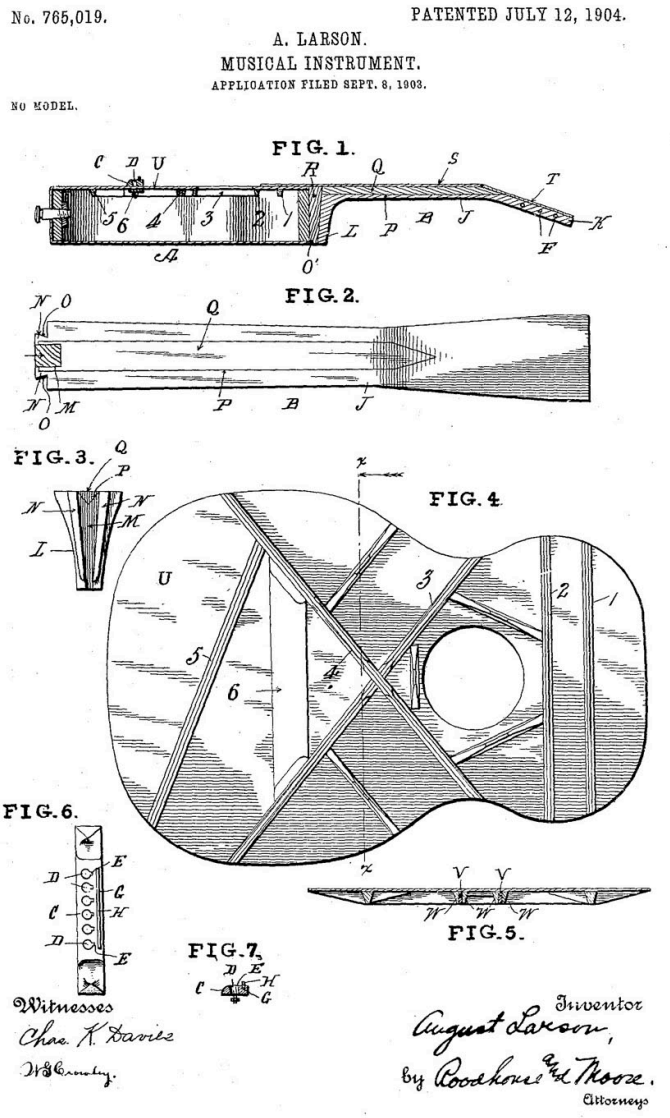
[622] Carl Larson (1867-1946); August Larson (1873-1944).
[623] Robert Carl Hartman, *Guitars and Mandolins in America: Featuring the Larsons' Creations: Histories, Interviews, Pictures*, Rev. ed ed. (Hoffman Estates, IL: Maurer, 1988), pp. 11-12.
[624] Around 1896, in Indianapolis Wulschner and Son began manufacturing Regal guitars and mandolins as well as other brand names. Lyon & Healy acquired the stock and brand name in 1904.

Fig. 134. Symphony harp guitar by the Larson Brothers, distributed by Dyer & Sons, Chicago, 1920s. Collection of MFA, Boston. No. 2008.67 [Photo: MFA].

Arguably, from when they first started to manufacture their Maurer brand of instruments, the Larsons made guitars intended to be strung with steel. This included the Symphony Harp guitar for Dyer [Fig. 153], which like some of Knutsen's original models incorporated X-braced soundboards. This design in comparison to the lateral bracing Knutsen alternatively experimented with, proved to be more successful in counteracting the increased tension of the instrument's extra strings. Over the passing of time, where the soundboards on many of his ladder-braced instruments have now collapsed, his X-braced instruments have faired better (and even more so the Larson-

made versions). The Larsons had a singular approach to the construction of their guitars, which Hartman describes as 'built under tension',[625] resulting in a domed soundboard and a heavily arched back (both laterally and longitudinally) achieved by forcing the edges of both plates down to meet the ribs; the area between the sound hole and bridge characteristically then becoming the deepest. Although some ladder-braced Larsons exist, soundboards were more often supported by X-braces made up of a three-ply laminate of two pieces of spruce with a hardwood centre. The choice of this hard wood component varied, and in practice rosewood, maple or ebony were all at times used. August Larson's patent of 12 July 1904 also states that the composite could be made of spruce with a band of steel as its centre. Besides including a small bridge improvement to secure the ends of strings, the patent clearly shows an X-braced design employing laminated braces, claiming its constructional benefit as: 'securing a lighter and more rigid top by using these strips, either constructed of hard wood or steel, but that the hard wood acts to convey the vibrations from the top to the sides of the instrument much more perfectly than in general construction'.[626] In addition to the bracing improvement the patent details a method of inserting a strip of wood into a V-shaped channel routed into the top surface of the neck along its length. This design was to prevent upward pull that may have resulted from the [higher] level of tension exerted by the strings, which in turn would have damaged the neck's dovetail joint to the body.

[625] Hartman, *Guitars and Mandolins in America: Featuring the Larsons' Creations: Histories, Interviews, Pictures*.
[626] August Larson. 1904 Musical Instrument. US Patent 765,019, filed 8 September 1903, and issued 12 July 1904.


No. 765,019. PATENTED JULY 12, 1904.

A. LARSON.

MUSICAL INSTRUMENT.

APPLICATION FILED SEPT. 8, 1903.

NO MODEL.

FIG. 1.

FIG. 2.

FIG. 3.

FIG. 4.

FIG. 5.

FIG. 6.

FIG. 7.

Witnesses

Chas. K. Davies

W. S. Crowley.

Inventor

August Larson,

by Cookhouse and Moore.

Attorneys

Fig. 135. US Pat. 765019. Patent for guitar improvements by August Larson, 1904.

Later in 1927, August Larson applied for another patent in which he specifies the use of an internal steel rod running longitudinally between the end block and neck block.[627]

[627] August Larson. 1930 Guitar. US Patent 1,768,261, filed 25 February 1927, and issued 24 June 1930.

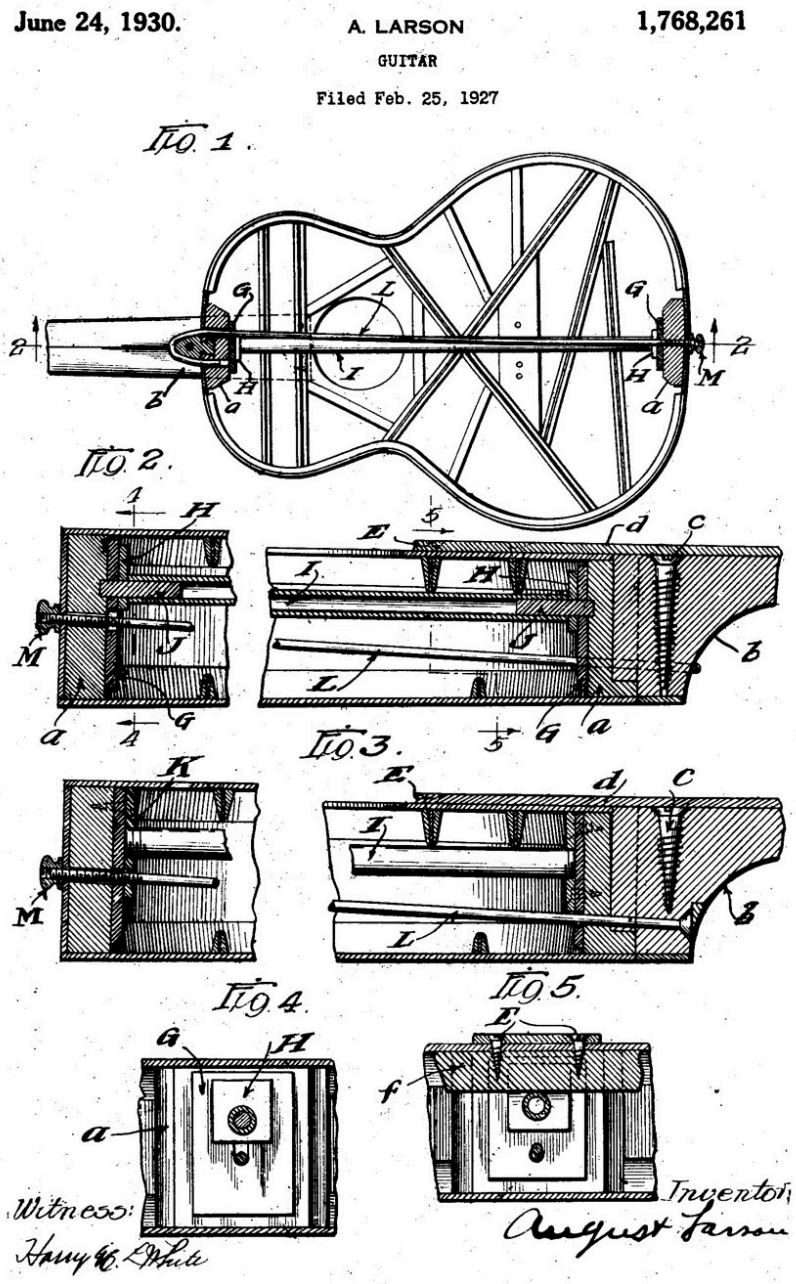


Fig. 136. US Pat. 1768261. Patent for guitar improvements by August Larson, 1930.

Although this device was designed to pull on the neck block when tightened thus effectively resetting the angle of the neck, its principle purpose was to alleviate the strain on the soundboard caused by increased string tension, which in this instance could have resulted from stringing with higher tensioned steel. While additional benefits from the use of interior supporting rods, such as improved tone, may have been cited by both Tilton and Larson in their patents, keeping the instrument's body in a fixed state of compression between the blocks to allow the installation of a thinner more

responsive soundboard was their intention, as it was when the same device was introduced earlier by Georg Staufer.

While he was not the first to use it, Joseph Bini's patent of 1867 for an X-braced soundboard is the first registered for this particular design.[628] From as early as the mid-1840s he was also experimenting with tailpieces as an alternative to the commonly used pin bridge. A review of a Bini guitar fitted with such a device in *Scientific American* (23 July 1846) claims the instrument as, 'superior to any other in use, with regard to its tone, elegance and durability', though in announcing that 'a specimen may be seen at Kiefer's manufactory, 108 Delancy street', it also suggests that Bini's instruments were made by other makers than himself.[629] Certainly later in the 1880s when the John C. Haynes Company acquired the rights to the Bini patent, they were marketing their own-manufactured model of *Bini* guitar. At the same time as these large companies promoted the designs conceived earlier by individuals such as Bini, other makers with innovative ideas were working independently. One such was Joseph Bohmann (born in Bohemia in 1848),[630] who immigrated to Chicago in 1873, `and who in 1876 founded 'Bohmann's American Musical Industry'. Besides standard six-single-string guitars, he made numerous multi-stringed harp guitars, violins, zithers and mandolins and held a number of patents for musical instrument improvements. Bohmann also used a variation on the X-bracing pattern to support soundboards by incorporating two X's to increase its strength.

7.5 The Ditson Company

Many of the names that appear as prime movers in the burgeoning American music industry of the late nineteenth and early twentieth centuries had their origins in the Ditson company of Boston. Oliver Ditson (born 20 October 1811) started out in 1823

[628] Details of Bini's patent are included in the chapter *Nineteenth Century Strings and Guitar Design in North America* of this thesis.
[629] David K. Bradford, 'The First Steel String Guitars ', in *The Unstrung History of the American Guitar: The Guitar and 19th Centuey American Music* (2009), http://www.19thcenturyguitar.com [Accessed 9 October 2012] Bradford cites "Improvement in the Guitar," *Scientific American*, vol. 1, no. 44 (July 23, 1846), p. 2.
[630] According to Bradford and Miner, Michael Wright gives 1848 as Bohmann's birth date, and Newmarket, Bohemia as the place. The 1900 US federal census gives the date as 1845 and place as Austria.

working in the bookshop of the organist and composer, Colonel Samuel H. Harper. He then spent some time apart from Parker learning the business of the printing trade, but in 1834 returned to set up a new store with Parker, whose original had been destroyed in a fire. The two set up as Ditson & Parker. Ditson concentrated his efforts on music publishing and sheet music sales, eventually buying out Parker's rights in 1840 and carrying on under his own name. In 1845 Ditson employed John C. Haynes (then aged fifteen) as a general dogsbody. Haynes must have proved his worth as from September 1850 he started to receive a share of the store's profits, and on January 1, 1857 he was made a full business partner in what was to become Oliver Ditson & Co. In 1858 Ditson purchased *Dwight's Journal of Music*, the leading music publication at the time voicing musical criticism and focusing public opinion on musical matters. Ditson continued to publish the journal in its original format until 1878 when it was succeeded by the *Monthly Musical Record*, which although it evolved through editorial and name changes, continued to be published by the [Ditson] company throughout its existence.

In 1860 Ditson set up one of his employees, John Church, to run a branch of the company's operations in Cincinnati that included instrument manufacture as well as sheet music sales. Church later bought out Ditson's holdings to the branch and established the John Church Company. Ditson repeated this entrepreneurial activity again in 1864 with another one of his other employees, George W. Lyon, by financing the formation of Lyon & Healy in Chicago. Lyon headed up the company together with P. J. Healy (who had previously been employed by the music publisher George P. Reed). In 1865 Ditson then founded The John C. Haynes Company specifically as a manufacturing wing of his publishing empire. Like the Ditson Company it was based in Boston, although it remained a separate operation under Haynes's leadership until he became president of the Ditson Empire, whence it was re-united with the parent company. As well as acquiring the rights to manufacture Tilton guitars, Haynes also manufactured other guitar lines: notably the Bay State range, whose top model was the Excelsior. According to Ayars, Pehr Anderberg, working for Haynes in the 1880s, supervised the construction of these guitars, and the 'Haynes shop on Fremont Street became a training ground for several luthiers, including a Mr. Swenson and C. A.

Sundberg, two of the founders of what was to become the Vega Co.'.[631] Although the Vega Company is associated more with the twentieth century rather than the nineteenth, its origins were in 1881 with a founding group of Bostonian craftsmen led by the Swedish immigrant Julius Nelson, and included Swenson and Sundberg. Julius Nelson, together with his brother Carl, later bought out the shares of the other founders. The company was incorporated and named Vega in 1903.

After promoting his interests through the John Church Company, Lyon & Healy and the John C. Haynes Company, in 1867 Oliver Ditson bought up the music plant and stock of Firth, Son & Co. in New York City, and established Charles H. Ditson & Co. in its place, under the management of his son. A few years later in 1875, he extended his empire further by putting another of his sons, James Edward Ditson, in charge of a company branch in Philadelphia [J. E. Ditson & Co.]. During the 1870s and 1880s Ditson continued to expand his stock by buying up catalogues of smaller music houses. After Ditson's death in 1888, Haynes was made president of what became known simply as the Oliver Ditson Company. On Haynes death in 1907, Ditson's son Charles Healy Ditson took over the company's presidency.[632]

Initially in the 1860s, Lyon & Healy were operating primarily as music publishers though also selling a variety of smaller musical instruments, but in the early 1880s they equipped a factory and starting building instruments under their own name. In the 1880s and 1890s Lyon & Healy were producing around 2000 of its top-of-the-line Washburn guitars yearly, compared to Martin's annual production figures of 150 to 200.[633]. Besides Washburns, which Pliejsier estimates was only fourteen per cent of their total guitar production at the time, they were also manufacturing cheaper lines to be sold under their own brand names, dealer house names and (as they also did with

[631] Ayars, *Contributions to the Art of Music in America by the Music Industries of Boston, 1640 to 1936*. p. 234 & p. 274. Ayars received the information on Pehr A. Anderberg from his son, Ernest A. Anderberg, who was also a guitar maker. The son also worked for the John C. Haynes Co. while the father was factory superintendent, and preceded his father working for George Bauer and the partnership of Stewart & Bauer. Ernest A. Anderberg after Stewart & Bauer then worked for the Elias Howe Co. until that company's demise; also see, Tom Wheeler, *American Guitars: An Illustrated History* (New York: Harper and Row, 1982), p. 26. Anderberg later, in the early 1900s, supervised the Stewart & Bauer guitar-making operation in Philadelphia.

[632] Peter Hadams, 'History of Oliver Ditson Company', in *the Musical Courier*, vol. 70, no. 8, 24 February 1915, p. 8 (2009). http://peterhadams.com/history_of_oliver_ditson_company.htm#_ftn1

[633] Pleijsier, *Washburn, Prewar Instrument Styles, Guitars, Mandolins, Banjos and Ukeleles 1883-1940*. p. 235.

Washburns) through the mail order companies of Montgomery Ward and Sears Roebuck & Co. By 1890 Lyon & Healy claimed to be producing 100,000 musical instruments in total a year (approximately 28,000 of these were guitars), and even if the figure had been somewhat exaggerated there is no doubt that they were still the largest manufacturers of musical instruments in North America at that time.

7.6 Other American guitar manufacturers in the third quarter of the Nineteenth Century

The Oscar Schmidt Company (New Jersey), founded in 1871 and incorporated in 1911,[634] started as a music publishing company and set up a chain of music schools to market its product. It then capitalised on this ready-made market by offering for sale, through the schools, its self-manufactured plucked string instruments that included mandolins, zithers, banjos and guitars. Its guitars, under the brand names of Stella, Sovereign and La Scala,[635] ranged from cheap entry-level models to more expensive instruments, and included six and twelve-string guitars, as well as harp guitars with extra bass strings. According to Bradford, 'The Musical Instrument and Materials special report to the 1900 census lists 12,219 mandolins and mandolas, 12,723 guitars and 456 banjos manufactured in New Jersey – nearly 15 percent of the national total – most of which were made by Schmidt.'[636] At the height of its production in 1920, the company had four factories in Europe and three in the United States.

Stella and Sovereign guitars were later in the twentieth century made by Harmony. This company's beginnings were also in the previous century when a former Lyon & Healy employee, Wilhelm J. F. Schultz, created it in 1892. In 1894 Harmony started to supply, amongst others, W. J. Dyer & Bros., and then around 1897, Sears Roebuck & Co., whose nation-wide client base allowed Harmony to become one of the largest guitar manufacturers of the early twentieth century. Montgomery Ward, Sears' rival mail order company, had already starting offering guitars in its catalogue sometime

[634] The current incarnation of the company's website gives 1871 as the founding date, while according to Wheeler, company records point to both 1879 and 1893.
[635] Both Stellas and Sovereigns were later made by Harmony.
[636] David K. Bradford, 'The Oscar Schmidt Company', in *The Unstrung History of the American Guitar: The Guitar and 19th Century American Music* (2009), http://www.19thcenturyguitar.com [Accessed 5 November 2012].

between 1879 and 1893, and as the advertising copy for guitars appears the same in both firms' respective catalogues for 1894, it would seem that Sears used that of Montgomery Ward until it revised its own in autumn 1896. Pleijsier claims that Lyon & Healy made the cheaper guitars carried by both Montgomery Ward and Sears, his view supported by the similarity of wording used in their written disclaimers for the use of steel strings to that of Lyon & Healy's original. Bradford, on the other hand, suggests that other statements made in their catalogues describing the choice of manufacturer, are misleading. Montgomery Ward's copy claims '[we have] selected twelve of the choicest, [models] made by the acknowledged leading manufacturer of the world',[637] implying that (as their top-of-the-line instrument was a Washburn) Lyon & Healy must have made all the guitars they offered. Bradford suggests instead that certain characteristics of the lower-end guitars point to Harmony as the manufacturer, while other of the more expensive instruments bear the hallmarks of both Oscar Schmidt and Stewart & Bauer, as well as Lyon & Healy.[638] In their 1894 catalogue, Lyon & Healy price their cheapest guitars at $4.50, rising to $26 for the Washburn, whereas the cheapest model offered by Montgomery Ward the same year is their 'Leader' at $3.75, with a parity of $26 for the sale of a top-of-the-line Washburn. Cheaper models in Montgomery Ward and Sears are described as 'American made Guitar [s], standard size, back and sides made of maple and handsomely finished in imitation of either Rosewood, Mahogany, or Oak, all highly polished, yellow top [presumably yellow pine], imitation ebony finger board, position dots; patent head, raised frets, warranted for one year', while the top-of-the-line model is identified as a 'Washburn American Guitar, of solid rosewood body, mahogany or cedar neck, ebony finger board, inlaid, warranted not to warp or split, concert size'.[639]

Beginning in the final years of the nineteenth century Stewart and Bauer is an example of a smaller partnership making guitars. Samuel Swaim Stewart, banjo manufacturer and proprietor of the BMG journal named after him, and the guitar and mandolin maker George Bauer, formed the company in Philadelphia in 1898. Advertisements for

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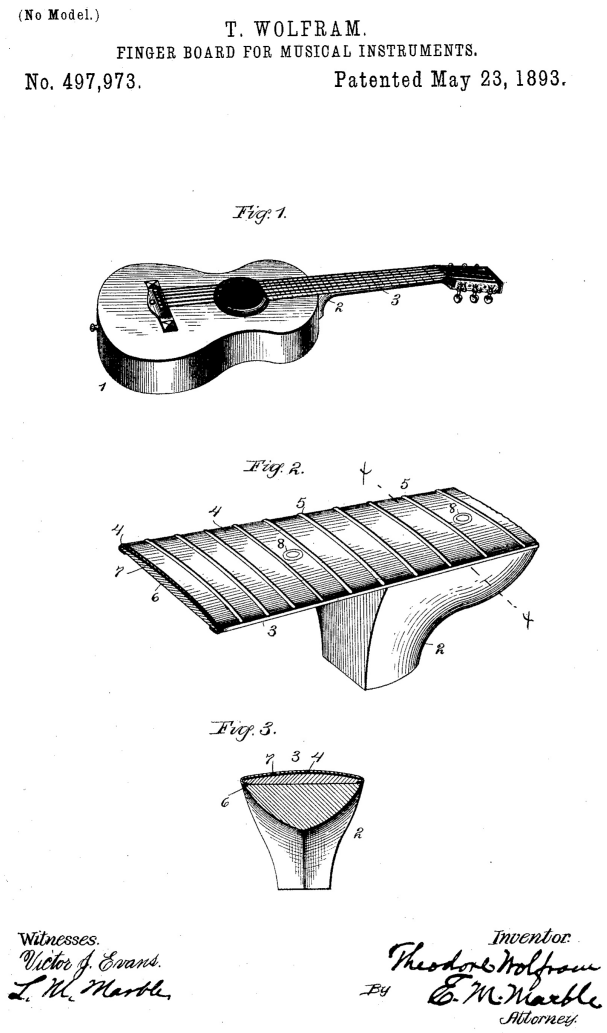
[637] Montgomery Ward, *Catalogue & Buyers Guide, No. 56 [Fall & Winter] 1894-95* (Northfield, Ill: Gun Digest Co, 1970); Bradford, 'The Sears Catalog'.
[638] David K. Bradford, 'The Sears Catalog', in *The Unstrung History of the American Guitar: The Guitar and 19th Century American Music* (2009), http://www.19thcenturyguitar.com [Accessed 7 November 2012].
[639] Montgomery Ward, *Catalogue & Buyers Guide, No. 56 [Fall & Winter] 1894-95* (Northfield, Ill: Gun Digest Co, 1970); Bradford, 'The Sears Catalog'.

Stewart guitars appear in his journal before their partnership was officially formed, but Wheeler considers that their similarity to those made by Bauer suggest that it was he and not Stewart who was making the guitars.[640] Stewart died soon after they joined forces but Bauer continued to fulfil their joint contracts, at first until 1901 with Stewart's sons, and then independently until 1911.

In 1894, The Merrill Aluminum Musical Instrument Company by their use of aluminium notably exhibited an early departure from wood as a major component in guitar manufacture, though they were not the first to experiment with this new material for instrument construction.[641] In 1893 Theodore Wolfram patented an aluminium fingerboard and introduced this feature to his Triumph brand of guitars. The first incarnation of the Wolfram Guitar Company declared insolvency in 1901, but by the beginning of that same year it claimed to have produced 10,000 instruments from when it was formed in 1891, which was a sizeable quantity.

[640] Wheeler, *American Guitars: An Illustrated History*, pp. 347-348.
[641] Mentioned in this thesis chapter, 19th C North American Strings & Design; Michael I. Holmes, 'Musical Instruments Made of Aluminum', *Mugwumps*(2011), http://www.mugwumps.com. According to Holmes, Neil Merril began experimenting with aluminium for making the bodies of musical instruments (the soundboards and necks were of wood) in 1886, the same year that Charles Martin Hall was awarded the first American patent for a cheap method of extracting aluminium.


(No Model.)

T. WOLFRAM.

FINGER BOARD FOR MUSICAL INSTRUMENTS.

No. 497,973. Patented May 23, 1893.

Fig. 1.

Fig. 2.

Fig. 3.

Witnesses.
Victor J. Evans.
L. M. Marble.

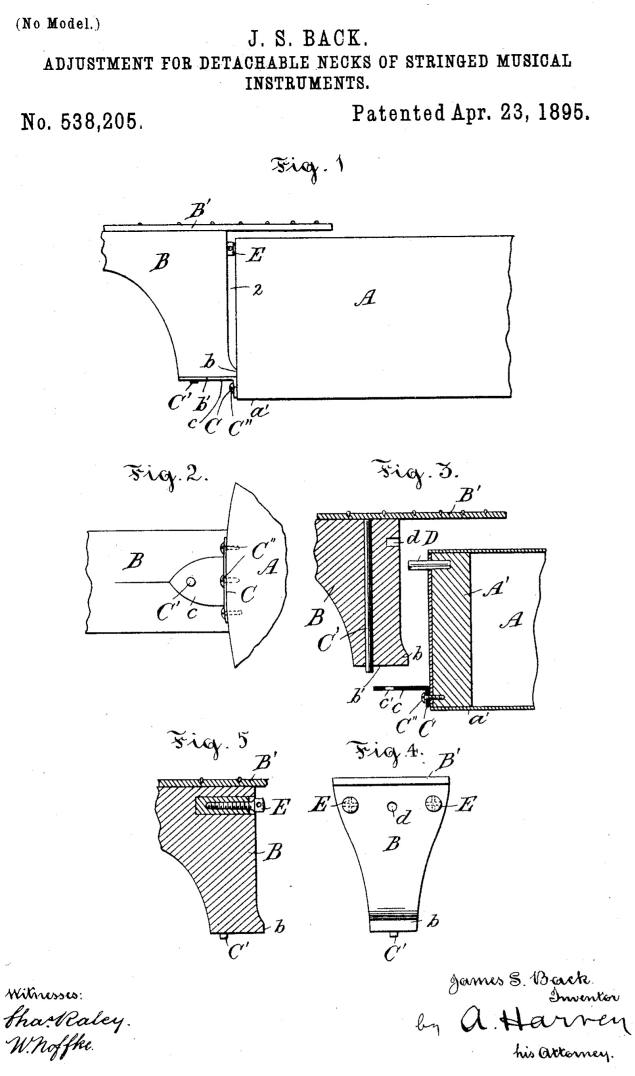
Inventor.
Theodore Wolfram
By E. M. Marble
Attorney.

Fig. 137. US Pat. 497,973. Fingerboard for Musical Instruments by Theodore Wolfram (Columbus, Ohio) 23 May 1893.

Elias Howe [Jnr] originally founded The Elias Howe Company in around 1840 as a music publishing operation, but during the 1890s it also distributed Howe-Orme mandolins and guitars. It continued to sell sheet music and take in instrument repairs until the 1930s, but it in reality it had ceased acting as a manufacturer and publisher by 1911. The Howe-Orme association was formed between Howe's [Jnr] sons, Edward and William, and George Louis and George N. Orme. George Louis appears as a co-assignee on a patent granted to one James S. Back in 1893, for a pressed-soundboard arch top design described as 'consisting of a narrow transverse arch, extending from tail end to neck end'[642] and as being suitable for both guitars and mandolins. Back was evidently working for Orme as, again with G. L. Orme as co-assignee, he received a

[642] James S. Back, *Guitar*, 14 November 1893. US Patent 508,858.

patent [514,877] in 1894 for a stringed musical instrument where the neck was detachable and interchangeable, thus allowing the instrument to be used either as a guitar or banjo. In 1895 another patent (538,205) in his name [Fig. 157] describes a detachable and adjustable neck: a design that would become a feature of Howe-Orme guitars, and one that was introduced by Staufer and Ertl some seventy years earlier in Vienna.[643]


(No Model.)

J. S. BACK.

ADJUSTMENT FOR DETACHABLE NECKS OF STRINGED MUSICAL INSTRUMENTS.

No. 538,205. Patented Apr. 23, 1895.

Fig. 1

Fig. 2.

Fig. 3.

Fig. 5

Fig. 4.

Witnesses:
Chas. Raley.
W. Noffke.

James S. Back
Inventor
by A. Harrer
his Attorney.

Fig. 138. US Pat. 538,205. Adjustments for Detachable Necks of Stringed Musical Instruments by J. S. Back, 23 April 1895.

[643] Although Back's design differs from Staufer's with its use of three fixing screws into the heel, the principal of attachment that allows regulation of neck angle is the same.

While Martin's guitars may have evolved rapidly in the 1840s from his initial model, design elements introduced earlier in Vienna by Staufer remained in his work and continued to appear in guitar manufacture by other American makers throughout the nineteenth century and into the next. Although Martin had moved away from the Staufer-style detachable and adjustable neck by the end of the nineteenth century, conceptually this design was still a key element of Howe-Orme guitars. By the middle of the nineteenth century Martin guitars no longer commonly featured the Staufer Persian Slipper headstock, this may have been due in part, if not wholly, to the cost of the manufacture and importation of the tuning mechanism with which they were fitted. An exception to the *Shaker* style rectangular headstock that replaced it can be found with a twelve-single-string *harp guitar* from 1905 [Fig. 158].[644] This instrument has two necks, of which the one for the extra bass strings features a slipper headstock fitted with six-in-a-line Viennese style mechanical tuners. While this may have been a customer's special order, it indicates that Martin was still comfortable to be associated with the design and to optionally provide it, and that as a feature signifying Staufer's design influence it had a place in contemporary American guitar culture.

[644] This Martin instrument from 1905 is in the Smithsonian Institute, National Museum of American History [Cat.1992.0179.01].

Fig. 139. (Harp) Guitar by C. F. Martin & Co,, Nazareth 1905. Smithsonian Institute, National Museum of American History. Cat.1992.0179.01 [Photo: Smithsonian Institute].

7.7 Chapter Conclusions

Besides pre-dating the conception and use of Tilton's internal supporting rod, and influencing the construction and appearance of Martin's early guitars and those of his colleagues, other important design features that can be linked to the Staufer school include both the introduction of the hollow arm acoustic chamber by his pupil Schenk (later found in the Symphony Harp Guitar), and the heavily arched back of the Larsons' guitars, which mirror the form of Staufer's Legnani model and likewise was designed to improve the guitar's acoustic projection.

Chapter 8 Nineteenth-Century-Viennese Guitars Strings and Pitches

Designs in North American guitars during the course of the nineteenth century suggest that not only were they being made stronger to counteract the toll of a harsher climate, but that concurrently string tension was rising. Chapters 8 and 9 of this thesis examine the type of guitar strings used both in Europe and in America at this time.

Mimmo Peruffo (Aquila Corde), from his chapter in *La Chitarra di Liuteria*,[645] provides an historical overview of the composition of nineteenth-century guitar strings and the pitch to which they were tuned. Gut had been the principal material used for making strings in the West for centuries, and according to Peruffo, bass strings of a gut core overwound with a fine metal wire, usually copper, were not conceived of until the second half of the seventeenth century. This process had the two-fold effect of increasing the mass of the string, thereby allowing a shorter vibrating length, which in turn led to the design of instruments that could produce a low pitch without the need for excessive string length; and secondly created a string that was more brilliant in tone owing to reduced inharmonicity. Peruffo suggests that the technology of overwinding strings allowed the 680-730 mm string length commonly found on five-course guitars to be reduced. He proposes that this led to the introduction of a sixth bass string to the guitar and thus its evolution as a six-single-string instrument in the last quarter of the eighteenth century.[646]

Peruffo gives the breaking load of gut as 32 kg/mm^2, and states that the 'breaking frequency' (the point at which the string breaks, when stretched in length to vibrate at a certain frequency) is not affected by the diameter of the string, but rather is a constant arrived at when the string reaches a certain tension.[647] Unwound bass strings, thus of a

[645] Peruffo, Mimmo, 'Guitar Strings from the Nineteenth Century to the Advent of Nylon', in *La Chitarra Di Liutera: Masterpieces of Guitar Making*, 2nd ed., eds. Stefano Grondona, Luca Waldner, and Massimo Mandelli (Sondrio: L'officina del libro, 2002), pp. 168-176.
[646] Peruffo,'Guitar Strings from the Nineteenth Century to the Advent of Nylon', p. 168.
[647] Peruffo,'Guitar Strings from the Nineteenth Century to the Advent of Nylon', p. 169. Peruffo states: 'this point corresponds to the breaking load of the string, which in the case of gut is about 32 kg/mm². The value of this limit frequency, known as the 'breaking frequency', is completely independent - strange as it may seem - of diameter, as may be easily demonstrated either mathematically (applying the general formula for the strings) or experimentally. This limit frequency is in direct proportion to the vibrating

greater diameter to produce lower frequencies, lose their power and tone. It is therefore desirable to compromise with their thickness and attempt to keep their maximum length, but with the string length fixed between the nut and saddle for all the strings, this is governed by the 'breaking frequency' of the highest one. Regarding the upper pitch limit in relation to string length Peruffo, allowing a working margin that does not actually stretch the highest string to breaking point, arrived at a string length of 690 mm (the average found on extant five-course guitars) when tuned to a pitch of A= 415 Hz (commonly used in the mid-eighteenth century).

Peruffo notes that apart from Pujol, whose treatise is from the twentieth century, most guitar manuals of the nineteenth and early twentieth centuries do not mention the instrument's treble strings and their dimensions. He does however show that other documents of the time state that the first three strings of the guitar were of the same composition and dimensions as those of the violin:

> The first string of the violin was made from three lamb guts, which produced a diameter of between 0.65 and 0.73 mm. For the second and third strings five and nine guts respectively were used, producing a diameter range of 0.80-0.90 mm for the A string and of 1.04-1.20 for the D string. These were also the *e*, *b* and *g* strings of the guitar of the time of Sor, Giuliani and Coste.[648]

Peruffo emphasizes that the three bass strings available during this period with an overwound silk core had a greater acoustical output than the gut wound strings used previously in the eighteenth century. He goes on to state:

> After the addition of the sixth string and the elimination of [paired] courses in favour of single strings, and up to the 'enlarged' guitars of Torres (the second half of the nineteenth century), the vibrating length was stabilised at about 62-63 cm, as shown by the manual

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length of the string. In other words, the product of the vibrating length - in metres - and the breaking frequency - in Hz - is a constant defined as the 'breaking index'. The average breaking index of a modern gut string in experimental conditions is 240 Hz/m, obviously corresponding to a breaking load of 32 kg/mm². This means that at a vibrating length of a metre the string will break, theoretically, at 240 Hz. If one divides the breaking index by the tuning frequency chosen for the first string, this will produce the vibrating length at which the string will break. For the first string of a baroque guitar in E at the supposed seventeenth-century tuning standard of A = 415 Hz (according to which E = 315 Hz), the theoretical length at which the first string will break is 75 cm'.

[648] Peruffo,'Guitar Strings from the Nineteenth Century to the Advent of Nylon', p. 173.

> of Aguado: 27 pulgadas,[649] i.e. around 62, and as seen in the many surviving instruments of the period, whether made in Italy or abroad.[650]

Pitch standards varied in the nineteenth century. Twenty-first-century pitch is standardized at *a'*=440 Hz (although it has been known to creep up to 444 Hz on occasion), as was first recommended by the Congress of Stuttgart in 1834 (though not implemented in the West universally until a meeting of the International Organisation for Standardisation in 1939). During the intervening years it was known to have fluctuated between *a'*=435 Hz and *a'*=456 Hz.

During the middle of the eighteenth century a pitch standard of *a'*=415 Hz was commonly found, however the organ built in 1759 at Trinity College, Cambridge, was at *a'*=309 Hz, and Handel's tuning fork from 1751 is at *a'*=422.5 Hz.[651] In 1813 the Philharmonic society adopted a pitch standard of *a'*=423.3 Hz, although by 1859 this had risen to *a'*=452 Hz. Haynes, quoting Ellis from the 1880s,[652] states: 'in 1813, the Philharmonic Concert, opened with *a'*=423.7- and retained it until 1828.'[653] Peruffo reports that:

> In 1858 the French government reported that the tuning standard of the Paris Opéra and the Opéra Italienne was A = 448 Hz, but a year later a French commission for the standardisation of tuning (composed of illustrious figures such as Halévy, Auber, Berlioz, Meyerbeer, Rossini and Thomas) - the first in Europe - established A as 435 Hz through an imperial decree.[654]

Although in 1859 *a'*=435 Hz may have been decreed as a standard in France, the following year in London [1860], Cramer's piano makers were producing instruments designed to be tuned to a pitch of *a'*=448.4 Hz.[655]

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[649] John Henry Alexander, *Universal Dictionary of Weights and Measures, Ancient and Modern; Reduced to the Standards of the United States of America. By J. H. Alexander.* (Baltimore: W. Minifie, 1857; repr., Scholarly Publishing Office, University of Michigan Library (December 20, 2005)). 1 *pulgada* from the Spanish region of Castille = 0,9132 of an inch.
[650] Peruffo,'Guitar Strings from the Nineteenth Century to the Advent of Nylon', p. 173.
[651] "History of Pitch - Tuning Forks A440 C523.3," http://www.piano-tuners.org/history/pitch.html.
[652] Alexander John Ellis, *The History of Musical Pitch ... Reprinted, with Corrections and an Appendix, from the \201cjournal of the Society of Arts,\201d Etc* (pp. 293-403. London, 1880).
[653] Bruce Haynes, *A History of Performing Pitch: The Story of 'A'* (Lanham, Md: Scarecrow Press, 2002).
[654] Peruffo,'Guitar Strings from the Nineteenth Century to the Advent of Nylon', p. 174.
[655] 'History of Pitch - Tuning Forks A440 C523.3'.

At the end of the eighteenth century, Viennese pitch could be identified with *Kammerton* of *a'*= [approximately] 433 Hz at one end of the spectrum, and *Wienerton* of *a'*= [approximately] 440 Hz at the other end. Two *Griesbacher* clarinets, one made just before 1800, the other just after, function at a pitch of *a'*= 438 Hz, although the owner of the later instrument claims it is also able to function well at *a'*= 430 Hz. Viennese pitch, with variations, would seem to remain largely bracketed within *Kammerton* and *Wienerton* up until the mid 1830s. Haynes, discussing Kiesewetter's observations in 1803 on the pitch difference used between Leipzig and Vienna, notes that in the case of flutes made by Tromlitz (working in Leipzig until 1805) the fourth and fifth corps would have 'played at 437 and 441, right in the Viennese range.'[656] Haynes goes on to suggest that other contemporaneous multiple corps traversos would have played best at around 435-438 Hz, also within the pitch range bracketed by *Kammerton* and *Wienerton*.

Haynes points out that while Anton Schindler was of the opinion that before 1814 all Austrian orchestras and bands had the same pitch because woodwind players all used instruments by Stephan Koch (1772-1828), Kiesewetter on the other hand, wrote of three slightly different Viennese pitches in use at the time:[657] the lowest tuning fork, that of the Court theatre, was approximately a semi-tone higher than the pitch in Leipzig, suggesting to Haynes it was between 435 and 440 Hz. Kiesewetter adds that this fork was higher than a fork he had in his possession from Paris, and possibly at the same pitch as that used in St. Petersburg, which had been measured at 436 Hz in 1796. According to Haynes (citing Näke), Beethoven's Eighth Symphony in 1814, and also his Ninth in 1824, were played at a pitch bracketed by 430 and 440, and that this was the same pitch used by both Mozart (for his Viennese performances), and Schubert for the duration of his life. Näke, writing in the 1820s, remembers that 'The Vienna opera gradually reached 870 vibrations (*a'*=435 Hz), as indicated by an oboe of Professor Sellner of Vienna'.[658] Ellis reports that Weber's *Euranythe* was performed at the Kärntnertor theatre in Vienna, at a pitch of *a'*=438 Hz.[659]

[656] Haynes, *A History of Performing Pitch: The Story of 'A'*.
[657] Haynes, *A History of Performing Pitch: The Story of 'A'*.
[658] Haynes, *A History of Performing Pitch: The Story of 'A'*. *Über Orchesterstimmung* (Dresden, 1862), p. 23; Joseph Sellner was a professor at the Vienna conservatory between 1821 and 1838.
[659] Ellis, *The History of Musical Pitch.*

According to Haynes, Viennese pitch in 1834 was reported by Scheibler as 'Viennese minimum' with *a'*=434 Hz. He gives 437 and 439 Hz as other pitches used in that same year, and quotes Ellis as giving 441 Hz for the Viennese opera and 445 Hz for the Conservatory also in that same year. Haynes continues:

> Ellis reported on a fork he received from Streicher's in 1859, that gave the celebrated 'sharp Vienna pitch' that was in use in orchestras before the introduction of the *diapason normal*; it was at 456, close to the highest level recorded in this entire period.[660]

Pitch rose in Europe so much that in 1858 the French government set up a commission to establish a uniform musical pitch. The *diapason normal* of *a'*=435 Hz, recommended by this commission, became law in France in 1859. The Viennese Opera adopted 'French Pitch' (as it was known) in 1860, but by the late 1870s their pitch had risen again.[661]

Musical pitch in America throughout the nineteenth century followed European trends, which varied considerably. It is likely that European guitars made in the first quarter of the nineteenth century were designed to be tuned to a pitch of about *a'*=435 Hz, and although this may have been decreed as a standard in France in 1859, pitch continued to rise. In an attempt to curb this trend, the Walcker Orgelbau Great Organ for the Boston Music Hall, Massachusetts, was tuned to *a'*=435 Hz when erected in 1863. Only a few years later, a second Walcker was installed in the First Church of Boston, also tuned to *French pitch*. Despite the introduction of this pitch standard into Boston's public schools, instruments used by both American and foreign touring orchestras, opera troupes, and musical organizations remained high.[662]

American Standard Pitch of *a'*=440 was adopted by the American Federation of Musicians in 1917 and by the American Music Industries Chamber of Commerce on 11 June 1925. The American Standards Association accepted it in 1936 and the International Federation of Standards Associations (ISA) adopted it, in 1939.

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[660] Haynes, *A History of Performing Pitch: The Story of 'A'*.
[661] Haynes, *A History of Performing Pitch: The Story of 'A'*.
[662] Charles R. Cross, 'Historical Notes Relating to Musical Pitch in the United States', *Proceedings of the American Academy of Arts and Sciences* 35, no. 22 (1900), pp. 453-455.

Pitch standards in Europe and in America, in so much as that continent followed the European trend, varied considerably throughout the nineteenth century. It is likely that Viennese guitars made in the first quarter of the nineteenth century were designed to be tuned to a pitch of about *a'*=436 Hz, however they would just have likely been tuned slightly higher or lower depending on the mean pitch of any other instruments to which they would have been part of an ensemble, if being used in that context. Woodwind and piano being a good example of this: Melanie Piddocke has recorded that of four Viennese clarinets in the collection at Edinburgh University, one from c. 1840 was at *a'*= 450, another at *a'*= 440 from around 1840 – 1860, another from c. 1890 at *a'*= 440, and one from 1900 - 1920 at *a'*= 433, which she considered surprisingly low. It should also be considered that these instruments could have been ordered for an export market with a different pitch standard to Vienna.[663]

According to Watchorn, Georg Staufer's first guitars built before the early 1820s and following Italian influence demonstrate a string length of 625 mm. Although this is often the case,[664] and fits with a typical length of between 620 and 630 mm mentioned in Aguado's method [cited by Peruffo], there are both longer and shorter exceptions. Certainly many of Georg Staufer's guitars at the end of the 1820s have noticeably shorter string lengths: the guitar from 1829 in the Edinburgh University's collection has a string length of 608 mm,[665] while a guitar attributed to Staufer & Company from the 1830s, in the private collection of James Westbrook, exhibits a scale length of 586 mm and would commonly have been used for terz tuning.[666] Besides the shorter string length of around 608 mm, Watchorn claims between 580 and 590 mm is also evident with Staufers at this time.[667] These shorter scale lengths are often found on guitars from the period where Staufer labels show Legnani's endorsement. While its association is with virtuosic playing, whether this length was intended to facilitate the execution of intricate and difficult musical passages is debatable, as certain extant instruments

[663] Melanie Piddocke, 2011. *Private email,* EUCHMI.
[664] Watchorn, 'Inventing the Modern Guitar - Johann Georg Stauffer and the Viennese School of Guitar Making'. For example of 625 mm string length see the guitar by Georg Staufer, Vienna c1802-1815, Powerhouse Museum, Sydney. Cat. No. 88/439.
[665] Guitar by Georg Staufer, Vienna 1829, Edinburgh University Collection of Historic Musical Instruments, cat No. 3838.
[666] Watchorn, 'Inventing the Modern Guitar - Johann Georg Stauffer and the Viennese School of Guitar Making'.
[667] Watchorn, 'Inventing the Modern Guitar - Johann Georg Stauffer and the Viennese School of Guitar Making'.

containing the innovations associated with Legnani's endorsement also demonstrate an alternative longer string length. In the Kunsthistorisches, SAM 489 made by Georg Staufer in 1829, has a string length of 645 mm; guitarist, Dennis Cinelli reports another Georg Staufer guitar from c1830, in his possession, with a length of 640 mm; and A. P. Sharpe describes a Georg Staufer guitar from 1830 with a length of 25.5 inches, approximately 645 mm.[668]

Using *Gut and Silk 900* strings (appropriate for stringing on late-nineteenth-century guitars), as a hypothetical comparison of their tensions at a nominal pitch of *a'*=435 Hz with a string length of 645 mm, Peruffo gives the following:[669]

Table 3

645 mm tuned @ *a'*=435 Hz			
	Diameter of gut	Diameter of winding	Tension
1st [*e'*]	0.66 mm gut		8.00 Kg
2nd [*b*]	0.82 mm gut		6.95 Kg
3rd [*g*]	1.00 mm gut		6.50 Kg
4th [*d*]	1.40 mm equiv gut	81 mm	7.15 Kg
5th [*A*]	2.00 mm equiv gut	1.00 mm	8.20 Kg
6th [*E*]	2.50 mm equiv gut	1.18 mm	7.20 Kg
Total			44.00 Kg

[668] Sharpe, *The Story of the Spanish Guitar*; Sharpe, *The Story of the Spanish Guitar*.

[669] Mimmi Peruffo, 'Gut & Silk 900,' http://www.aquilacorde.com. 'Historical Guitar Sets'. Our set Gut & Silk 900 is designed for the typical early twentieth-century chorister equal to 435 Hz and vibrating length of the instrument around 65 cm. Choristers more acute and / or more vibrant lengths may affect the duration of the first string.
GUT&SILK 900 SINGLE STRINGS
1st 'e' 5.70 Euros, Code: 67C (.66 mm gut; tension: 8.6 Kg)
2nd 'h' 6.80 Euros, Code: 68C (.82 mm gut; tension: 7.6 Kg)
3rd 'g' 8.60 Euros, Code: 69C (1.00 mm gut; tension: 6.7 Kg)
4th 'D' 5.50 Euros, Code: 70C (1.40 mm equiv gut; tension: 6.0 Kg; external diameter: .81 mm)
5th 'A' 6.00 Euros, Code: 71C (2.00 mm equiv gut; tension: 7.7 Kg; external diameter: 1.00 mm)
6th 'E' 6.60 Euros, Code: 72C (2.50 mm equiv gut; tension: 7.5 Kg; external diameter: 1.18 mm)

Table 4

645 mm tuned @ *a'*=440 Hz			
	Diameter of gut	Diameter of winding	Tension
1st [*e'*]	0.66 mm gut		8.20 Kg
2nd [*b*]	0.82 mm gut		7.10 Kg
3rd [*g*]	1.00 mm gut		6.65 Kg
4th [*d*]	1.40 mm equiv gut	81 mm	7.30 Kg
5th [*A*]	2.00 mm equiv gut	1.00 mm	8.40 Kg
6th [*E*]	2.50 mm equiv gut	1.18 mm	7.35 Kg
Total			45.00 Kg

From Peruffo's template of string dimensions and their equivalent in gut for the covered wound strings, and using *Arto's String Calculator*,[670] the following tensions have been calculated for string lengths of 609 mm and 586 mm with *a'*= 435 Hz and 445 Hz; and for 645 mm with *a'*= 445 Hz.

Table 5

609 mm tuned @ *a'*=435 Hz			
	Diameter of gut	Diameter of winding	Tension
1st [*e'*]	0.66 mm gut		7.14 Kg
2nd [*b*]	0.82 mm gut		6.18 Kg
3rd [*g*]	1.00 mm gut		5.79 Kg
4th [*d*]	1.40 mm equiv gut	81 mm	6.37 Kg
5th [*A*]	2.00 mm equiv gut	1.00 mm	7.30 Kg
6th [*E*]	2.50 mm equiv gut	1.18 mm	6.40 Kg
Total			39.17 Kg

[670] Arto Wikla, 'Arto's New String Calculator, Version 1.0,' http://www.cs.helsinki.fi/u/wikla/mus/NewScalc/.

Table 6

609 mm tuned @ *a'*=440 Hz			
	Diameter of gut	Diameter of winding	Tension
1st [*e'*]	0.66 mm gut		7.47 Kg
2nd [*b*]	0.82 mm gut		6.47 Kg
3rd [*g*]	1.00 mm gut		6.06 Kg
4th [*d*]	1.40 mm equiv gut	81 mm	6.67 Kg
5th [*A*]	2.00 mm equiv gut	1.00 mm	7.64 Kg
6th [*E*]	2.50 mm equiv gut	1.18 mm	6.70 Kg
Total			41.01 Kg

Table 7

586 mm tuned @ *a'*=435 Hz			
	Diameter of gut	Diameter of winding	Tension
1st [*e'*]	0.66 mm gut		6.61 Kg
2nd [*b*]	0.82 mm gut		5.73 Kg
3rd [*g*]	1.00 mm gut		5.36 Kg
4th [*d*]	1.40 mm equiv gut	81 mm	5.90 Kg
5th [*A*]	2.00 mm equiv gut	1.00 mm	6.76 Kg
6th [*E*]	2.50 mm equiv gut	1.18 mm	5.93 Kg
Total			36.29 Kg

Table 8

586 mm tuned @ *a'*=440 Hz			
	Diameter of gut	Diameter of winding	Tension
1st [*e'*]	0.66 mm gut		6.92 Kg
2nd [*b*]	0.82 mm gut		5.59 Kg
3rd [*g*]	1.00 mm gut		5.61 Kg
4th [*d*]	1.40 mm equiv gut	81 mm	6.17 Kg
5th [*A*]	2.00 mm equiv gut	1.00 mm	7.07 Kg
6th [*E*]	2.50 mm equiv gut	1.18 mm	6.20 Kg
Total			37.96

Table 9

645 mm tuned @ *a'*=440 Hz			
	Diameter of gut	Diameter of winding	Tension
1st [*e'*]	0.66 mm gut		8.35 Kg
2nd [*b*]	0.82 mm gut		7.26 Kg
3rd [*g*]	1.00 mm gut		6.80 Kg
4th [*d*]	1.40 mm equiv gut	81 mm	7.48 Kg
5th [*A*]	2.00 mm equiv gut	1.00 mm	8.57 Kg
6th [*E*]	2.50 mm equiv gut	1.18 mm	7.51 Kg
Total			45.97 Kg

At the bottom end of the scale, then, a Staufer guitar with a string length of 586 mm, tuned at *a'*=435 Hz, was exerted to approximately 38 Kg of string tension, while at the

top end of the scale, a Staufer guitar with a string length of 645 mm tuned at *a'*=440 Hz was exerted to approximately 46 Kg of string tension. It would seem that although the Staufer instruments appearing from the mid 1820s featured shorter string lengths, which would have alleviated additional string tension had they been tuned in accordance with rising Viennese pitch. By the mid 1830s the Staufers were also making longer scale guitars, at a time when pitch had risen even higher.

Fundamentally, the bracing pattern of the soundboards of Staufer guitars does not change. With very few experimental exceptions, the design remains one of three or four transverse braces positioned in a lateral configuration.

Chapter 9 Guitar Stringing in Late-nineteenth-century North America and the Emergence of Steel

This chapter surveys the North American manufacture and use of guitar strings from the mid nineteenth century. By examining the types of strings offered in North-American musical merchandise catalogues and their representation in periodicals of the Banjo-Mandolin-Guitar movement, it traces the gradual emergence of steel as a string material; and it examines contemporaneous patents for bridges and tailpieces that indicate rising string tension.

9.1 Guitar strings in nineteenth-century Europe

Marin Mersenne in L'Harmonie Universelle (1627)[671] describes how the fundamental frequency of a stretched string depends on the length, tension, and mass per unit length of the string. He states that 'the fundamental frequency of a stretched string is inversely proportional to the length of the string, keeping the tension and the mass per unit length of the string constant, [and that] the fundamental frequency of a stretched string is directly proportional to the square root of the tension in the string, keeping the length [and the mass per unit length] in the string constant.'[672] Following this premise, the lower strings of a guitar or violin are made with a greater mass per unit length (thicker string and/or denser material) and the higher strings have a lesser mass per unit length

[671] Marin Mersenne, *Traité De L'harmonie Universelle. Oú Est Contenu La Musique Theorique-Pratique Des Anciens - Modernes, Avec Les Causes De Ses Effets* (Paris: Guillaume Batdry, 1627).

[672] Translation after Encyclopædia Britannica Online, s. v. "Mersenne's laws", http://www.britannica.com/EBchecked/topic/376421/Mersennes-laws [Accessed July 07, 2012].
Mersenne's laws detail how the fundamental frequency of a stretched string depends on the length, tension, and mass per unit length of the string.

- The fundamental frequency of a stretched string is inversely proportional to the length of the string, keeping the tension and the mass per unit length of the string constant.
- The fundamental frequency of a stretched string is directly proportional to the square root of the tension in the string, keeping the length and the mass per unit in the string constant.

Mersenne's laws help explain the construction and operation of string instruments. The lower strings of a guitar or violin are made with a greater mass per unit length, and the higher strings made thinner and lighter. This means that the tension in all the strings can be made more nearly the same, resulting in a more uniform sound.

(thinner string and/or lighter material), so that the tension of the strings can be made more uniform in order to give a balanced sound.[673]

Early nineteenth-century evidence, such as the strings associated with the Shelley guitar (c1822) in the Bodleian Library in Oxford, indicates that plain gut trebles and overwound basses were normal on the six-string guitar. Whereas, previously the strings of the four and five-course guitar were plain gut, allowing a lowest pitch of *g* and *d* respectively, covered string technology enabled the addition of a sixth string, tuned to *E*.[674] Although pre-nineteenth-century lutes had plain gut strings tuned to lower pitches than nineteenth-century guitars, this was achieved by using highly twisted gut, but the elasticity of this form of string decreases, becoming stiffer as it is made thicker. The lowest pitch at which a plain gut guitar string, of a low to moderate twist can give an acceptably harmonic tone is around *g* (the pitch of the third string on the guitar). If the mass is increased, by using thicker gut, in order to allow the pitch of the string to be lowered, the tone quality is progressively compromised by increased inharmonicity. Because of this, the normal practice in guitar stringing from the late eighteenth century onwards was, from at least the fourth string downwards, to over-wind a core of gut (or silk) with a thin, flexible metal wire (usually copper, which was often silver-plated),[675] in order to add mass without appreciably increasing stiffness. In this way, unacceptably increased inharmonicity at the lower pitches (from the *d* string downwards) was avoided. The use of such a wound string was an option for the third (*g*) string also, with the advantage of lesser inharmonicity than with plain gut. As, on the other hand, the plain gut strings of the nineteenth-century guitar were tuned to a higher tension; this was accomplished by making them from a lower twist of gut.

Segerman concluded that those of the strings on the Shelley guitar that were probably original were at a higher tension than its late-nineteenth-century replacements.[676] He

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[673] Rephrased after Encyclopædia Britannica Online, s. v. "Mersenne's laws", http://www.britannica.com/EBchecked/topic/376421/Mersennes-laws [Accessed July 07, 2012].
[674] Average string length of four of five string guitar: 550 mm, and six-string guitar: 650mm.
[675] Silver-plating the copper winding would prevent green tarnishing or Verdi Gris, keeping the appearance of the strings bright and the fingers clean.
[676] Ephraim Segerman, 'Shelley's Guitar and 19th Century Stringing Practices', in *FoMRHI*, no. 67 (1992), pp. 41-42. Segerman gives the diameters of the gut treble strings on the instrument at the time of examination as *e'*: 0.024, *b*: 0.029, *g*: 0.026, and the wound bass strings as *d*: 0.035, *A*: 0.048, *E*: 0.058. In the case were loose pieces of (plain gut with diameters of 0.45 to 0.47 (i.e. thicker than any of the plain gut strings), which led him to believe that the instrument could at one time have been strung with a plain gut third thicker than the wound fourth on the guitar at the time of his examination. At a pitch of

noticed that a photograph of the guitar in 1898 showed that the plain third was thicker than the wound fourth string. From fragments, ranging between 1.14 -1.19 mm of plain gut strings left in the case, which he considered likely candidates for the original third [*g*], he concluded its tension would have been 9 - 10 Kg. To support his theory that string tension on the guitar decreased since the early nineteenth century, Segerman refers to Heerman's examination in 1890 of some old strings, sent by Paganini to the firm of Schott for replacements.[677] Finding their dimensions unusual as violin strings, Segerman originally presumed that these were guitar second [*b*] and third [*g*] strings, tuned to about 4.5 Kg tension. However, in light of the evidence gained from examining the strings on Shelley's guitar, he concluded they were rather the first [*e'*] and second [*b*] strings, with a tension of 7.5 Kg. According to Segerman, the strings which he thought to be later additions associated with Shelley's guitar were a similar size and tension as the Paganini strings, corroborating his view that the guitar in the early nineteenth century (in keeping with a similar fashion in violin stringing of the period) was strung with thicker strings than later in the century, and that these, in turn, would have been thicker than modern guitar strings. From experiments with over-winding silvered copper on to silk for the fourth string, he concluded that to have withstood breaking when rising above 4.5 Kg of tension, the strings would have had more silk filaments, these in turn making up the thicker core.

A guitar made by Pons in 1812, owned by Giuliani and deposited in a Coutt's Bank vault in 1816, came to light in London in 1998.[678] On examination of the guitar by Paul Pleijsier and Gary Southwell, it was evident that it had hardly been played, and although it was unstrung, the case contained strings originating from the time of its deposition. While it cannot be proven that the strings are a set, as they are graduated in size it

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a'=430Hz, with a string length of 654 mm, he calculates the tension of each string to be around 8 to 9 Kg, compared to a 'modern classical guitar' with a tension of 5 Kg per string.

[677] Ephraim Segerman, *Early Classical Guitar Strings* (Manchester: Northern Renaissance Instruments, 2009); Segerman, *Early Classical Guitar Strings*.. Segerman states that the issue over Paganini's strings and their examination by Heermann in 1890 was first discussed in *The Strad*, March 1998, p. 201.

[678] Paul Pleijsier, 'Found: A Giuliani Guitar, Kept in a London Bank Vault since 1816', *Soundboard* 29 (2001-2002).; Pleijsier, Gary Southwell and Photographer Klaas Fopma examined the guitar on 2 February 1998 at Coutts & Co., London, with the company archivist, Tracey Earl. Earl had previously, in 1990, published the story of the former owner, Christopher de Monte, in Coutts's house journal, *The Three Crowns*, reconstructing his biography from letters and diaries. Pleijsier published in German, shorter versions of the *Soundboard* article, in *Gitarre & Laute*, vol. 21, nos. 4 & 5 (1999).

makes this a possibility.[679] If so, it would suggest an unusual stringing practice was used on this guitar, with only the first string being of plain gut, while the other five are silk wound with silver or silver-plated copper. Pleijsier gives the diameter of the plain first string as 0.89 mm, and calculates it would give a tension of over 13 Kg if tuned to *e'* with the guitar in a concert tuning of *a'* = 415 Hz. Although Pleijsier notes this is a very high tension, he reports that Segerman informs him that theoretically a plain gut string will not break at this pitch. Following Segerman's theory that in the case of a wound string, the silk core [to support the over-winding] must contain enough filaments and in practice be made thicker, he states: 'A more likely candidate to snap at concert pitch would be the wound second string [gauge: 0.79 mm] with its thin silk core'.[680] It is possible, as Pleijsier also surmises, that the strings may have been matched to give a good tension when tuned below concert pitch, in circumstances that may have hypothetically been more suited to accompany a particular singer's vocal range.

It would appear that Giuliani's guitar in 1816 had heavier strings than Shelley's in 1822, and that if the strings Paganini sent to Schott, probably around the same time as Shelley acquired his guitar (Paganini died in 1840) were for the first and second string, then they were comparable.

[679] There is a difference of opinion as to how many strings were attached to the guitar in 1989 when it was given to restorer John Lodge: he remembers none. Tracey Earl, Coutt's archivist, recalls three strings attached and some more rolled up at the bottom of the case.
[680] Pleijsier, 'Found: A Giuliani Guitar, Kept in a London Bank Vault since 1816'.

Table 10[681]

String gauge comparison of the strings on the Shelley guitar, the Giuliani guitar and those sent by Paganini to Schott							
Shelley's examined in 1992 with replaced third, and presumed original from c1822		Presumed third in 1898		Giuliani's examined in 1998; presumed original strings from 1816		Paganini's examined in 1890; presumed strings from c1822	
	mm			mm		mm	
First [*e'*]	0.61		plain	0.89	plain	0.64	plain
Second [*b*]	0.74		plain	0.79	wound	0.81	plain
Third [*g*]	0.66	1.14	plain	0.89	wound		
Fourth [*d*]	0.89		wound	1.17	wound		
Fifth [*A*]	1.24		wound	1.30	wound		
Sixth [*E*]	1.47		wound	1.50	wound		

9.2 String manufacture in mid-nineteenth-century North America

Philip Gura's examination of the accounts and business records of James Ashborn's Connecticut guitar factory shows that in 1851 the three lower strings of the guitar, made of a silk core over-wound with silvered metal, were manufactured in-house.[682] For two decades from the late 1840s, Ashborn and Hungerford were the largest producers of parlour guitars in America.[683] At first the strings supplied with their instruments were purchased from Firth, Pond & Co. or William Hall & Son, but in 1851 Ashborn and Hungerford started producing them in-house, initially for their own use and subsequently, in 1852, supplying to others—including Hall, eventually. This necessitated building and equipping a dedicated workshop as well as further specialized training for members of the workforce. Gura notes the importance of this change from

[681] Measurements of the strings associated with the 'Shelley' and 'Giuliani' guitars and Paganini's order were originally given in thousands of an inch.
[682] Philip F. Gura, "Manufacturing Guitars for the American Parlor: James Ashborn's Wolcottville, Connecticut, Factory, 1851-1856," *The Crossroads of American History and Literature* (University Park: Pennsylvania State University Press, 1996), p. 209-210.
[683] Austin Hungerford was Ashborn's business partner.

artisanal worker to manufacturer, which divided labour into specialist tasks within the same factory.[684] He continues:

> Once Ashborn and Hungerford decided to manufacture strings on a large scale, they also began to take as credit from the New York firms large amounts of different-gauged silver wire, and of the silk thread around which the wire was wrapped to make the three lowest strings of the guitar. In September 1851 for example, they paid $4.50 for "16 [presumably a gauge] Silver wire" and $6.75 for "no. 18," and that same month returned to Hall twelve dozen "No. 6 Strings" for $7.80, and the same quantity of "No. 5" for $6.60. They also purchased "no. 13" gauge wire, presumably for the fourth strings. Interestingly, they never recorded the manufacture of the first, second, or third strings, usually made from twisted strands of gut, but only the three larger-gauge strings.[685]

Gura adds in a footnote, "nor do the records show Ashborn and Hungerford purchasing the lighter gauge strings or the materials from which to manufacture them. Presumably, they continued to acquire these from other sources, though the items do not appear in the credits of the New York firms' accounts, nor of anyone else's."[686] It would be extremely unlikely that Ashborn and Hungerford supplied guitars without the trebles fitted, even if their own string manufacture was only of the wound basses.

The Washburn & Moen Manufacturing Company's sizes for the thicknesses of music wire, for the gauges mentioned: 13, 16 and 18 (for making the 4th, 5th and 6th strings respectively) were, 0.031" 0.78 mm, 0.036" 0.91 mm, and 0.039" 0.99 mm.[687] However, these sizes of 'silvered wire', when wound on to a silk core, would have produced overly large strings, and with a diameter considerably greater than the three basses found with the Giuliani guitar at Coutts. It follows then that the system for measuring the diameter of silver wire for over winding must have differed to that of steel music wire.

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[684] Gura, *The Crossroads of American History and Literature*, p. 209.
[685] Gura, *The Crossroads of American History and Literature*, pp. 209-210. $7.80 is approximately half the cost a gross of simple, single spun, guitar sixth strings' listed price in Lyon & Healy's 1884 catalogue.
[686] Gura, *The Crossroads of American History and Literature*, p. 210.
[687] Sizes, 'Music Wire Guages', Sizes Inc., http://www.sizes.com/materls/wire_music.htm. [Accessed 1 September 2012]; Charles Nutt, *History of Worcester and Its People*, vol. 3 (New York, NY: Lewis Historical Publishing Company, 1919). Ichabod Washburn had begun manufacturing wire by 1831. He took his son-in-law Philip Moen on as a partner in 1851, and during the 1850s the firm led the field in piano wire production. In 1889 the firm was the largest employer in Worcester with 3,000 employees. It became part of the American Steel and Wire Company in 1899.

Pasquale Vinaccia is credited with first using steel for the first and second courses of the Neapolitan mandolin in c1835.[688] The tension created by tuning the first course to a pitch of *e*'' at a string length of 330 mm [13"] is comparable to that of first string of a guitar tuned to *e*' with double the string length, but, although theoretically it would have been possible, there is no evidence of the guitar being strung with steel in Europe or America at this time. Likewise there is no evidence of the widespread use of the mandolin in America before the debut of the Spanish Students in 1880.[689] However, it does appear that steel was a component in guitar string manufacture there before then.

Penny, in her *Cyclopaedia* (1863), has an entry for "Musical String Makers":

> The manufacture of strings for musical instruments is carried on as a separate branch. A German violin maker told me that women are employed in Germany in winding wire for guitar strings. I find they are also in a factory in Connecticut, and the manufacturer said they could earn as high as $9 a week. It is rather severe on the fingers, but that can be avoided to some extent by wearing a glove finger [sic]. In New York, it is mostly done by Germans and French, who have taken the trade from Americans. The preparing of catgut from the intestines of sheep and goats, and making it into strings, is carried on mostly in Germany, and some women are employed at that. Most metal strings are of steel, and covered with fine wire of other metals. Mrs. Z, whose husband, when living, manufactured covered strings for musical instruments, told me, she and her daughters had often assisted in covering guitar strings and the lighter piano strings. She thinks a person of good abilities could learn it in from two to four weeks, with an attentive instructor. She usually rested against a bench while employed. A good worker will earn from $3 to $5 per week. She has never heard of any but English and German women engaged in it. In some of the uptown shops the machinery is moved by steam, but it does not answer so well, because it is not easily slackened or checked. Harp strings and the larger piano strings cannot be made by women, because of the strength and firmness required.[690]

This implies that Mrs. Z's husband made wound steel-cored guitar strings prior to 1863, with the family helping, and that this was common practice in string winding factories of the period. The entry does not elucidate whether plain steel strings, as used for the first and second trebles of the guitar, were being made there, but if the bass cores were of steel, it is possible that they were. Penny also remarks upon the still sizeable trade in

[688] Tyler and Sparks, The Guitar and Its Music : From the Renaissance to the Classical Era; Wölki, History of the Mandolin : The Instrument, Its Exponents, and Its Literature, from the Seventeenth until the Early Twentieth Century.
[689] Noonan, *The Guitar in America: Victorian Era to Jazz Age*; Ruppa, 'The Mandolin in America after 1880 and the History of Mandolin Orchestras in Milwaulkee, Wisconsin'.
[690] Virginia Penny, *The Employments of Women: A Cyclopaedia of Woman's Work* (Boston: Walker, Wise & Co, 1863), pp. 463-464.

imported gut strings as well as the ethnicity of the workers employed. However, it is not known whether the factory in Connecticut was Ashborn's, and it may have been another venture. The area had established trade in various craft-based activities previously that were in the process of shifting from an artisanal base to newly developing forms of manufacture, of which musical instrument making was one.[691]

In describing the area bordering the Naugatuck River in Connecticut in the nineteenth century, Cowles states that from the head of the river at Torrington, now the site of Wolcottville, Ashborn's factory location, there were four large dammed reservoirs created within six miles.[692] He presents a picture of an area that, by the latter part of the century, saw an expansion of brass and copper production, founded upon easily obtained water privileges that had powered a brass-rolling industry begun in the second decade of the nineteenth century. The wooded hills that ran steeply down to the river provided the timber with which to feed the fires to anneal the metal, while the power supplied to the mills from the harnessing of the river also provided energy for offshoots of that manufacturing industry. The result was that the area became 'a great centre for the reworking and consumption of metal'.[693] It is perhaps no surprise then to find evidence of a string-winding factory based in Connecticut, where, as in Penny's descriptive encyclopaedia, silvered-wire was used to cover wound strings, whereas previously both copper and brass had been used for this purpose.

Further evidence of the manufacture of steel strings and improvements to their production in the late 1850's, albeit for the piano, can be found in a patent for *Improvement in Metal Strings for Piano, &c*, received by J. B. Thompson of Philadelphia, Pennsylvania on 29 November 1859:

[691] Gura, *The Crossroads of American History and Literature*, p. 210.
[692] Alfred A. Cowles in Chauncey M. Depew, *1795-1895. One Hundred Years of American Commerce ... A History of American Commerce by One Hundred Americans, with a Chronological Table of the Important Events of American Commerce and Invention within the Past One Hundred Years* (New York,: D. O. Haynes & co., 1895).
[693] Alfred A. Cowles in Chauncey M. Depew, *1795-1895. One Hundred Years of American Commerce ... A History of American Commerce by One Hundred Americans, with a Chronological Table of the Important Events of American Commerce and Invention within the Past One Hundred Years* (New York,: D. O. Haynes & co., 1895).

> My invention consists in the employment for strings of piano-fortes and other stringed musical instruments of hardened and tempered steel wire, such wire being less brittle and having greater tenaciousness of sound and producing more brilliant tones in its vibrations than the steel music wire heretofore used, which has always been made hard by repeated drawing in a cold state without annealing.[694]

The patent then goes on to describe the annealing process, which 'give[s] it a perfect homogeneousness of structure or texture'. The claim here is that the improved, less brittle wire is better able to vibrate resulting in a superior sounding string, suitable not only for the production of piano strings but for those of other stringed instruments as well.

Edwin H. Hill's patent *Improvement in Annealing and Tinning Wire* (24 September 1872) provides another example of developments in the mechanisation of wire plating in New England.[695] Not only does the patent make claim to the wholesale manufacture of 'tinned' wire, but also directly references wire for musical instrument string making. Hill gives his address as Worcester, Massachusetts, relatively near to the locations of both Ashborn's operation and the one that Penny describes. He outlines one of the benefits of the wire manufactured from this improvement as:

> For covering the bass-strings of pianos and similar instruments the soft and pliable wire is preferable, as it hugs closer and winds more uniformly upon the central wire, while the strings formed of soft wire produce a clearer and more perfect tone than do those wound with a stiff wire, which is liable to spring away from the central wire and produce a jarring tone when the string is vibrated. The clearness of tone is important; and copper wire has heretofore been much used for the purpose of winding the strings, owing to its extreme pliability; but it has been found upon trial that tinned iron wire, made by my improved process, above described, is a superior article for the purpose, and large quantities are at present being used therefore'.[696]

According to Ayars, around the mid 1830s Ira Johnson White, one of two respected violinmaking brothers in Boston, was reported to have possessed a string winding

[694] J. B. Thompson. 1859 Improvement in Metal Strings for Piano, Etc. US Patent 26,304, 1859, and issued 29 November 1859.
[695] Edwin H. Hill. 1872 Improvement in Annealing and Tinning Wire. US Patent 131,680, 1872, and issued 24 September 1872.
[696] Hill. Improvement in Annealing and Tinning Wire. Worcester, Mass is approximately 100 miles from Ashborn's factory in Wolcottville, Connecticut.

machine, and to be the first there making wound violin strings.[697] His brother, Asa Warren White, advertised 'G' [*g*] strings of 'my own make', which indicates he too was winding strings. Even though these are violin and not guitar strings, the brothers' activity demonstrates the emergence of covered string making in America before the mid-nineteenth century, alongside the importation of European strings.

To summarise, instrument string winding was already carried out in North America in the years leading up to the time when Ashborn & Hungerford started their string manufacturing division in the 1850s and, as Penny shows, it had become a recognised manufacturing occupation by the 1860s.

Although specified as an 'Improvement in Machines for Covering Piano-Strings', the patent awarded two years later to Charles Reinwarth of New York, [N. Y.,] on 25 August 1874, exemplifies the ongoing advances in the mechanisation of musical instrument string-winding technology as a whole.[698] Evidence of these developments are seen less than a year later on 23 March 1875, in a United States patent received by James Baillie Hamilton of University College, Oxford, England, for 'The Improvement in Strings for Musical Instruments'. His invention which appears to offer a revolutionised method of winding, claims 'A string for musical instruments, composed of a coiled wire or metallic strip, flattened in a direction parallel with the axis of the coil, in the manner and for the object specified'.[699]

Improvements to the composition of strings and string-winding technology continued to be seen in the patents of Henry W. Gray, on 2 April 1878,[700] and Mahlon S. Ludwig, on 22 November 1884,[701] both residents of Philadelphia, Pennsylvania. The specifications of these are for the composition of the windings to steel piano strings, applied through the process of electro-gilding. Gray claims that 'the object of my invention is to render

[697] Ayars, *Contributions to the Art of Music in America by the Music Industries of Boston, 1640 to 1936*. Ira J. White's son, Ira E. White, carried on the business making and repairing violins, basses, harps, drums and guitars.
[698] Charles Reinwarth. 1874 Improvement in Machines for Covering Piano-Strings. US Patent 154,342, 1874, and issued 2 July 1874.
[699] John Farmer James Ballie Hamilton. 1873 Improvement in Strings for Musical Instruments. US Patent 160,173, 1873, and issued 25 June 1873.
[700] Henry W. Gray. 1876 Improvement in Piano-Strings. US Patent 202,020, 1876, and issued 2 April 1878.
[701] M. S. Ludwig. 1884 Piano Forte String. US Patent 303,651, 1884, and issued 19 August 1884.

such strings proof against the deteriorating effects of moisture, and at the same time to render the tones emitted by the strings more clear and resonant'.[702] Ludwig's patent describes the metallic composition of the strings in more detail, but in common with Gray's emphasises a compound, that includes the benefits of using gold, over the previous practice of a simple copper winding.

9.3 Strings offered in North-American musical merchandise catalogues

Lyon & Healy's 1884 catalogue of *Musical Merchandise* lists guitar strings of differing compositions.[703] First and second strings were offered in both gut and steel, plain [non wound] thirds in gut. The third, fourth, fifth, and sixth strings were available as 'wound', either with a silk core, a steel core, or a core of a compound of silk and steel. All of these variants were then over-wound with an outer layer of what is described as either 'silvered wire' or 'silver-plated wire' [tables 1-2]. To complete whole sets of strings, in which, as in its 'American Wound' brand, the wound strings have either a silk or compound silk and steel core, the catalogue states that gut violin strings *e*, *a,* and *d* must be used for the guitar *e′*, *b*, and *g* strings, respectively.[704]

[702] Ludwig. Piano Forte String.
[703] Lyon & Healy, *Catalogue of Musical Merchandise* (Chicago: Lyon & Healy, 1884), p. 95. This catalogue was a revised edition in the company's twenty-first year; making 1863 the first year Lyon & Healy's catalogue was published. These catalogues were for trade use.
[704] Lyon & Healy, *Catalogue of Musical Merchandise* (1884), p. 95.

Table 11

American Wound guitar strings	
For strings 1 to 3 use	Violin gut strings *e, a* and *d*.
For string 4 (*d*) use	String no. 11: white floss silk centre with a silver wire covering;
alternatively use	String no. 14: compound white floss silk and steel wire core, covered in silver-plated wire;
or use	String no. 18: white floss silk covered in silver-plated wire with knotted ends.
For string 5 (*A*), use	String no. 12: white floss silk centre with a silver wire covering;
alternatively use	String no. 15: compound white floss silk and steel wire core, covered in silver-plated wire;
or use	String no. 19: white floss silk covered in silver-plated wire with knotted ends.
For string 6 (*E*) use	String no. 13: white floss silk centre with a silver wire covering;
alternatively use	String no. 16: compound white floss silk and steel wire core, covered in silver-plated wire;
or use	String no. 20: white floss silk covered in silver-plated wire with knotted ends.

Table 12.

Steel guitar strings	
For string 1 [*e'*] use	String no. 5: steel wire or string no.8, silver-plated steel wire.
For string 2 [*b*] use	String no. 6: steel wire or string no.9, silver-plated steel wire.
For string 3 [*g*] use	String no. 7: steel wire covered with silvered wire.

With strings sold both by the dozen and the gross, the listed alternative compositions provided the player with various stringing possibilities. Earlier in the nineteenth century, gut treble strings had been used in combination with covered bass strings consisting of a silk core overwound usually with copper. It seems likely that by offering the combination of gut trebles with basses of silk covered with silver-plated wire as a standard, Lyon & Healy was continuing that stringing tradition, enhanced by the silver plating. The wound bass strings whose core consisted of a compound of silk and steel on the other hand, would, owing to their greater mass, have produced a more powerful sound than those with silk core, as well as a more sustained tone because of

the steel core's lower coefficient of internal damping. The catalogue recommends this type of string to complement the steel treble strings. While in 1884 Lyon & Healy offered no bass strings made solely with a steel core, the third was available in this composition as steel covered with silvered-wire.

Contemporaneously, Haynes's catalogue of 1883-1884 also offered both gut and steel guitar strings. The steel sets are described as 'Steel wire, silver-plated' for the first and second strings and 'Steel wire core, covered with silk' for the third to the sixth strings. This last is an unlikely composition as described, and although a metal over-winding outside the silk is not mentioned, its presence must be assumed.[705] Alternatively it might have been that the core was silk or silk and steel, and the over-winding was silver-plated wire—as in the Lyon & Healy strings—but this accords less well with the description.

In its 1889 catalogue Lyon & Healy listed sets of Steel Guitar Strings for which the lower four strings are given as 'steel wire, wound, silver-plated', to be paired with silver-plated steel for the top two.[706] Significantly then, in the five years since the 1884 catalogue, wound strings with a purely steel core were newly offered. Although in 1889 for the sets of steel strings Lyon & Healy offered only a wound third, in 1892 Herman Sonntag was listing an unwound silver-plated third also, and it would appear that the plain steel third option became available in the very early 1890s.[707] In its catalogue from 1900, Lyon & Healy was listing this option too, suggesting that the thickness of the string was not making it overly stiff (with unacceptable inharmonicity), and that it had enough mass to be tuned to *g* without breaking when the instrument was at concert pitch (tables 3-5).[708]

By 1900, Lyon & Healy was offering even wider choices of both brand and material composition that included superior Russian goat gut and three grades of wound steel,

[705] John C. Haynes & Co., *Illustrated Catalogue of Musical Instruments, Strings, and Trimmings of Foreign & American Manufacture*, rev. ed. (Boston: The Company, 1884), p. 82.
[706] Lyon & Healy, *Catalogue of Musical Merchandise* (1889), p. 187.
[707] Lyon & Healy, *Catalogue of Musical Merchandise* (1900), pp. 321-322.
[708] Unless concert pitch was dropping (at least for guitars with steel strings), the use of steel as a string material would have been a major factor in increasing string tension. In the last quarter of the nineteenth century, a number of patent applications were made in America for tailpiece improvements, designed to help the guitar withstand this rising tension.

besides compound silk and steel [Figs. 1a and 1]).[709] Wound strings with a white floss silk core were the most expensive; followed by those with a Damascus steel core, while 'Finest English Steel' strings were the least costly.[710] The catalogue that year also listed 'Specially Tested' guitar strings with polished gut for the three trebles, and overwound silk for the basses. As is suggested from the title, these strings were more expensive (tables 6-9).

Fig. 140 a.

Fig. 140 b.

Figs. 140 a & b. String packets, *Catalogue of Musical Merchandise* (Chicago, Ill: Lyon & Healy, 1889).

[709]Lyon & Healy, *Catalogue of Musical Merchandise* (1900), 321-322. Russian goat gut strings (*Kosie Flaki*, Russian goat gut), strings were expensive compared to silver-plated steel strings. The D string, which could be substituted for the guitar third (g) on the guitar cost $10.00 per thirty strings. The string length was 2.5 times longer than the violin length, but that is only good for one guitar string length. In comparison, a package of wound silver-plated steel guitar thirds was only 55 cents per dozen.
[710]Lyon & Healy, *Catalogue of Musical Merchandise* (1900), 321-322. The third string was used for comparison of manufacturing type and retail price. Covered fourth, fifth and sixth strings are also offered in these same materials.

Lyon & Healy's 1903 catalogue listed 'Contra Bass Guitar Strings', to be tuned *g, d, B-flat, F, C and G1.* Violin gut *a* and *d* strings were recommended for the two highest strings, while the third to sixth strings were listed as compound silk and steel core, overwound with silver-plated wire [table 10]. The tuning given for the contra bass guitar here differs from both that of the ten-to-thirteen-string Austrian *kontragitarre* and the Symphony Harp Guitar (originally designed by Knutsen), indicating a further variant on the instrument.[711]

By 1925 the catalogue shows an increase of hundred percent since 1884 in the retail price of strings, and a comparison between gut and silver-plated treble strings, shows that gut was approximately four to six times the price, depending on the brand (although it would appear that covered strings, both with a silk, and silk and steel core, were by the dozen, some 20 cents cheaper in 1889 than in 1884).[712] [tables 11-13]. Besides the Bell brand of strings introduced in 1900, the National Musical String Company now appeared as manufacturers, offering its Black Diamond brand. Here, the first and second strings were described as silver-plated steel wire, and the wound strings were available with three different types of central core: steel, silk and steel, and silk. [Although no specification of the material used for over-winding the core is mentioned, it would seem likely to have continued to be *Silvered wire* for this purpose]. Additionally, listed to these standard strings were Bell Brand Auditorium Strings, for which all the strings are forty-two inches in length, the four covered strings wound on 'silver-plated steel', the top two plain 'silver-plated steel'; Bell Brand Hawaiian Guitar Strings, for which the top three strings are of silver-plated steel and the bottom three 'wound on silver-plated steel', and Lyric Brand Contra Bass Strings, described as 'wound on silk and steel', their tuning given as the same as that of the thirteen-string *kontragitarre* and harp guitar (descending chromatically from *E-flat* below the standard guitar sixth string).

[711] Lyon & Healy, *Catalogue of Musical Merchandise* (1903), pp. 294-295. The four extra sub-bass strings of the mid-nineteenth-century *kontragitarre* were typically tuned diatonically, descending in tones. The sub-basses of the evolved thirteen-string instrument were tuned chromatically, descending in semitones.
[712] Lyon and Healy, *Catalogue of Musical Merchandise*, 62nd year edition ed. (Chicago, Ill: Lyon & Healy, 1925), p. 159.

Table 13

Lyon & Healy	
English steel core wound with silver-plated wire	30 cents per dozen
Damascus steel core wound with silver-plated wire	80 cents per dozen
American Wound white floss silk core with silvered wire	65 cents per dozen
Bell Brand	
Steel wire core wound with silver-plated wire	60 cents per dozen
Compound silk and steel core wound with silver-plated wire	88 cents per dozen
White floss silk core wound with silver-plated wire	$1.05 per dozen

Table 14

Lyon & Healy 'American Wound' fourth string	
White floss silk core wound with silvered wire	70 cents per dozen
White floss silk core wound with silvered wire, fancy coloured and knotted ends	80 cents per dozen
White floss silk core wound with silvered wire, Conservatory, extra quality, green silk ends	$1.50 per dozen
Lyon & Healy 'Specially Tested' fourth string	
White floss silk core wound with silver wire, superfine quality	$2.20 per dozen

The descriptions and prices for the 'Specially Tested' strings are:

Table 15

Lyon & Healy 'Specially Tested' strings		
1 [*e'*]	Gut, polished, 1 length, superfine quality	$3.18 per dozen
2 [*b*]	Gut, polished, 1 length, superfine quality	$3.18 per dozen
3 [*g*]	Gut, polished, 1 length, superfine quality	$3.18 per dozen
4 [*d*]	White floss silk core wound with silver wire, superfine	$2.20 per dozen
5 [*A*]	White floss silk core wound with silver wire, superfine	$2.43 per dozen
6 [*E*]	White floss silk core wound with silver wire, superfine	$2.68 per dozen

Complete sets of strings were offered in the following materials and prices:

Table 16

No. 25: Fine quality [presumably American Wound], gut trebles and over-wound silk-core basses[713]	$9.00 per dozen
No. 35: Steel [presumably English], core over-wound with silver-plated wire[714]	$2.70 per dozen
No.36: Damascus steel core over-wound with silver-plated wire	$5.00 per dozen
No. 535: Bell [brand] steel core over-wound with silver-plated wire	$3.30 per dozen

Table 17

Lyon & Healy: Stringing materials, combinations and year [first] listed			
	1884	1884	1889
1 [*e'*]	Gut	Steel [plain]	Steel, Silver Plated [plain]
2 [*b*]	Gut	Steel [plain]	Steel, Silver Plated [plain]
3 [*g*]	Gut	Wound Steel	Wound Steel
4 [*d*]	Wound Silk	Wound Silk & Steel	Wound Steel
5 [*A*]	Wound Silk	Wound Silk & Steel	Wound Steel
6 [*E*]	Wound Silk	Wound Silk & Steel	Wound Steel

Table 18

Herman Sonntag: Stringing materials, combinations and year listed			
	1892	1892	1892
1 [*e'*]	Gut	Steel [plain]	Steel, Silver Plated [plain]
2 [*b*]	Gut	Steel [plain]	Steel, Silver Plated [plain]
3 [*g*]	Gut	Wound Silk & Steel	Steel, Silver Plated [plain] or Wound Steel
4 [*d*]	Wound Silk	Wound Silk & Steel	Wound Steel
5 [*A*]	Wound Silk	Wound Silk & Steel	Wound Steel
6 [*E*]	Wound Silk	Wound Silk & Steel	Wound Steel

[713] As the strings appear listed in the Lyon & Healy catalogue, 1900, they are simply described as complete sets of fine quality guitar strings. It seems reasonable to presume that Lyon & Healy were packaging a combination of the violin gut strings they advised for the guitar trebles, with the over-wound silk strings, referred to as *American Wound*, they sold for the basses in this stringing preference, to make up complete sets.

[714] As these strings appear listed in the Lyon & Healy catalogue, 1900, they are simply described as complete sets of steel guitar strings. However as their price accords with the difference between Damascus and English steel, it is likely they were of the cheaper English steel variety.

Table 19

Lyon & Healy: Stringing materials, combinations and year [first] listed			
	1900	1900	1900
1 [*e'*]	Gut	Steel, Silver Plated [plain]	Steel, Silver Plated [plain]
2 [*b*]	Gut	Steel, Silver Plated [plain]	Steel, Silver Plated [plain]
3 [*g*]	Wound Silk	Wound Silk & Steel	Steel, Silver Plated [plain]
4 [*d*]	Wound Silk	Wound Silk & Steel	Wound Steel
5 [*A*]	Wound Silk	Wound Silk & Steel	Wound Steel
6 [*E*]	Wound Silk	Wound Silk & Steel	Wound Steel

Table 20

Contra Bass Guitar Strings	
Third string [B_b]	$1.25
Fourth string [*F*]	$1.25
Fifth string [*C*]	$1.88
Sixth string [$G_{1]}$	$2.25

Table 21

Lyon & Healy 'Specially Tested'	Gut	1st string [*e'*]	$4.50 per doz
Black Diamond	Silver-plated steel	1st string [*e'*]	$1.06 per doz
Bell Brand	Silver-plated steel	1st string [*e'*]	$0.72 per doz

Earlier in 1882, J. Howard Foote's catalogue of musical instruments and merchandise listed the guitars and strings they supplied but also provided opinion on their use, suggesting that some players tuned a semitone below concert pitch for vocal accompaniment.[715]

> *Concerning Concert Guitars*: A popular fallacy exists in the idea that the *body* of a Guitar, to be used as a Concert or Solo instrument, must be extra-large in size. In the course of many experiments, I have discovered that Guitars of *medium size* are the most effective, and of the fullest tone for concert or solo playing, *provided the model is of right proportions*. No's 6080-6082 are true Concert size, and can be tuned to high concert pitch without breaking the strings. No's 6083, 6084 are very large size, with long compass (or divisions of the scale) and should be tuned half a note below concert pitch, to save the strings. They are specially adapted to the human voice, possessing, as they do, a deeper volume of tone *near the performer*, but not as brilliant and powerful at a distance as the concert size. The large-sized Guitars are therefore called the *Amateur* model, and are the best for parlor use, as an accompaniment to the voice.[716]

Foote's advice on the best size of guitar for concert performance or in the parlour is somewhat at odds with the view, or at least the description used today, when referring to these instruments historically. When now used, the term 'parlor guitar' commonly refers to smaller bodied instruments, while Foote is clearly recommending smaller-sized guitars for concert performance, and larger bodied models with longer scale lengths for the 'parlor'.[717]

By advising tuning the larger-bodied *Amateur* models [6083 & 6084] (with their longer scale length) a semitone below concert pitch to 'save the strings', infers that the medium-sized *Concert* models [6080-6083] had a shorter scale length thus allowing their strings to be 'tuned to high concert pitch without breaking'.[718] Foote's statement,

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[715] Foote, *J. Howard Foote's Catalogue of Musical Instruments, Strings, Musical Boxes, and General Musical Merchandise. Complete Ed,* pp. 56-66.
[716] Foote, *J. Howard Foote's Catalogue of Musical Instruments, Strings, Musical Boxes, and General Musical Merchandise. Complete Ed,* p. 57.
[717] Foote's advice on the best size of guitar for concert performance or in the parlour is somewhat at odds with the view, or at least the description used today, when referring to these instruments historically. When now used, the term 'parlor guitar' commonly refers to smaller bodied instruments, while Foote is clearly recommending smaller-sized guitars for concert performance, and larger bodied models with longer scale lengths for the 'parlor'.
[718] Lyon & Healy, in 1889, describe their 'Grand Auditorium Size' *Washburn* guitar (402 & 403) as their largest model, having the 'longest used' scale length at 25 3/8 inches,[718] and suggest this size of guitar as a more powerful alternative when playing in [club] ensembles with mandolins or banjos. Foote's advice on tuning the larger-bodied *Amateur* models (6083 & 6084), with their longer scale length, a semitone below concert pitch to 'save the strings', infers that the medium-sized *Concert* models (6080-6083),

claiming that their instruments were specifically 'adapted to the human voice' could be seen as another example of a manufacturer's hyperbolic sales pitch, but perhaps may have been a device to ensure that their large guitars were not, once sold, over-stressed due to high string tension. In the catalogue, Foote disassociated himself from the use of steel strings for the guitar, but at the same time did not refrain from offering them as a retail item due to their popular demand. The following is his printed disclaimer:

> *Wire Strings For Violin, Guitar And Banjo.* The large demand for strings of *wire* is one of the musical absurdities of the period. We do not recommend them in any sense. They are severe on the fingers, wearing to bows, and trimmings of the instruments. Their tone is metallic and unmusical. No artist will ever use them. We quote them only as an article of trade.[719]

Foote's catalogue of 1882-3 prices strings by the gross, while the Lyon & Healy catalogue of 1884 does so by the dozen. A later Lyon & Healy catalogue, from 1925, offers strings sold either by the dozen or gross, where it is apparent that a discount of 33.3% was applied to gross sales. By extrapolating this formula and multiplying by

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whose strings could be 'tuned to high concert pitch without breaking', had a shorter scale length. Apart from the statement by Lyon & Healy in 1889 regarding the scale length (25 3/8 inches) of their Grand Auditorium model and giving that of the Contra Bass Guitar as 27 inches, neither theirs nor the merchandising catalogues of Foote, Gemünder or Haynes expressly specify the scale length of their own standard and concert instruments. However Hubert Pleijsier,[718] who has examined a large number of extant *Washburn*, and cheaper, Lyon & Healy guitars from between 1883 and 1940, gives the scale lengths, accepting slight variations in individual instruments, as:

1884-1887			
Standard	(Size 1)	24 ¼ inches	[616.95 mm]
Concert	(Size 2)	24 ¾ inches	[628.65 mm]
Grand Concert	(Size 3)	25 inches	[635.00 mm]

And additionally

1887-1922			
Auditorium	(Size 4)	25 ½ inches	[647.70 mm]
Contra Bass Guitar	(Size 5)	27 inches	[685.80 mm]

Martin used a comparable scale length of 24.9 inches on its standard (size 1), concert (size 0), and grand concert-sized (size 00) guitars of this period, and it would seem likely that the concert instruments Foote is referring to would have had a similar scale length to both Martin and Lyon & Healy.

[719] Pleijsier, *Washburn, Prewar Instrument Styles, Guitars, Mandolins, Banjos and Ukeleles 1883-1940*, p. 65.

eight the prices quoted for strings in the Lyon & Healy 1884 catalogue, it is possible to compare string prices charged by the two suppliers.

Foote offered two qualities of what he describes as 'Guitar Treble Strings of Wire, plain steel and best plain steel silver-plated'. In both qualities, the third was a wound string. A gross of first strings of 'plain steel' cost $3.60, while the same quantity and size of best 'steel silver-plated' strings was $5.40.[720] The Lyon & Healy prices, albeit for a year later, were $4.00 for the former and $5.05 for the latter (a smaller difference between the two).[721] The third string with a plain steel core, and described as covered with 'silvered wire', cost $6.00 per gross from Lyon & Healy and $6.30 from Foote, who describes the string as being 'wound on steel'. Foote additionally offered another grade of third, described as 'wound on steel, silver plated', for $8.40 per gross.

Table 22

	1883/4 strings per gross	Standard quality Plain steel	Best quality Silver plated
J. W. Foote	*e'* strings	$3.60	$5.40
Lyon & Healy	*e'* strings	£4.00	$5.00
J. W. Foote	*g* steel-core	$6.30	$8.40
Lyon & Healy	*g* steel-core silvered wire	$6.00	n/a

Foote offered three grades of wound bass strings, emphasizing the qualities of the Genuine Spanish, and the even higher grade Genuine Spanish Artist Strings. Lyon & Healy's American Wound strings were cheaper, with both a wound silk and a wound silk and steel fourth costing $9.05 per gross.[722] Foote's equivalent wound silk retailed at $9.60 per gross and Genuine Spanish at $11.60 per gross, with Genuine Spanish Artist, with fancy silk ends, at $15.00 per gross.

[720] Foote, *J. Howard Foote's Catalogue of Musical Instruments, Strings, Musical Boxes, and General Musical Merchandise. Complete Ed,* p. 57. Foote's catalogue prices strings by the gross, while Lyon & Healy's contemporaneous catalogue prices by the dozen. The later 1925 Lyon & Healy catalogue offers strings sold either by the dozen or gross, where it is apparent that a discount of 33.3% was applied to gross sales. By extrapolating this formula and multiplying by eight—the prices quoted for strings in the Lyon & Healy 1884 catalogue—it is possible to compare string prices charged by the two suppliers.
[721] Lyon & Healy, *Musical Merchandise Catalogue* (1884), p. 95.
[722] Strings of the same composition from Lyon & Healy, but instead offered fancy colored and knotted ends for fastening, costing more, at $11.05 a gross.

Table 23

	1883/4 strings per gross	Standard	Best
J. W. Foote	*d* silk core o/wound silvered wire	$9.60	$11.60
Lyon & Healy	*d* silk core o/wound silvered wire	£9.05	n/a

Sets of guitar strings were also available in boxes. Lyon & Healy's catalogue from 1889 lists No. 25 as complete sets of professional guitar strings, superfine quality at $9.00. The composition of these particular strings is not given, but as the numerical listing follows the same sequence given to that of the American Wound brand of strings, it may be that they are of the same make-up.

Steel wire for strings was also supplied on spools. Herman Sonntag's 1892 catalogue offers steel wire, described as tinned (a cheaper alternative to silvered) for the guitar first string at 70 cents per dozen (this same gauge string is also alternatively named as violin *a*), the second at 58 cents per dozen, and the third, presumably also unwound, for 55 cents per dozen.[723] Sonntag's strings appear to be a little cheaper than those offered in this format by Lyon & Healy which, in 1889, was retailing the first at 80 cents per dozen and the second and third at 70 cents per dozen.

August Gemünder's catalogue of 1895 listed wound guitar strings of both a solely silk, and a composite silk and steel core, as well as silver-plated steel for guitar trebles, including an unwound third, and wire on spools for guitar first strings.[724]

August Gemünder & Sons was established in New York in 1846, specializing in the manufacture of violins, and the frontispiece of the 1895 catalogue describes the

[723] Herman Sonntag, *Illustrated Catalogue of Musical Instruments, Strings, Etc.* (New York: H. Sonntag, 1892), p. 182.
[724] Gemünder and August Sons, *Illustrated and Descriptive Catalogue of High-Grade Stringed Instruments Made and Sold by August Gemünder & Sons* (New York: Gemünder, 1895). p.10

company as an 'old reliable violin house'.[725] The catalogue contains various endorsements for their products from both satisfied customers and as reprints of newspaper reviews. One such review, that had apparently appeared previously in the *Mercantile Times* of New York, states that August Gemünder had made guitars (as well as violins) in Europe before moving to America, and that the high standard of their workmanship had prompted a large American importer of European guitars to try and persuade Gemünder to start their manufacture soon after arriving in New York. According to the author of the article Gemünder had at that time refused, claiming that to realise their true potential he was only interested in making them with the same care and attention he gave his violins (inferring that he did not want to mass produce an inferior instrument). The article goes on to proclaim, that as an established violin-making firm, it had now [in 1895] applied its scientific violin-making principles and standards to producing high quality guitars. By 1895 then, the company was also offering for sale various models of its own guitars, as well as mandolins and zithers, together with accessories such as strings. Although its string merchandise was geared towards the violin family, no doubt due to its initial success as a violin-making company, it also offered guitar strings. As with other contemporary musical merchandise suppliers, Gemünder directed consumers towards the violin E, A, and D, or E, A, and G strings for the guitar first, second, and third. The composition for the violin E, A, and D strings is not stated in the catalogue, but it can be presumed they were of gut, in keeping with both standard stringing practice at the time and with strings offered by competitors. The [violin] G string however, is described as being 'covered', and is offered with either 'Copper wire, silver plated' or 'Highest grade, pure silver wire': a specific reference to the metal used for the over-winding. The company also offered covered strings for the guitar with both a purely silk, and a silk and steel core, and it would seem likely that the same composition of metal for the over-winding was used.[726] Its Wire Guitar Strings for the top three trebles are described as 'finest English wire, plated' and sold in 'lengths', with the top two strings also available 'on spools'.

[725] Gemünder and August Sons, *Illustrated and Descriptive Catalogue of High-Grade Stringed Instruments Made and Sold by August Gemünder & Sons* (New York: Gemünder, 1895).
[726] Gemünder and August Sons, *Illustrated and Descriptive Catalogue of High-Grade Stringed Instruments* (New York: Gemünder, 1895), p. 10. The Gemünder catalogue also lists silk violin strings 'for summer use'.

The mail order company Montgomery Ward offered guitars and their strings, along with other guitar-related accessories. Its 1894 catalogue stated that it sold only American-made guitars, claiming:

> We guarantee every Guitar in our stock to be absolutely perfect in scale and have a smooth, musical tone. They are made in the largest factories in this country, the workmanship is the very best, and we warrant each instrument regardless of price (for one year), not to crack or warp.[727]

It then issued the following advice regarding stringing:

> We recommend gut and silk wound strings under all circumstances. If steel strings are to be used, however, we suggest that a tail-piece be put on the instrument, otherwise the sounding board is liable to "spring" at the bridge and in time injure the guitar.[728]

This is a clear indication that guitar string tension was rising because of the increasingly common practice of using steel strings. Although warning against their use, Montgomery Ward nonetheless was ready to sell them, offering the combination of steel trebles and wound silk and steel basses alongside gut and silk guitar strings. In recognition of this obvious demand for steel strings, the seemingly contradictory attitude to their use is tempered with the advice they proffered with the entry for guitar tailpieces: 'If steel strings are to be used on a guitar it is essential to the tone and durability of the instrument that they should be attached to a tail piece'.[729] Besides its own range of guitars (singling out its Windsor models in particular), which it claimed were manufactured in some of the best American guitar-making factories, Montgomery Ward also offered two models of Washburn guitars. Hubert Pleijsier claims both Montgomery Ward and the contemporary mail order company, Sears & Roebuck, carried cheaper Lyon & Healy-made guitars besides the top-of-the-line Washburn, and points out that their disclaimers for the use of steel guitar strings are almost word for word revisions of the statement made by Charles N. Post, Lyon & Healy's advertising executive, in that company's 1889 catalogue. It would appear that Lyon & Healy had a close business arrangement with both companies, and likely also supplied them with

[727] Montgomery Ward, *Montgomery Ward & Co. Catalogue and Buyers' Guide 1895* (New York: Skyhorse Pub., 2008), p. 243.
[728] Montgomery Ward, *Montgomery Ward & Co. Catalogue and Buyers' Guide 1895* (New York: Skyhorse Pub., 2008), p. 243.
[729] Montgomery Ward, *Montgomery Ward & Co. Catalogue and Buyers' Guide 1895*, p. 244.

their cheaper guitars, some of which, according to Pleijsier, from 1896 were equipped with steel strings.[730] Alongside guitars, the 1897 Sears & Roebuck catalogue also listed strings and accessories. Although pointedly stating that all strings were imported, somewhat confusingly it continues by claiming that the steel and covered strings were American-made.[731]

9.4 Nineteenth-century North American guitar strings: journal and newspaper adverts

Adverts showing the material composition of strings and their prices can be found from the 1850s onwards in the many city and state North American newspapers, and from the 1880s onwards in the periodicals published by the Banjo-Mandolin-Guitar (BMG) movement. Guitar strings, although often presented bracketed together with those of the violin, banjo and mandolin, are also sometimes advertised separately. Earlier nineteenth-century, references to the guitar in the American press are rare and somewhat isolated occurrences. On 15 January 1811 *The National Intelligencer*, a Spanish guitar was offered for sale in an advert placed by W. Cooper's Music Store.[732] No further mention of the guitar occurs in the same paper until 20 May 1813, when Cooper's advertised guitar strings. Adverts from Cooper's appear again on 3 March 1815 and 12 February 1816, for the sale of Spanish guitars; and on 31 January 1817, offering violin and guitar strings from Naples.

The Spanish guitars sold by Cooper at that time would have been strung with gut trebles and metal (probably copper) overwound silk-core basses. The guitar in Spain at the end of the eighteenth and beginning of the nineteenth century had developed from the five-course to the six-course instrument. Elsewhere in Europe, initially in Italy around 1776,

[730] Pleijsier, *Washburn, Prewar Instrument Styles, Guitars, Mandolins, Banjos and Ukeleles 1883-1940* (Anaheim Hills: Centerstream, 2008), p. 55. Before 1915, Washburn models were designed for gut and silk, although Pleijsier claims that some custom Washburns, constructed for the use of steel, 'implying they were X-braced, and or, fitted with steel bar reinforced necks', were available as a special order from 1889.
[731] Sears, Roebuck and Company, *1897 Sears Roebuck & Co. Catalogue*, reprint (New York, NY: Skyhorse Pub., 2007), pp. 518-535.
[732] W. Cooper, *The National Intelligencer,* 15 January 1811. It is noteworthy that the only earlier reference to a guitar in *The National Intelligencer & Washington Advertiser*, 10 November 1806, is to an English guittar, in a performance with flute.

the double stringing of the five-course instrument was replaced by single stringing, first with five and then six single strings.[733] The term 'Spanish guitar' at this time in North America distinguished the gut and silk-strung instrument, originating in Europe, from the iron- and brass-strung English guittar, which is related to the cittern. Americans associated the six-string guitar – irrespective of design or actual country of origin – with Spain and a rather romantic and impetuous Southern-European character,[734] and so generalised the European guitar in its terminology.

From the 1850s, evidence of guitar string sales appears in newspaper classified advertising more regularly. On January 6, 1852, *The Daily Scioto Gazette* carried a classified placed by D. A. Schutte offering 'a fine assortment of Violin and Guitar strings' alongside a selection of violins 'Just Received Direct from Germany' (priced between $1.25 and $12.00) and a 'superior' guitar ($30.00).[735] Other classifieds placed by Schutte in the same issue of the paper suggest he also sold all manner of hardware, from carriage trimmings to marbles and pistols. A year later, the same paper carried, amongst ads for sugar, molasses and hymnbooks, a classified simply stating: 'Violin and Guitar Strings, for sale by Whittsmore & Saxton'.[736] It would appear that guitar strings and other musical merchandise were commonly featured alongside general items of sale. In New England, geographically separated from *The Daily Scioto Gazette* in Ohio, a classified placed in the *Vermont Patriot & State Gazette* (1853) in a section entitled 'Boston Cards, March 1853', reads, 'Charles Clapp & Co., Sheet Music, Musical Instruments, Umbrellas, Parasols, Canes, Violin, Violoncello, Double Bass, Guitar Strings'.[737]

Advertising for strings in American newspapers from this time appears in three distinct forms: as separately advertised items in the classifieds, as general music-related accessories from musical instrument retailing stores, and also, for sale amongst other non-music related goods that included umbrellas, parasols, canes, tobacco goods,

[733] Thomas F. Heck, 'Stalking the Oldest Six String Guitar', in *Gendai Guitar*, vol. 9, no. 3 (1975), pp. 64-71.
[734] Noonan, *The Guitar in America: Victorian Era to Jazz Age*, pp. 9-11 & p. 42; also see Gura, *C.F. Martin and His Guitars, 1796-1873*, pp. 1-5.
[735] D. A. Schutte, *The Daily Scioto Gazette,* January 6, 1852. Issue 29. Classified Ads, Col. A.
[736] Whittsmore and Saxton, *The National Intelligencer,* April 5, 1811. Issue 107.
[737] Charles Clapp and Co, *Vermont Patriot & State Gazette,* 17 March 1853. Issue 13/337. Classified Ads. Col. C.

stationery, and watches. This trend continued in the 1860s, with guitar strings and other musical merchandise continuing to be sold alongside general hardware items, but additionally, with major musical merchandise companies such as Firth, Pond & Co in evidence promoting their trade with large and impressive ads.[738] One such ad placed for musical instruments that included Mahogany and Rosewood guitars, together with strings for plucked and bowed string instruments, appears in *The Wisconsin Daily Patriot* (1862) (fig. 2).[739] In some classifieds, such as Barker's & Co.'s in *The Hartford Daily Courant* (1865),[740] guitar and violin strings appear separately from banjo strings, while in others, they appear together, such as Frederick Blame's classified ad in *The New York Daily Tribune* (1865): 'Hot Weather violin, guitar and banjo strings, at 25 cts and 35 cts'.[741]

In 1866 both specialized and generalized vendors continued to advertise strings: the *Jamestown Journal,*[742] *Lowell's Daily Citizen,*[743] and *The Macon Daily Telegraph*[744] all carried classifieds offering them sold alongside clocks, and in the *Pacific Commercial Advertiser* in Honolulu, H. M. Whitney was selling "Best Guitar and Violin Strings" alongside general stationary and photographic services.[745] On the other hand, Ludlow Barker & Co.'s ad in the *Hartford Daily Courant* was from a musical merchandise store selling guitar and violin strings,[746] and in the *Salt Lake City Daily Telegraph* (1866), David O. Calder stated that he was an importer of 'all kinds of Musical Instruments and Musical Merchandise' and had 'a fresh supply of the best quality violin and guitar strings, both wholesale and retail'.[747] Throughout the rest of the 1860s and 1870s, guitar 1strings continued to be available from musical instrument dealers, individuals, and general goods vendors.

Strings also appear to have been available from some teachers. In 1870 W. L. Hayden, whose name and ads regularly appear later in the early Banjo-Mandolin-Guitar (BMG)

[738] Pond Firth and Co, *The Wisconsin Daily Patriot,* June 21, 1862. Ads, 1.
[739] Pond Firth and Co, *The Wisconsin Daily Patriot,* June 21, 1862. Ads, 1.
[740] Ludlow Barker and Co., *Hartford Daily Courant,* July 18, 1865, 3.
[741] Frederick Blume, *The New York Daily Tribune,* July 15, 1865, 2.
[742] *Jamestown Journal,* January 12, 1866. Vol. 40.
[743] Rugg and Griffith, *Lowell's Daily Citizen and News,* January 1, 1866. Issue 296, 4.
[744] E. J. Johnston and Co, *The Macon Daily Telegraph,* January 16, 1866. Issue 212, 4.
[745] M. Whitney, *Hartford Daily Courant,* July 18, 1865, 3.
[746] Ludlow Barker and Co, *Hartford Daily Courant,* January 24, 1866, 3.
[747] David O. Calder, *Salt Lake City Daily Telegraph,* February 9, 1866. Issue 165, Col. A.

periodicals, offered his services in the *Boston Daily Advertiser* as a teacher of the flute, piano, and guitar, stating that he was an agent for the 'celebrated Tilton Guitar' and also a dealer in musical instruments, music, and strings.[748] Later, in 1889, D. A. Bloomey (Manchester, New Hampshire), who was recorded in the town's directory from 1884 and described as a teacher from 1887, was inviting dealers and teachers to send for a wholesale price list of banjo, guitar, violin, and mandolin strings.[749]

While the strings offered for sale through classified ads were specific to one or perhaps two different types of instruments, such as the guitar and banjo for example, ads from larger musical instrument merchandise stores, claimed to stock strings for all types of stringed instruments bowed and plucked.[750] Throughout the second half of the nineteenth century, the popularity of stringed instruments in the leisure activities of society resulted in a demand for strings that saw them being sold not only in specialist music stores but also in general goods stores, and through mail order.

Beginning in the 1880s, journals were published by leading figures in the BMG movement to promote the culture of these instruments, their use, and sale. These also carried advertising for the instruments and their accessories. The Philadelphia-based *S. S. Stewart's Banjo, Mandolin & Guitar Journal* (April-May, 1884) carried an ad for both steel and gut guitar strings, available from Stewart himself and marketed as 'X.L.N.T. [sic]' (fig. 3). Stewart offered gut strings at 80 cents a set, steel at 75 cents, and single strings at 15 cents (a remarkably high price in relation to gut: that same year, Lyon & Healy was offering plain steel trebles at 50 cents a dozen and silver-plated steel at 63 cents a dozen).[751] In the later August-September edition, W. L. Hayden advertised again that as a 'Dealer in guitars' he also sold strings, and Wm. I. Peters (Battle Creek, Michigan) claimed to be importing 'Genuine Italian strings, the best for all stringed musical instruments'.[752] In 1887, a rival journal, *Gatcomb's Banjo & Guitar Gazette*, the manufacturer Steadman & Co. (Cambridgeport, Massachusetts) placed ads for 'wound strings', 'wire strings', and 'steel music wire in clamps 1-4', and the John C.

[748] W. L. Hayden, *Boston Daily Advertiser,* April 24, 1870, 3.
[749] *Gatcomb's Banjo & Guitar Gazette*, vol. 3, no. 2 (Boston: L.B. Gatcomb & Co, 1889), 8.
[750] J. H. Hidley, *Albany Evening Journal* (December 19, 1865), 3.
[751] *S. S. Stewart's Banjo, Guitar & Mandolin Journal*, ed. S. S. Stewart, vol. 2, no. 9 (Philadelphia: S. S. Stewart, April-May, 1884), p. 7.
[752] *S. S. Stewart's Banjo, Guitar & Mandolin Journal*, ed. S. S. Stewart, vol. 2, no. 11 (Philadelphia: S. S. Stewart, August-September, 1884), p. 14.

Haynes Company advertised strings alongside its Bay State, Excelsior, and Tilton guitars.[753] Ads in *Gatcomb's* show that strings were available directly from specialist distributers as well as being items of general musical merchandise. Brands of strings advertised in *Gatcomb's* between 1887 and 1899 include Opera Strings,[754] Griffith's Strings,[755] and, starting in 1899, Abt Strings.[756]

In 1890 *J.E. Henning's Elite Banjoist and Guitar and Mandolin News* described the sets of strings it supplied as having gut trebles, with basses of either a silk centre, or a wire and silk compound, and alternatively pairing wire trebles and wire centre basses. All of these strings were sold individually as well as in sets, so theoretically it would have been possible to create mixed sets. Gut trebles were all priced at 20 cents each; compound silk and wire basses at 10 cents each; silk centre basses at 10 cents each; complete sets of 'best strings' (presumably gut trebles with silk, or silk and steel core basses) were 75 cents; wire trebles were all 5 cents each, with complete sets that included wire centre basses, at 40 cents.[757] In contrast, *The Cadenza* featured an ad in 1894 from the Legg Brothers (Kansas City) for gut & silk at 50 cents and steel and wound guitar strings at 30 cents a set.[758]

The Cadenza's March-April 1895 issue featured an article on string care, and while its emphasis was on fitting and caring for gut on banjos, it also mentioned the use of covered silk bass strings for both that instrument and the guitar. The author reported that until recently, poor quality English and German gut strings were being imported, but now, higher-grade Italian strings, and those made in Germany from Danish and Russian gut, were available. It continued by stating:

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[753] *Gatcomb's Banjo & Guitar Gazette*, vol. 1, no. 1 (Boston, Mass: L.B. Gatcomb & Co, 1887), p. 3; The John C. Haynes Company was also selling strings in *Gatcomb's Banjo & Guitar Gazette*, vol. 1, no. 1, 8. Ads in *Gatcomb's* show that strings were available directly from specialist distributers as well as being general items of musical merchandise.
[754] *Gatcomb's Banjo & Guitar Gazette*, vol. 1, no. 3 (Boston, Mass: L.B. Gatcomb & Co, 1888), p. 3.
[755] *Gatcomb's Banjo & Guitar Gazette*, vol. 5, no. 1 (Boston, Mass: L.B. Gatcomb & Co, 1891), p. 11.
[756] *Gatcomb's Banjo & Guitar Gazette*, vol. 12, no. 5 (Boston, Mass: L.B. Gatcomb & Co, 1899), p. 13. Valentine Abt was a highly regarded player in BMG circles.
[757] *J.E. Henning's Elite Banjoist and Guitar and Mandolin News*, Oct-Nov 1890, p. 19. Although the term 'covered' or 'wound' is not specifically used in the ad, the way it is worded: 'Bass, wire and silk compound, E, A and D' and 'Bass, silk centre E, A and D', suggests both variants ('wire centre' too) were covered strings. The term 'wire' here was used to mean steel.
[758] *The Cadenza, a Music Magazine*, vol. 1/2 (Kansas City, Mo: C. L. Partee Co., 1894), p. 12.

> In regard to the bass or wire wrapped silk strings, the American manufacturers are making a decidedly superior one to those produced, in, France, Germany or England. After much experimenting I find the American strings best in tone, and so strong that I find it necessary to change them before breaking. Three eastern, firms who make strings, now give employment to 147 men. [759]

Only male employees are mentioned here, whereas Penny recounts women also winding strings and it is likely that the article's author overlooked their contribution to the trade. Never the less, this statement highlights the scale to which the string making industry appeared to be growing in North America in 1895.[760]

The 1897 October-November issue of Henning's later periodical, *The Chicago Trio*, advertised his own model of guitar (patented on July 12, 1892), described as 'Concert size' and costing $30. The ad stated:

> A guitar that will never spring or warp with patent Sword Steel Centre Neck; a beautiful model. Easy action and most powerful tone. Can use wire strings with perfect safety. The only guitar ever made that absolutely Will Not Spring or Warp.[761]

In the same issue, another Henning ad offered guitar strings only as 'Set[s] of best strings, pure wound silk, or compound silk and wire bass', however, as the material of the trebles is not mentioned, it is unclear whether these sets included the wire trebles with which his guitar could be strung safely, or the common alternative, gut.

Valentine Abt (Pittsburgh, Pennsylvania) advertised his BMG strings in the 1899 March-April issue of *The Cadenza*, offering only gut trebles with overwound silk basses for both guitar and banjo, although he supplied silvered wire strings for the mandolin.[762] The November-December issue, under the heading of 'Trade Dept., Manufacturing Interests', presented Louis Wright (Winsted, Connecticut) as a 'string importer', distributing Peerless Strings wholesale for violin, banjo, guitar, and mandolin, but here

[759] *The Cadenza*, vol. 1, no. 4 (1895), p. 4.
[760] Penny's *Cyclopaedia* noted women employed in a Connecticut string-winding factory in the 1860s. Her account of female family members assisting the male head of the family finds a European parallel in Jenny Nex's observation, in her research into musical string makers in London, that 'many of the firms had been family concerns with both women and men running businesses as circumstances dictated'. See Jenny Nex, 'Gut String Makers in Nineteenth-Century London', *The Galpin Society Journal* 65 (2012), pp. 131-160.
[761] *The Chicago Trio. An Educational Banjo, Guitar and Mandolin Journal*, vol. 1, no. 1 (Chicago: The Henning Music Co., 1897), p. 20.
[762] *The Cadenza*, vol. 5, no. 4 (1899), p. 39.

as in his own ads, materials are not identified.[763] In the same issue, *The Merrill Aluminum Musical Instrument Company* (New York) advertised its all-aluminium guitars, banjos, mandolins, and lutinas, proclaiming them to be 'The Greatest Musical Invention of the Age'.[764] Whether they were to have metal strings, in keeping with their all-metal image, is not indicated, but as George D. Reed had previously (December 2, 1873) patented a guitar with an all-metal body, designed to be strung with either metal or gut, it is possible that they were.[765]

The 1900 January-February issue of *The Cadenza* carried string ads from both H. E. Brinton (St. Louis, Michigan), and Frank M. Woodrow (Newton, Iowa). Brinton's ads give no information on string prices and materials, indicting only that he specialized in violin, mandolin, guitar, and banjo strings. Woodrow's ads, on the other hand, show he was offering guitar strings at 50 cents for 'special' grade and 30 cents for 'best steel'. Although the material of the special grade strings is not mentioned, and while they may simply have been of better quality steel, given their price difference, it seems more likely that they were gut.[766] By 1900, ads placed by Abt in *The Cadenza* listed a greater variety of strings. In that year's July issue he was offering the guitar's three gut trebles at 8 cents each or 80 cents per dozen, with wound silk basses at 5 cents each, 50 cents per dozen, and complete sets at 35 cents. Steel trebles were offered with no individual price, only for sale at 10 cents per dozen. Silk and steel basses sold for 5 cents each or 50 cents per dozen, and 'complete sets, [of] steel' at 25 cents.[767]

In November 1900, *The Cadenza* ran an ad from C. Meisel (New York) for the Globe brand of mandolins and guitars, proclaiming their 'light action'. Globe strings were offered for the guitar, mandolin, banjo and violin, although as the string material was not mentioned, particular qualities of Meisel's strings contributing to the 'light action' of his instruments cannot be judged.[768] In the same issue, under a new heading of

[763] *The Cadenza*, vol. 6, no. 2 (1899), p. 26.
[764] *The Cadenza*, vol. 6, no. 2 (1899), p. 45.
[765] George D. Reed, 1872 Guitars. USPTO, Patent 145,241, filed November 4, 1872, and issued December 2, 1873. Originally applied for on November 4, 1872.
[766] *The Cadenza*, vol. 6/3 (1900), p. 45.
[767] *The Cadenza*, vol. 6, no. 6 (1900), p. 42.
[768] *The Cadenza*, vol. 7, no. 3 (1900), p. 36. In 1894, C. Meisel was listed in the New York City directory as a musical instrument importer, operating from 343 E. 10th St.

'Zither Department', was an introduction to the zither, its use and stringing. The composition of the zither strings was given as:

> The first two trebles are steel, silver or nickel plated being preferred; the third of brass, although nickel, bronze, silver or gold is sometimes substituted; the fourth and fifth, respectively, of steel covered with copper wire; the bass strings [are described] as either: plain gut over-spun, plain silk over-spun, silk and steel over-spun or steel over-spun.[769]

The article states that in Austria and Germany gut and silk strings were the preferred choice, and that while the combination of gut trebles and overwound silk and steel basses make an acceptable set, America's harsher climatic conditions, dictate the use of the more durable combination of steel trebles and overwound steel basses. Plainly, by 1900, strings of differing materials were being manufactured, not only as a viable option for use on the zither in America, but also for other plucked stringed instruments that included the guitar.

F. O. Gutman used his publication, *The F. O. G. Mandolin Banjo and Guitar Journal* (Cleveland, Ohio), as a vehicle for advertising his goods as well as for promoting the BMG movement as a whole. In 1900 an ad entitled 'Poor Strings' saw him appealing to consumers 'who have been troubled with them [strings] at fancy prices'. He stated, 'Our Copper Wound Strings for the Mandolin and Guitar are unequalled for tone production and strength and are reasonably priced'.[770] The overwinding of the covered string is described here as copper, whereas often, without defining the main metal of the

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[769] *The Cadenza*, vol. 7, no. 3 (1900), pp. 19-20. 'STRINGS -THEIR CONDITION AND QUALITY'. The fingerboard and bass strings should always be the best that can be procured. The 1st and 2nd fingerboard strings are of steel wire. The condition of these strings should show no signs of rust, or specks, also no kinks or twists; a silver or plated string should be preferred. The 3rd string is of brass. This string should be of a bright appearance and well polished. Various metals have been substituted for this string. Gold, silver, bronze, nickel have been used, but we find that brass serves the purpose best. The 4th and 5th are steel strings covered with a thin copper wire. The bass strings are made of different materials. We can classify them as made from over spun silk and plain gut, over spun with a silk and thin steel centre, and over spun with plain steel centre. In Germany and Austria and countries having stable atmospheric conditions, silk and gut strings are desirable. A very serviceable set of strings are made of the combination of silk and steel centre. The 1st, 3rd, 6th, 8th11th in both sets are gut strings. In the United States we find the over spun string, with a steel centre, in general use. This set is entirely of steel, the durability exceeds other sets, but it has unpleasant features. One is that it causes the fingertips some pain, and in time they become callous. Strings should never remain on an instrument until they get rusty and black. The strings should always have a bright appearance, so hat the white and red strings can be immediately distinguished. Never allow your zither to have a soiled appearance. Keep it in a clean and tidy condition, and always pit it in its case or cover when done playing'.

[770] *The F. O. G. Mandolin, Banjo and Guitar Journal*, vol. 1/1 (Cleveland: F. O. Gutman, 1900), p. 21.

winding, the term used in newspaper, journal, and musical merchandise catalogues at this time, is 'silvered', or 'silver-plated wire'.

F. J. Bacon (Hartford, Connecticut) advertised his Never False brand of gut strings in the May-June 1901 issue of the *F. O. G. Journal*. He targeted both banjoists and guitarists, claiming that 'every one (is) guaranteed absolutely true, and non-stretching'.[771] The strings were offered at '$2.00 for a bundle of thirty–either 1st, 2d or 3d, or assorted', presumably the price for banjo strings, as the same ad offered a bundle of 'Guitar E' and 'Violin E' at $2.25. That Bacon does not here supply bass strings of any composition suggests he was catering to players using gut trebles that needed replacing more often than the basses, whether because of wear or breakage.

In Gutman's *F. O. G. Journal* from November 1902, he advertised his 'F. O. G. Special Brand' strings as being neither gut nor steel, and although he does not identify their material, he claims they were 'not effected [sic] by perspiration'.[772] 'Artificial Silk', or rayon was first commercially produced in 1891, making it possible that Gutman was using it for his 'New String'.[773] They were priced at 10 cents each, with quantities of a dozen, for either the guitar or violin, at 75 cents, and for the banjo at only 65 cents. In the period between 1889 and 1903 a comparison between Lyon & Healy's prices to dealers and ads in BMG journals shows that the cheapest gut trebles for the guitar were still twice the price of the best steel and that best gut was six times that price. Gutman's Special Brand string (of unidentified composition) was priced in between the average cost of gut and steel.

In 1884, Lyon & Healy offered as standard, three overwound silk basses to be used in combination with three gut trebles to make complete sets of guitar strings. Later in its 1900 catalogue it introduced the option of a wound third string made with a silk core overwound with silvered wire. Although in catalogues from 1884 and 1889 Lyon & Healy offered only a wound steel third (described as 'Steel wire, covered with silvered wire' in 1884 and 'Steel wire, Wound, Silver Plated' in 1889), presumably intended to be used in combination with steel trebles, in 1900 it was also listing an unwound silver-

[771] *The F. O. G. Mandolin, Banjo and Guitar Journal*, vol. 1/4 (1901), p. 39.
[772] *The F. O. G. Mandolin, Banjo and Guitar Journal*, vol. 3, no. 1 (1902), p. 15.
[773] Joseph Foltzer and Thomas Woodhouse, *Artificial Silk and its Manufacture* (London: Sir I. Pitman & Sons, 1921), p. 244.

plated steel third. This would suggest that the thickness of this plain steel third was not making it overly stiff (with unacceptable inharmonicity), and that it had enough mass to be tuned to *g* without breaking when the instrument was at concert pitch. Unless concert pitch for guitars with steel strings was dropping, the use of steel as a string material would have been a major factor in increasing string tension. In the last quarter of the nineteenth century, along with improvements to strengthen the neck and the use of internal compression rods running from neck to end block intended to relieve stress on the soundboard, a number of American patent applications were made for tailpiece improvements designed to help the guitar withstand this rising tension.

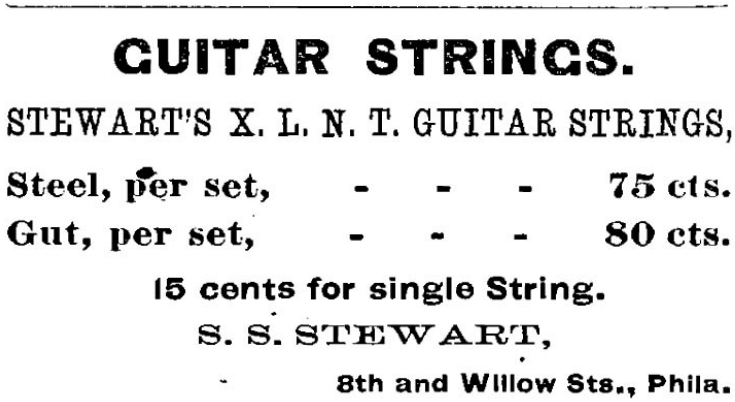


Fig. 141. Advert for guitar strings. S. S. Stewart's Banjo, Mandolin & Guitar Journal, 2/9, 1884.

Table 24

Price comparison between guitar gut and steel trebles (1889-1903)				
1889	L&H cat	Russian gut (vln e'') 4 length = 2x guitar *e'*	$8.75 for thirty	approx 15 cts
		Russian gut (vln *d'* & *a'*) $2^1/_2$ length = 1x guitar *b* or *g*		approx 30cts
1889	L&H cat	'Conservatory' gut	$6.25 for thirty	approx 25 cts
1901-3	L&H cat	Best gut	$3.18 per doz	approx 30 cts
1901-3	L&H cat	Damascus steel	$0.50 per doz	approx 5 cts
1901-3	L&H cat	Bell Brand (steel)	$0.30 per doz	approx 3 cts
1901	Neverfalse	Gut	$2.25 for thirty	approx 10 cts
1902	F. O. G.	Special	$0.75 per doz	10 cts each

In the last decade of the nineteenth century, advertising in BMG journals shows the gradual acceptance of steel guitar strings and starts to address structural issues with instruments as a consequence of their use. Instruments that had formerly been designed for lighter stringing were increasingly being put under greater stress from the use of heavier strings.

9.5 String tension and tailpieces

Joseph Bini, as well as receiving a patent for an X-braced soundboard, was also experimenting with tailpieces from as early as 1846. Bradford points to a review in *Scientific American* from that year, in which a Bini guitar with a tailpiece is proclaimed as 'superior to any other in use, with regard to its tone, elegance and durability'.[774]

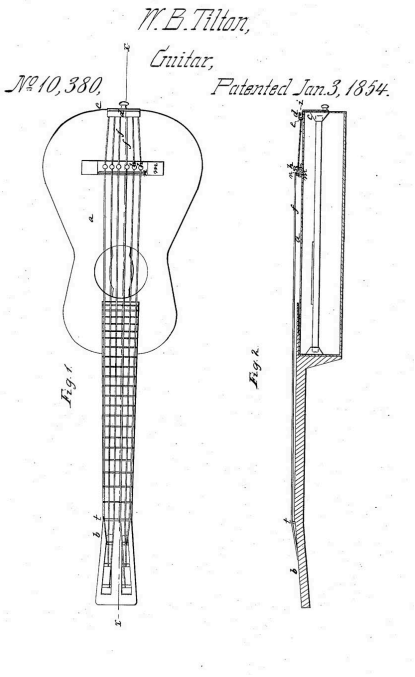


Fig. 142. US Patent 10380. Guitar improvement. William B. Tilton, 3 January 1854.

In his patent of 3 January 1854 [Fig. 142], Tilton claims a new design that 'precludes the necessity of the bracing usually required under the sounding board [ed: presumably

[774] 'Improvement in the Guitar', *Scientific American* 1, no. 44 (1846), p. 2.

in the area where the bridge is located], which always has a tendency to injure the tone'.[775] Tilton's improvement fixes the strings to a tailpiece fitted at the foot of the guitar. The strings then pass over the bridge and saddle, but where in other similar designs they have a tendency to slide laterally over the saddle when plucked, Tilton uses a pin device to hold them in place. He considered that this would provide the requisite tension on the bridge to allow it to act as a fulcrum, imparting energy to the soundboard, which, together with the 'beneficial effects of fastening the strings to the foot', would at the same time prevent 'discordant twanging' caused by the strings loosely sliding laterally over the saddle. He states:

> By my invention I give the requisite tension to the usual length of string, upon which every note is made, and by the additional length of string between the pins and the foot, together with the relief of the soundboard from obstruction, produce a vibration which gives a fullness and richness of tone not obtained on any instrument of this character.[776]

In the patent Tilton goes on to refer to his earlier patented (1851) strengthening dowel design, suggesting its use in conjunction with this lightly-braced soundboard design to further help withstand the increased tension caused by the strings being extended to the tailpiece. In his additional patent of March 4, 1856, Tilton refers to a series of experiments since 1854 that further improve the functioning of the soundboard.[777] In this case, his design features a metal tailpiece that is screwed to the base of the guitar and attached to the rear edge of the bridge, which, without touching the soundboard, then connects to the rim of the guitar. The plate of the tailpiece has six openings through which the ends of the strings are attached. He reasons that 'as the strings have no need of pins to secure them to the wooden bridge, it can be made much smaller', and further suggests 'that with strain of the strings taken up by the tailpiece, along with the reduction in the size of the bridge, the tone of the instrument is improved'. He states that while he recognizes a tailpiece is not a new invention, the interplay of bridge size, string tension, and soundboard vibration is central to his particular design of combination bridge-tail piece. In 1854, gut was still predominantly used for the trebles of the guitar, even if a transition to the use of steel was in the wings. Although it might be considered only circumstantial for this design to be taken as evidence of the

[775] William B. Tilton, January 3, 1854. Patent No. 10380.
[776] William B. Tilton, January 3, 1854. Patent No. 10380.
[777] William B. Tilton, March 4, 1856. Patent No. 14378.

suggested use of steel strings as a device for dealing with the guitar's inherent mechanical stresses, it can be seen, however, as a precursor to the tailpiece designs that became advisory optional extra for those wishing, later in the century, to string their instruments with higher-tensioned steel.

From as early as the late 1860s, evidence points to increasing guitar string tension. On August 11, 1868, Gustav Schleicher of Mount Vernon, New York, received a patent, *Improvement in Stringed Musical Instruments*, that outlined an internal tongue-like device fitted within a guitar for improving the 'power and brilliancy of tone', together with a double system, consisting of both a floating bridge and a pin bridge, to which the strings were secured:

> The invention consists, further, in the arrangement of a series of ribs on the inner or under surface of the sounding-board of a guitar, or other similar instrument, in such a manner that said sounding-board is materially strengthened, and enabled to sustain the strength of the strings.[778]

While the composition of the strings is not mentioned, that the device is intended for strengthening the soundboard to be better 'enabled to sustain the strength of the strings' suggests an increase in string tension, which Schleicher claimed, would also give a more brilliant tone [Fig. 143].

[778] Gustav Schleicher, 1868 Improvement in Stringed Musical Instruments. US Patent 81,012, 1868, issued August 11, 1868. Schleicher also had a patent (202668) awarded in 1878 for improvements to circular saws and appears in the New York City directory of 1889 as the head of Schleicher and Sons, manufacturing and dealing in pianos and organs.

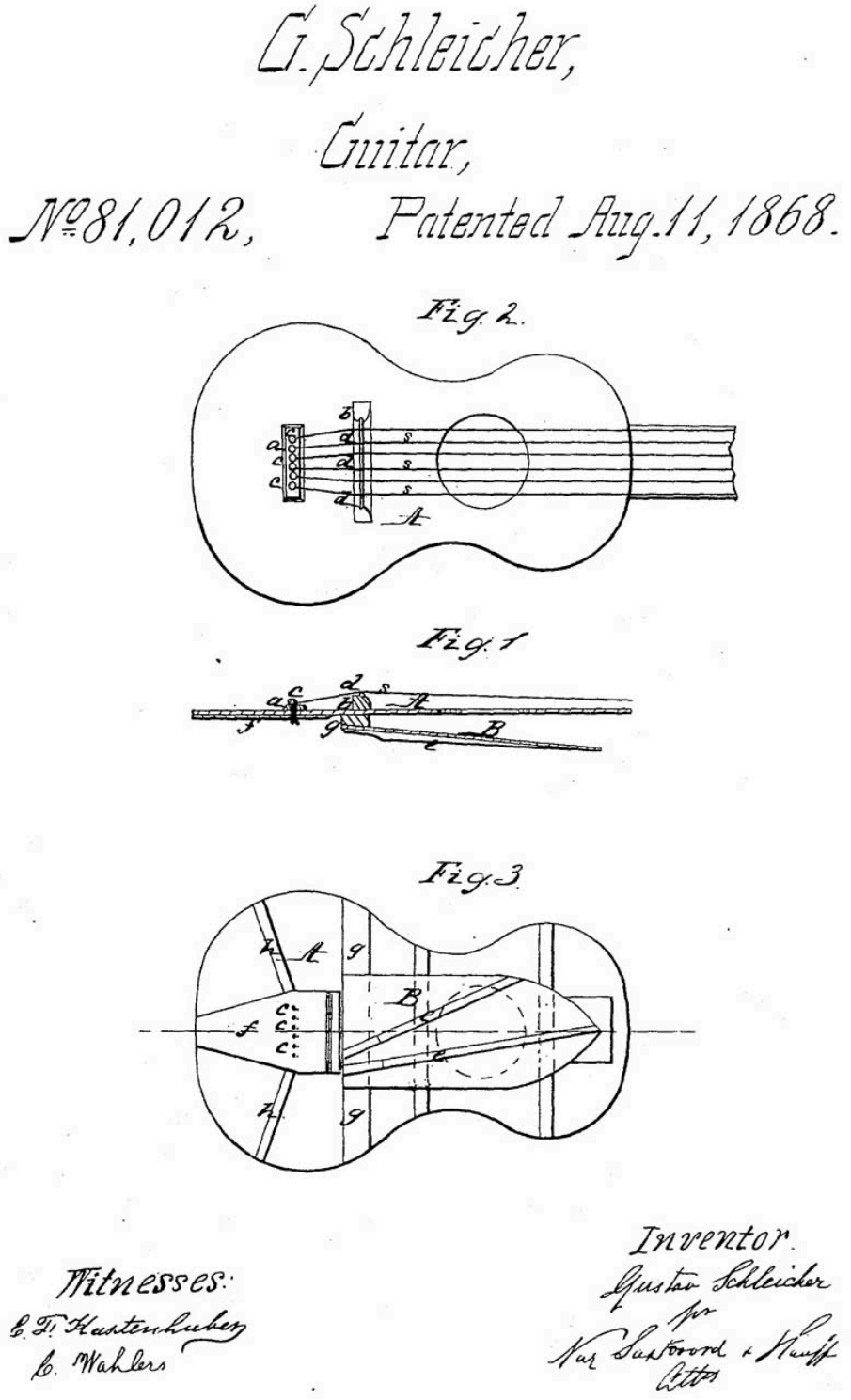


Fig. 143. US Patent 81,012. Guitar device. G. Schleicher, 11 August 1868.

George D. Reed's patent of December 2, 1873 mentions metal strings [Fig. 144].[779] This invention is for an all-metal guitar body, with either a wooden or metal neck, to be used with either gut or metal strings. Reed does not elucidate as to whether he is referring to metal as the overwindings of the bass strings, as a core material, or for plain, unwound, trebles. However, as gut trebles and copper-wound silk basses had been in use since the early nineteenth century, the mention of metal does suggest a departure from these types of strings, suggesting its early use for guitar stringing in 1872. Reed declares that a guitar constructed of metal, following his design, 'will be found to have great power and brilliancy of tone, and be particularly free from the twanging sound characteristic of guitars with a wooden body'. He goes on to claim that his 'guitar can be constructed at a less cost than guitars ordinarily made', and that as a toy would be indestructible. This design should not be confused with the National steel-bodied guitar, pioneered by John Dopyera and George Beauchamp in 1927, which had a fundamentally different approach to amplifying the string vibrations by utilizing a system of internal resonating cones.[780]

[779] Reed, Guitars patent.
[780] Bacon, *The History of the American Guitar*.

G. D. REED.

Guitars.

No. 145,241. Patented Dec. 2, 1873.

Fig: 1.

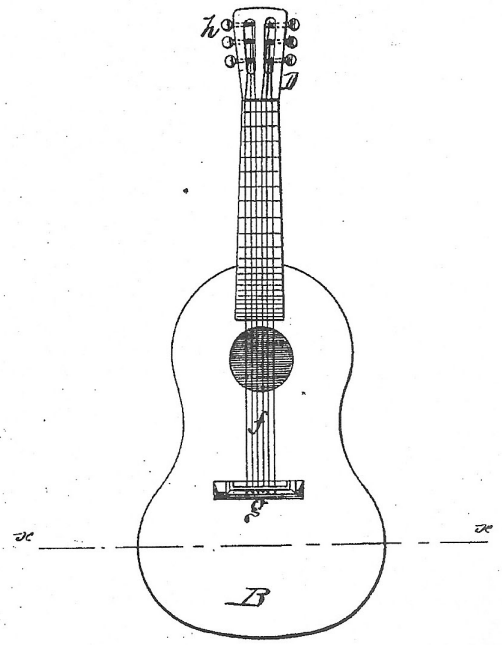
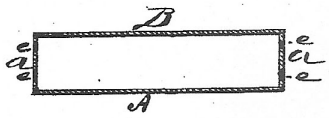


Fig: 2.



Witnesses:
H. C. Mattenberg
S. Forsey

Inventor:
George D. Reed
per
Atty.

Fig. 144. US Patent 145,241. Metal body guitar by G. D. Reed, filed 4 November 1872, and issued 2 December 1873.

Within ten years, further patents show the start of experiments to improve tailpieces and bridge design. Jacob Abraham of Silver City, New Mexico, received a patent of December 25, 1877 for *Improvement to Tail-Pieces for Guitars* [Fig. 145].[781] The main feature of this improvement was a metal tailpiece whose leading edge acted as a bridge to which the strings were also attached. To help relieve the forces exerted by the strings on the front of the instrument, the whole device was screwed to the guitar's base, coming into contact with the soundboard only at the end block.

[781] Jacob Abraham, 1877 Improvement to Tail-Pieces for Guitars. US Patent 198,556, 1877, and issued December 25, 1877.

J. ABRAHAM.
Tail-Pieces for Guitar.

No. 198,556. Patented Dec. 25, 1877.

Fig: 1.

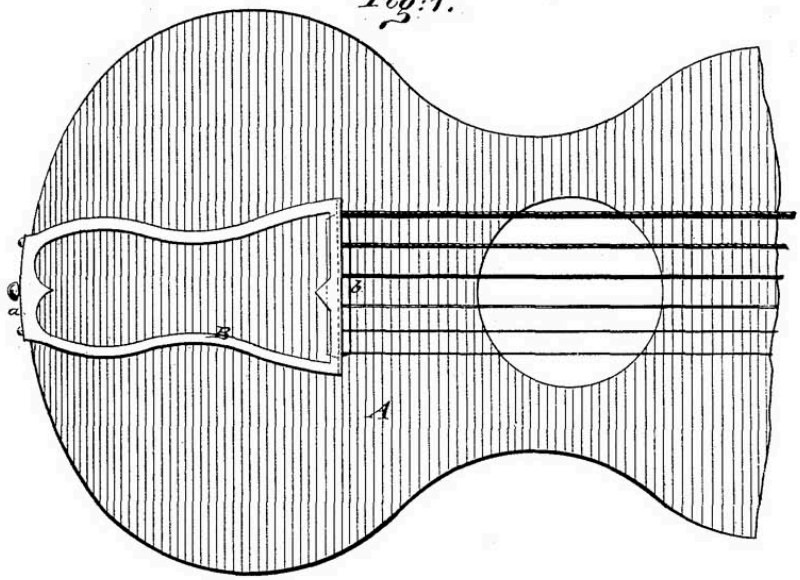
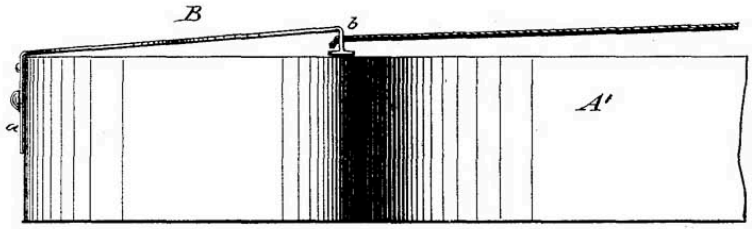


Fig: 2.



WITNESSES:
Chas. Nida
J. W. Scarborough.

INVENTOR:
J. Abraham.
BY Munn & Co.
ATTORNEYS.

Fig. 145. US Patent 198,556. Tail-Pieces for Guitar by J. Abraham. 25 December 1877.

On July 31, 1883, Erland Anderberg of Mount Vernon, New York, was awarded a patent entitled *String-Bridge for Guitars* [Fig. 146].[782] Erland claims for his height-adjustable bridge that: 'The object of my invention is to provide an efficient and inexpensive means of adjusting the elevation of the strings above the soundboard of a guitar….'. He describes his 'bridge-block, which contains an adjustable saddle mechanism, as being fixed to the soundboard by glue or other means', perhaps suggesting the use of screws to withstand the force exerted by the strings. While this in itself is not direct evidence of the use of steel strings—whose use would have increased the force exerted on the soundboard—it does suggest that higher-tension strings may have been in use, which could have distorted the soundboard and bent the neck forward, resulting in an unacceptably high action.

[782]Erland Anderberg, 1883 String-Bridge for Guitars. US Patent 282,147, 1883, issued July 31, 1883. Anderberg was born in 1851 in Malmo, Sweden and immigrated to the US in 1873 (naturalized in the US in 1880). He was listed in Mount Vernon (NY) city directories as a guitar manufacturer, and later as an instrument maker, from 1889 until 1918. It is plausible that Ernest Anderberg, who also made guitars, was his son. In 1892, Ernest Anderberg was registered at the same address in Chelsea, Massachusetts as Pehr Anderberg, both as guitar makers. Pehr Anderberg, according to Groce, also originated in Malmo, coming to the US around the time of the Civil War, first working for Bruno in New York, then moving to Mount Vernon, and later to Boston (Chelsea). It seems likely that there was a familial or business association between them.

(No Model.)

E. ANDERBERG.

STRING BRIDGE FOR GUITARS.

No. 282,147. Patented July 31, 1883.

Fig 1.

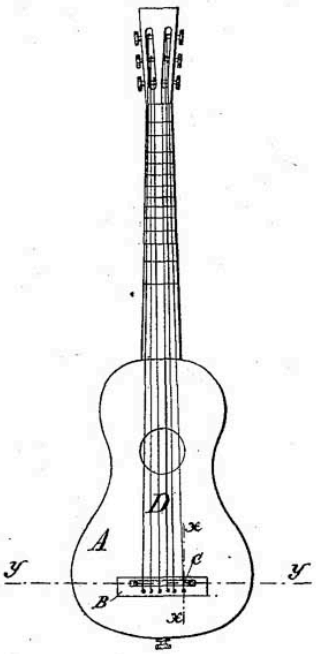


Fig 2.

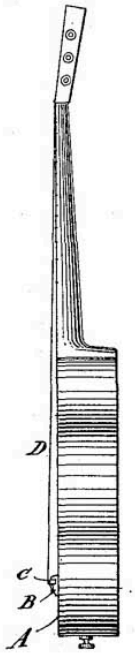


Fig 3.

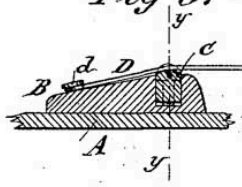
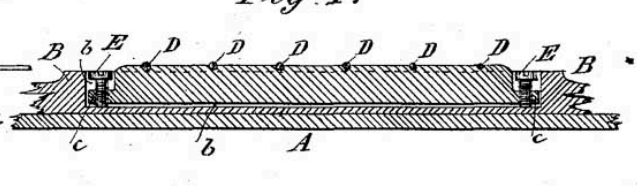


Fig 4.



WITNESSES:

Edward Arfelt

Robt W. Matthews

INVENTOR

Erland Anderberg

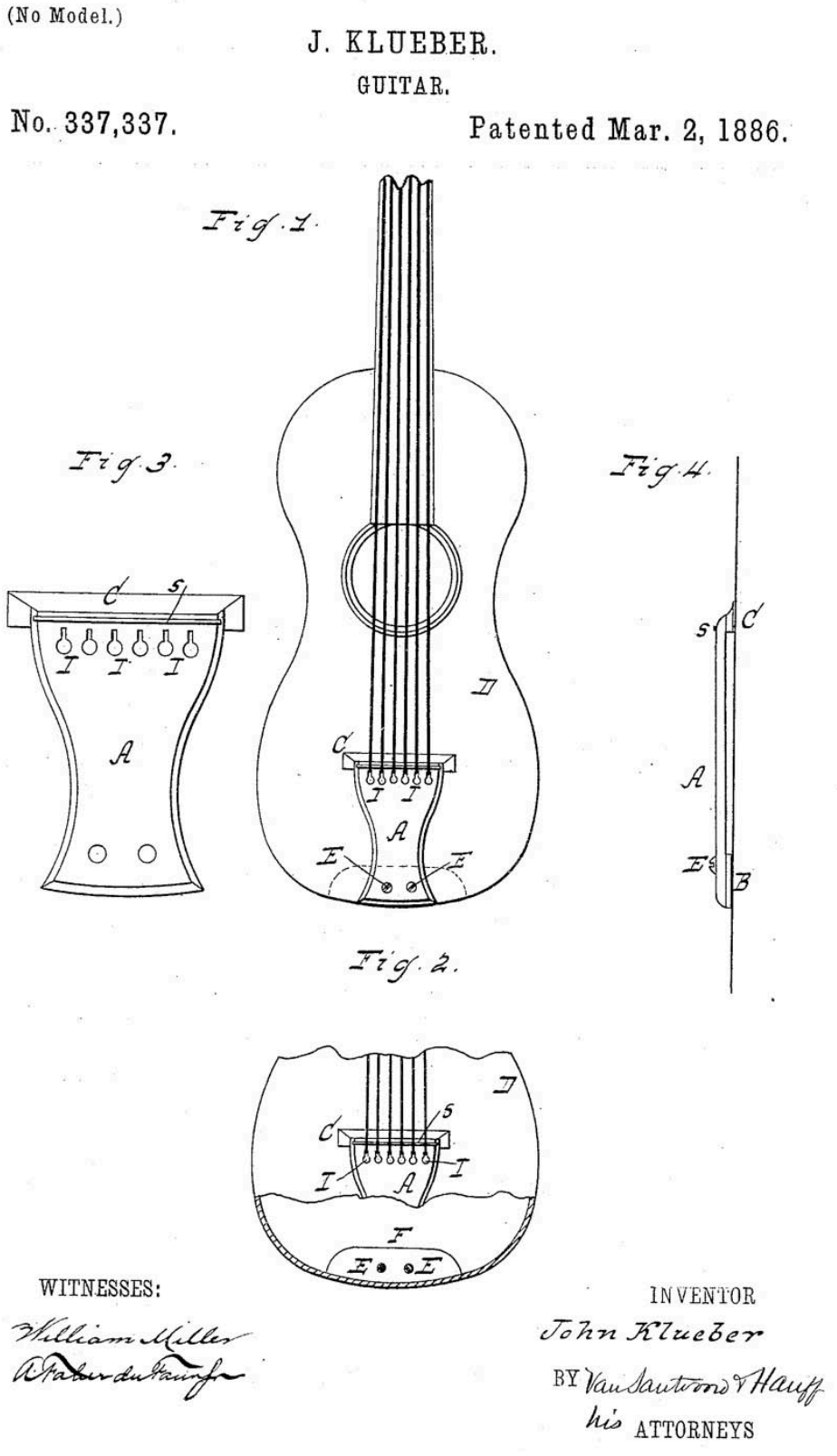
BY A. W. Almqvist

ATTORNEY

Fig. 146. US Patent 282,147. String Bridge for Guitars by E. Anderberg, 31 July 1883.

A little later, on March 2, 1886, John Klueber of Sandusky, Ohio, received a patent for a combined bridge and string-holder that also served as a hand-rest [Fig. 147).[783] The string-holder is in fact a metal tailpiece with an attached crosspiece of wood or metal, situated where the bridge would normally be. The crosspiece rests on the soundboard, and the strings pass over a ridge, fashioned as part of the tailpiece, that acts as a saddle. The force of the strings is transmitted via the tailpiece to a large end block, to which it is screwed.

[783] John Klueber, 1886 Guitar. US Patent 337,337, 1886, issued March 2, 1886.


(No Model.)

J. KLUEBER.

GUITAR.

No. 337,337. Patented Mar. 2, 1886.

Fig. 1.

Fig. 3.

Fig. 4.

Fig. 2.

WITNESSES:

William Miller

A. Baker du Faing Jr.

INVENTOR

John Klueber

BY Van Santvoord & Hauff

his ATTORNEYS

Fig. 147. US Patent 337,337. Patent for guitar tailpiece, J. Kleuber, 2 March 1886.

The first years of the next decade witnessed a flurry of patents also concerned with bridge and tailpiece design. The patent awarded to Rudolph Lorang of Chicago on June 30, 1891,[784] entitled *Bridge for Musical Instruments*, makes reference to metallic strings in particular:

> In all such instruments that I have named (guitars, mandolins, banjos, zithers) it is desirable to have the strings lie as close to the finger-board as they may without coming in contact therewith while under vibration, in order that the movement required to close may be minimized. Cheap instruments when they leave the factory are of course so adjusted as to attain this end; but in such instruments the finger-board may warp, or the strain of the strings may cause the neck to bend, or the sounding-board to sink just at and in front of the place where the bridge is attached. Either of these causes and others may bring the strings so close to the finger-board that when vibrating they touch it, and thereby prevent the production of a clear tone. Again, the amplitude of vibration of a gut string is very much greater than that of a metallic string, so much so that on a guitar gut strings require to be about an eighth of an inch farther from the finger-board than metallic strings.[785]

Significantly here, while the patent is designed to be appropriate for stringed instruments such as the mandolin and zither, which commonly employed metal strings, it also stipulates the difference in desired action for a guitar strung with gut from that of one strung with metal. Besides Lorang's observation that gut strings need to be further from the fingerboard to accommodate their greater 'amplitude of vibration' is the issue of the greater stiffness of metal strings, which in keeping with Young's Modulus on elastic properties, would need to be nearer to the fingerboard to prevent them from becoming sharp when stopped.

[784] Rudolph Lorang, 1891 Bridge for Musical Instruments. US Patent 455,221, filed January 17, 1891, issued June 30, 1891.
[785] Rudolph Lorang, 1891 Bridge for Musical Instruments. US Patent 455,221, filed January 17, 1891, issued June 30, 1891..

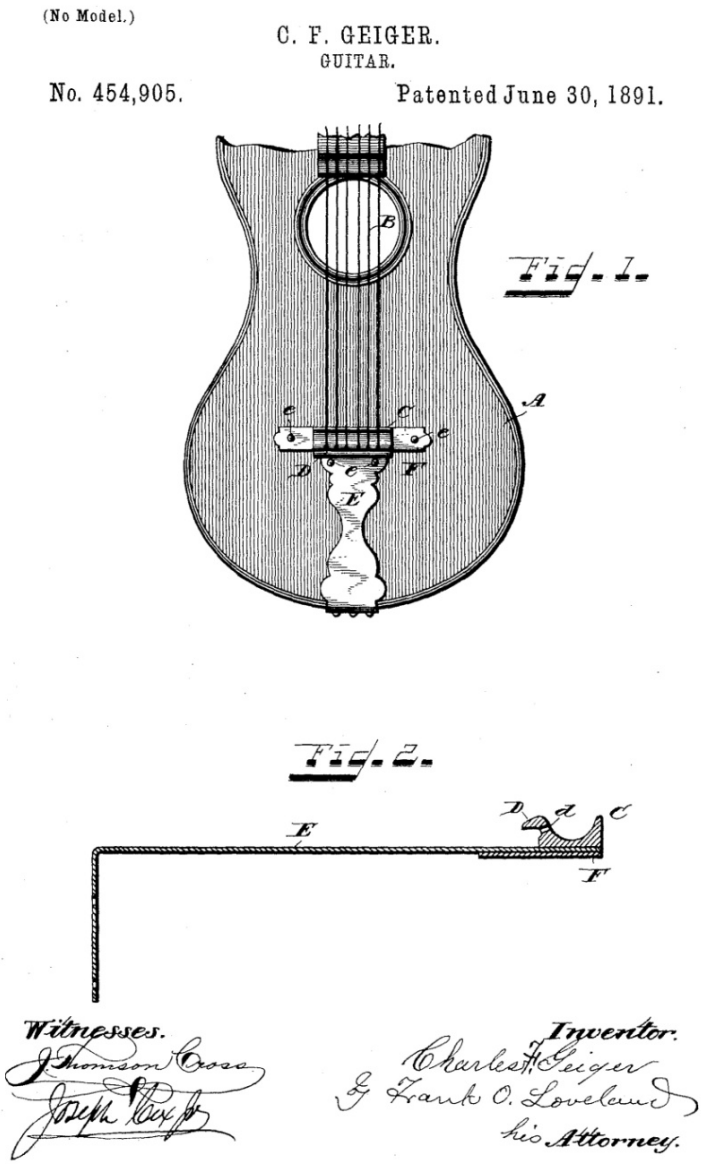
The patent received by Charles F. Geiger of Cincinnati, Ohio, on June 30, 1891, is for a tailpiece extension to the bridge, specifically designed to counteract the effect of the forces of metal strings on the soundboard [fig. 148].[786] In the patent Geiger states:

> When the strings of a guitar are attached directly to the bridge-piece on the sounding-board, there is a tendency to lift the piece from its seat or to warp the sounding-board when the strings are made taut. This is especially true when steel strings are used, as the strain of metal strings is much greater than that of gut strings. It is therefore desirable to have the strain of taut strings on some other part of the instrument than the middle of the sounding-board, and a better tone is produced when the strings are attached to the bridge-piece near the bridge.[787]

Geiger's invention goes on to describe how the strings are attached to the bridge-piece (the rear part of a preferably metal bridge), screwed into the soundboard and extended through a tailpiece, itself screwed in to the base of the instrument, thereby relieving the soundboard of the strain exerted by the strings. Geiger does not say whether making the bridge-piece and bridge fabricated from metal makes for the better tone of the strings or whether this material was simply a personal preference. Between 1885 and 1895 Geiger was listed in the Cincinnati city directories as either a clerk or a salesman for the John Church Company, musical instrument manufacturers and suppliers originally part of the Oliver Ditson Company.[788] In the 1891 patent application, Geiger is described as 'assignor to the John Church Company' who, from that time, installed the tailpiece on its Imperial brand of guitars, claiming that the instruments could be strung equally safely with either gut or steel strings. David Bradford suggests that this may have been the first guitar advertised as being built specifically for steel strings.[789] According to Bradford and Hubert Pleijsier, Lyon & Healy started to ship its Jupiter, Columbus, Marquette, Lakeside and Arion models equipped with factory installed steel strings only

[786] Charles F. Geiger, 1891 Guitar. US Patent 454,905, filed January 17, 1891, issued June 30, 1891. The patent gives Geiger as assignor to The John Church Company, of the same town. Chas F. Geiger is recorded in the Cincinnati city directory between 1885 and 1895 as being a salesman or clerk for the John Church Company.
[787] Geiger, Guitar patent (1891).
[788] Tom Wheeler, *American Guitars: An Illustrated History* (New York: Harper and Row, 1982), p. 25. Oliver Ditson set up the John Church Company (Cincinnati) as a musical instrument manufacturer and branch of the parent company in 1860, Lyon & Healy (Chicago) in 1864, and John C. Haynes (Boston) in 1865.
[789] David K. Bradford, "The First Steel String Guitars," *The Unstrung History of the American Guitar: The Guitar and Nineteenth-Century American Music* (2009), http://www.19thcenturyguitar.com. Accessed, May 1, 2011. Ditson sold the John Church Company to its founder, John Church, in 1871.

in 1896,[790] however, the firm was offering plain steel first and second, and wound steel third strings for sale in the 1884 catalogue, as was its contemporary, the J. Howard Foote Company, earlier in 1882-3.[791]


(No Model.)

C. F. GEIGER.

GUITAR.

No. 454,905. Patented June 30, 1891.

Fig. 1.

Fig. 2.

Witnesses.

Inventor.

Charles F. Geiger

by Frank O. Lovelace

his Attorney.

Figs. 148. US Patent 454,905. Patent for tailpiece extension by C. F. Geiger, 30 June 1891.

[790] Pleijsier, *Washburn, Prewar Instrument Styles, Guitars, Mandolins, Banjos and Ukeleles 1883-1940*, p. 42; David K. Bradford, "The First Steel String Guitars ," (2009), accessed July 29, 2012. http://www.19thcenturyguitar.com.

[791] The Columbus, Marquette, Lakeside, and Arion models of guitar, equipped with factory-installed steel strings, are advertised in the Lyon & Healy 1900-1901 catalogue. The Jupiter makes an appearance later in 1903.

Two more patents, awarded respectively to August H. Hines of New Orleans, Louisiana, on November 3, 1891[792] and Charles E. Mendenhall, together with Frank Ellis Pugh of Vermont, Illinois, on November 10, 1891,[793] were also concerned with bridge and tailpiece improvements for the guitar. While neither patent specifies the use of steel strings, both include sizeable tailpieces that are fastened to the base of the instrument in keeping with a changing trend in design that was proving to be beneficial in counteracting the damage caused by the use of higher-tensioned strings.

The patent awarded to Marzell Kersten of Savanna, Illinois, dated November 24, 1891,[794] also featured a substantial tailpiece fixed to the base of the guitar [Fig. 149]. In this case, the device was conceived so that, to relieve overall tension, the strings could be easily slackened off when the instrument was not in use and then quickly brought back up to pitch when necessary. This evidently was not simply an aid for changing strings quickly, but rather a device to relieve string stresses, suggesting that the level of the tension of strings at the time was having a detrimental effect on instruments.

[792] August H. Hines, 1891 Combined Bridge and Tail Piece for Guitars. US Patent 462,554, 1891, and issued November 3, 1891.
[793] Charles E. Mendenhall and Frank Ellis Pugh, 1891 Bridge for Guitars Etc. US Patent 462,869, filed August 24, 1891, issued November 10, 1891. Originally filed for August 24, 1891 as Patent No. 403610.
[794] Marzell Kersten, 1891 Tail Piece for Guitars. US Patent 463631, filed September 7, 1891, issued November 24, 1891. Originally applied for September 7, 1891 as Patent No. 405025.

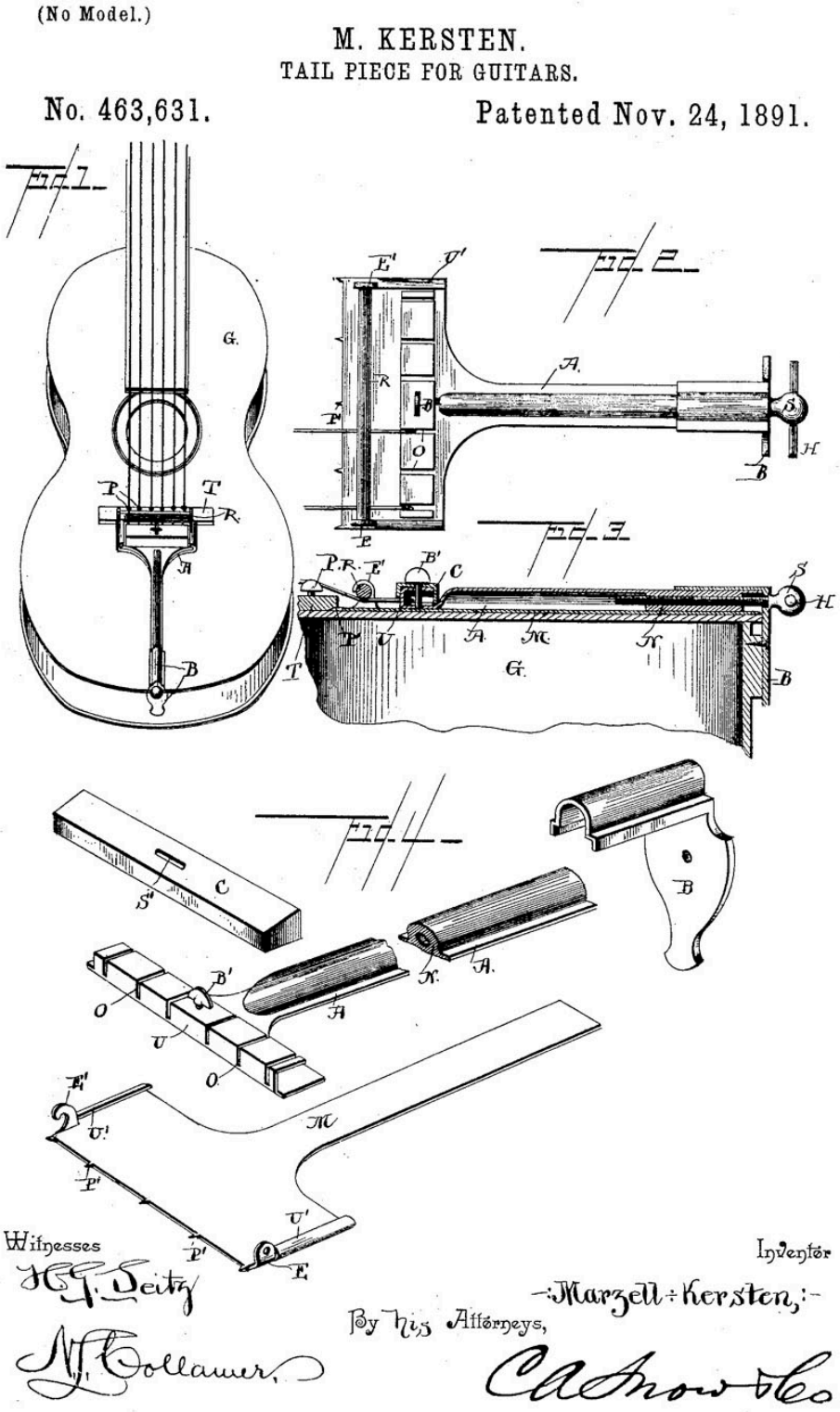


Fig. 149. US Patent 463,631. Tail Piece for Guitars by M. Kersten, 24 November 1891.

Although no further records of US patents specifically related to the guitar have emerged yet for the year 1892,[795] patent applications for improvements to guitar-bridge and tail-piece designs did not diminish, for in 1893 four patents were awarded, three of which had been applied for earlier in 1892: William Penn and Carl Lewis Eggert Jr. of Joplin, Missouri, together received a patent for *Combined Bridge and Tail-Piece for Musical Instruments*, dated January 17, 1893;[796] George Wooster of Fort Apache, Arizona, received a patent for an *Adjustable Bridge for Stringed Musical Instruments*, dated January 24, 1893, in which the strings rest on individually adjustable saddles to regulate string length;[797] Frank A. Ingersoll of New York received a patent for *Adjustable Tail-Piece for Guitars*, dated July 4, 1893, in which the bridge bar, acting as a string saddle, may be adjusted laterally towards or away from the end of the fingerboard, and the tailpiece, horizontally,[798] and William P. Owen of Joplin, Missouri (assignor to Jessie C. Owen of the same place) received a patent for a *Bridge and Tail-Piece*, applied for on January 23,1893 but not granted until November 21, 1893.[799] Owen's patent declares that although an adjustable bridge and tailpiece is not a new idea, his design is unique in that the two parts are separate, with the bridge being adjustable vertically and the tailpiece horizontally. By this, Owen means that the tailpiece would be adjustable toward or away from the bridge in the horizontal plane. Of these four, Wooster's patent is the only one that refers directly to string composition, mentioning the use of both silk and gut, and steel strings. The others, as with the previous patented designs from 1891, feature substantially built tailpieces together with their method of fixing.

[795] A patent was, however, awarded to Charles J. Cook of Montreal on May 24, 1892 for *Tailpiece for Stringed Musical Instruments* that included the guitar but is illustrated for the banjo. US Patent 475,674.
[796] William Penn and Carl Lewis Eggert, Jr., 1892 Combined Bridge and Tail-Piece for Musical Instruments. US Patent 490,213, filed June 17, 1892, and issued January 17, 1893. Originally applied for June 17, 1892 as Patent No. 437034.
[797] George Wooster, 1892 Adjustable Bridge for Stringed Musical Instruments. US Patent 490,528, filed October 17, 1892, issued January 24, 1893. Originally applied for October 17, 1892 as Patent No. 449140.
[798]Frank A. Ingersoll, 1892 Adjustable Tail-Piece for Guitars. US Patent 500,581, filed December 28, 1892, issued July 4, 1893. Originally applied for December 28, 1892 as Patent No. 456581.
[799] William P. Owen, 1893 Bridge and Tail-Piece. US Patent 509,240, filed January 23, 1893, issued November 21, 1893. Originally applied for January 23, 1893 as Patent No. 459348.

(No Model.)

G. WOOSTER.

ADJUSTABLE BRIDGE FOR STRINGED MUSICAL INSTRUMENTS.

No. 490,528. Patented Jan. 24, 1893.

Fig. 1.

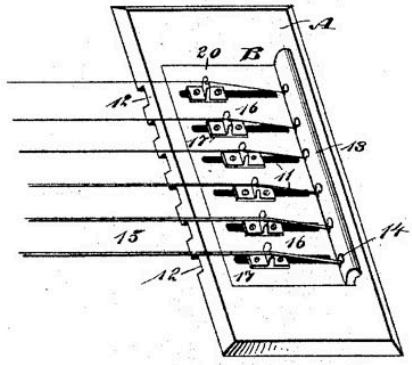


Fig 3.

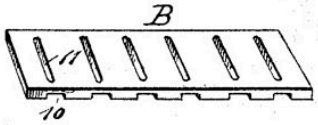
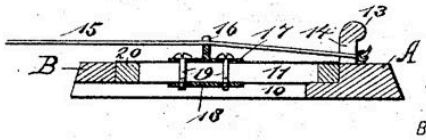


Fig 4.

Fig 2.



WITNESSES:

Paul Jabat

Ed. Sedgwick

INVENTOR

G. Wooster

BY Munn & Co

ATTORNEYS.

Fig. 150. US Patent 490,528. Adjustable Bridge for Stringed Musical Instruments by George Wooster, 24 January 1893.

The patent awarded to Pehr Anderberg of Chelsea, Massachusetts, on March 20, 1894[800] detailed three improvements to the guitar related to the stringing: a strengthened neck and truss rod design, a type of locking tuning peg, and a combination bridge and tailpiece in which the bridge is elevated from the top of the soundboard, supported on a metal frame that is part of the tailpiece itself fixed to the soundboard [Fig. 151]. Although this is not stated explicitly, all three appear to be intended to help withstand the effects of higher string tension.

[800] Pehr Anderberg, 1894 Guitar. US Patent 515,717 filed July 26, 1894, issued March 20, 1894.

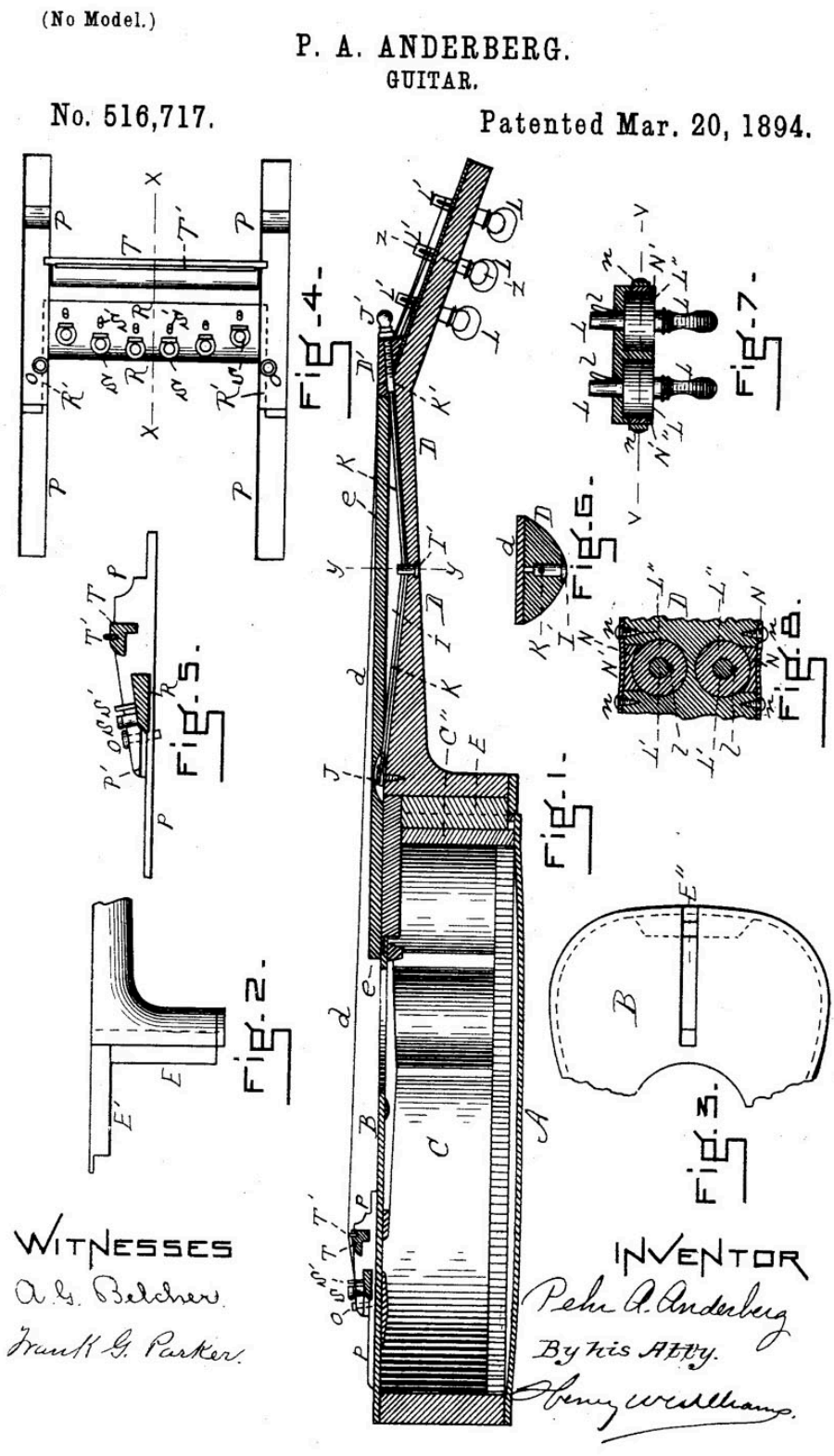


Fig. 151. US Patent 516717. *Guitar* by Pehr Anderberg, 20 March 1894.

On May 8, 1894, R. L. Turner was awarded a patent for a guitar tailpiece [Fig. 152].[801] This design is for a substantial interior metal device attached to the guitar's end bock. Two arms extend upward through the guitar's soundboard to support a tailpiece that is suspended to the rear of the bridge anchoring the strings, while at the same time isolating them from the soundboard. Turner again appears to be addressing instruments that could have been strung at a higher tension by incorporating a diagonal brace in his design that runs from the bottom of the end block to the front part of the internal device to add rigidity to the tailpiece. Its use is optional, depending on the size of the instrument.

[801] Originally filed for February 6, 1894 as Patent No. 499,248.

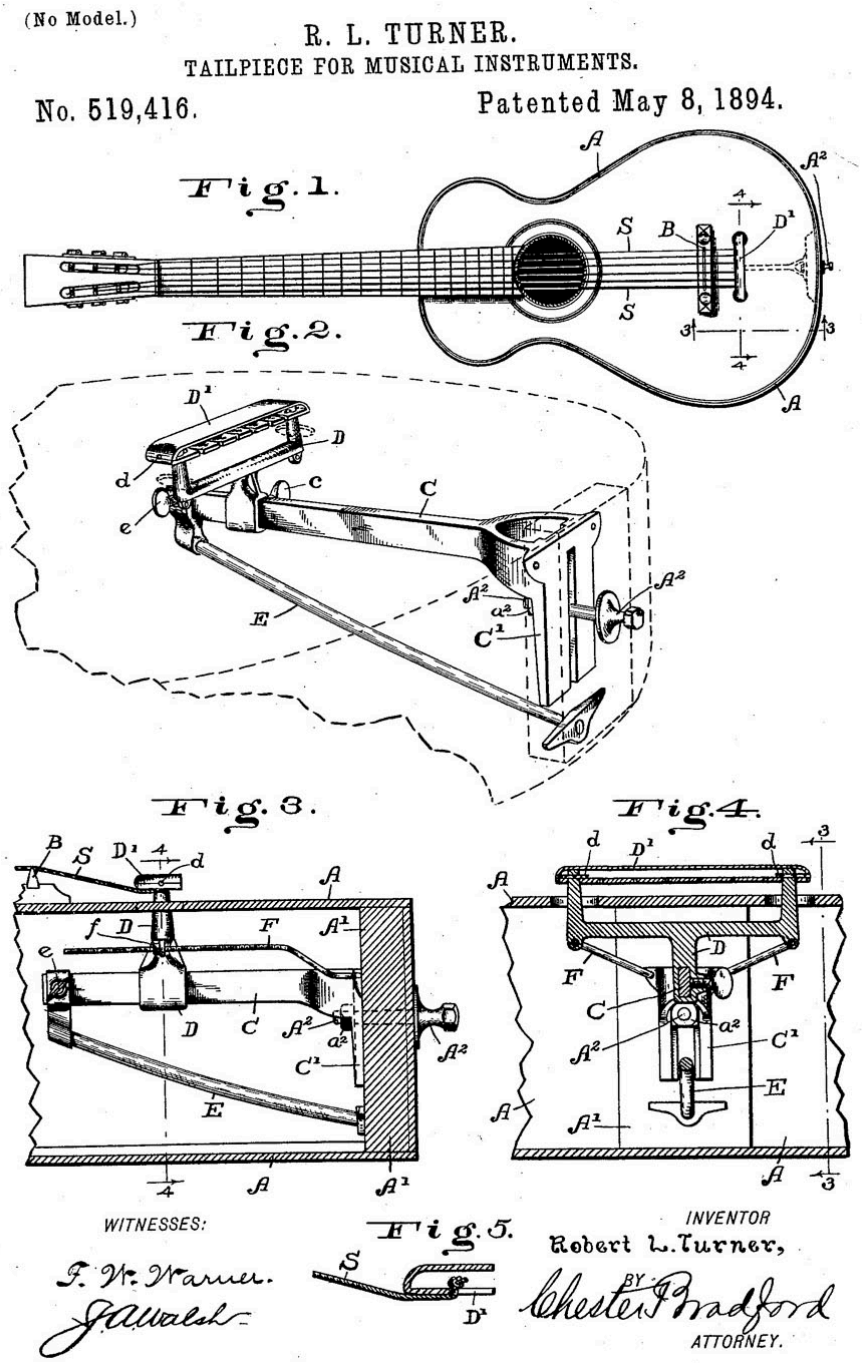


Fig. 152. US Patent 519416. Tailpiece for Musical Instruments by R. L. Turner, 8 May 1894.

Patents for tailpiece and bridge improvements, ranging from simple metal plates attached to the end block to bridges with adjustable saddles, continued to be awarded throughout the second half of the 1890s and into the 1900s. While the manner of securing the bridges to the instrument often appears to be substantial, their main design characteristic is a move away from the fixing and terminating of the strings at the bridge

itself—with the associated rotational force exerted on to the soundboard in that area—to extending the strings into sturdy tailpieces attached to the end block and so relieving their strain on the soundboard.

9.6 Chapter Conclusions

Although guitars with factory-installed steel strings did not become available until the middle of the 1890s (Lyon & Healy, for instance, started to ship their Jupiter, Columbus, Marquette, Lakeside and Arion models strung with steel in 1896),[802] steel, for plain trebles and (in combination with silk) for the core of overwound basses, had appeared in J. Howard Foote's musical merchandise catalogue of 1882-3. Penny's account of winding guitar strings in Connecticut in 1863, and the reference to metal strings in Reed's patent of 1872, suggest that steel strings were used by some North American guitarists from much earlier in the second half of the nineteenth century, some three decades before they became a factory option on commercially manufactured guitars.

References by Roger Siminoff to the Gibson Company's use at the beginning of the twentieth century of trebles of silver-plated copper wire (in combination with silk-cored basses overwound with silver-plated copper),[803] appear to be erroneous: copper, with or without plating, lacks the tensile strength necessary to reach even the *g* of the third string. According to Siminoff, 'Gibson Brand' (metal) strings first appeared as an accessory product in the 1909 *Catalog H*, but had been available from the company previously.

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[802] Pleijsier, *Washburn, Prewar Instrument Styles, Guitars, Mandolins, Banjos and Ukeleles 1883-1940*, p. 42; Bradford, 'The First Steel String Guitars '. http://www.19thcenturyguitar.com [Accessed 29/7/2012].

[803] Roger H Siminoff, 'Gibson Strings', in *Gibson Guitars: 100 Years of an American Icon*, ed. Walter Carter (Los Angeles: General Publishing Group, 1994), pp. 138-139. While Siminoff here states that silver-plated copper wire was used for the high strings, in *Gibson's Authorative Guide to Guitar Strings*, he only mentions copper wire as a string material.[803] Peruffo when explaining the highest pitch a particular type of string can be tuned without breaking cites Remy Gug who observed that copper alloy strings had a breaking frequency of 125 Hz per metre.[803] On a guitar with a string length of 635 mm the highest frequency this type of string could be stretched to would be 196.85 Hz or *g*.[803] A copper alloy string is usually made with between 5 % and 30 % of another metal (typically brass) making it stronger than a pure copper string, which would have an even lower breaking frequency, making it unsuitable for guitar trebles.

C. F. Martin, on the other hand, did not enter the commercial steel-string guitar market until 1916 (initially providing guitars for both Ditson and the Southern California Music Company, and then, from 1918, directly marketing their own models equipped with steel strings), although some guitars strung with steel do sporadically appear as special orders in company ledgers from as early as 1900. According to Johnston, it was not uncommon for Martin to substitute steel for the first string in a gut set, and in the early 1920s Martin shipped many guitars with steel trebles together with wound basses from an otherwise gut-string set, which he describes as 'not having a steel core' (presumably they were overwound silk, but perhaps silk and steel).[804] As the Martin Company had made a name with prominent American performers playing gut-strung instruments even before the emergence of a distinctive BMG community, and was also supplying this type of guitar to the American parlour, it is not surprising that its move to equipping guitars with steel trebles was at first cautious. However, by including steel-strung guitars in its range, the company reacted to public demand, and it is evident from the amount of advertising in musical instrument merchandising catalogues, newspapers and BMG journals, that steel strings, whether plain or overwound, had been readily available since at least the early 1880s, and that steel as a string material was already emerging earlier.

Johnston's statement regarding the shipping of Martin guitars with mixed string materials, suggests there may have been a practice to string the top two treble strings of the guitar with differing materials in combination.

That gut was more expensive than plain steel strings was additionally compounded by its shorter playing life. Aesthetic considerations to do with tone and volume must also have had an influence on string material usage. When the guitar was to be used in an domestic or other intimate setting, then gut would have been loud enough, and its timbral characteristics were likely to have been preferred for the repertoire of the early nineteenth-century European guitar pedagogues. This would have been true in a professional concert setting too, even with the limitation of the instrument's volume. However, when the instrument was used for vocal accompaniment or in small musical

[804] Richard Johnston, *Martin Guitars: A Technical Reference*, 1st ed. (New York: Hal Leonard Books, 2009), p. 47.

ensembles gathering informally in the parlour to play dance tunes, the practice of substituting steel for the first, or first and second strings may have developed, and the resulting timbral mixture may have been acceptable – or even desired. When using the guitar alongside other instruments such as the violin or piano (now a louder instrument than the early nineteenth-century-Viennese fortepiano with which the guitar had been paired) in the parlour, or for dances outdoors, the increased volume resulting from substituting steel for gut may have been preferred. When playing alongside the more powerful gut-strung banjo, silk and steel basses would have given the guitar a balancing strength of sound; and when, from the 1890s, the guitar was used as part of the popular mandolin orchestras, steel trebles in conjunction with either steel-core (or silk and steel-core) basses would have given the increased volume needed, and compatible timbre.

By the end of the nineteenth century, treble strings for the guitar were available in gut, plain steel, and silver-plated steel, while basses were available with a silk core, a steel core, or a silk and steel core, overwound with silver-plated copper wire; and the transition from gut and silk to steel reflected a move away from the solo, duet and accompanimental use of the guitar in the American parlour to its inclusion in ensemble and dance music played in bars, halls and larger outdoors settings.

Chapter 10 Players and Repertoire

10.1 Vienna

The early nineteenth-century Viennese guitar repertoire was largely comprised of works written by the instrument's leading players. Simon Molitor (1766-1848), Leonhard de Call (1767-1815) and Alois Wolf (1775-c1819) were the first prominent figures in the newly emerging Viennese guitar scene. Molitor co-authored and published with R. Klinger, a guitar method *Versuch einer vollstandigen methodischen Anleitung zum Guitare-Spielen* (c1811),[805] in which the preface mentions two important factors in the development of the Viennese guitar: that in around 1790 the five-single-stringed *chitarra francese* (or French guitar) was already in use, and that it was during this period that with the addition of a low sixth string, the six-single-stringed instrument emerged; and that the player-composers then active in Vienna (identifying in particular Matiegka and Diabelli) had adopted a type of guitar notation, which clarified written composition by a system of note stem directions and rests, so that melody and harmony could be separated with the bass, inner and top voices easily distinguished. The preface also refers to the arrival of Giuliani to Vienna in 1806, confirming that he too was using this new form of notation. Heck suggests that Giuliani may have started to use it some years earlier while still based in Italy, and points to its development in the teaching practice of Frederico Moretti and also in late eighteenth-century France, concluding that its emergence was simultaneous in Paris, Naples and Vienna.[806] Molitor also mentions that the bass strings he used on the guitar at the time were silk overwound with wire, and that the trebles were plain gut.

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[805] Heck, *Mauro Giuliani,* pp. 31-33. Heck gives the date of the method as circa 1811, whereas Stephen Mattingley in *Franz Schubert's Chamber Music with the Guitar: A Study of the Guitar's Role in Biedermeier Vienna* (Florida State University, 2007), gives an earlydate of 1799 as a first edition, and mentions a reprint in 1808. Wilhelm Klingenbrunner used the pseudonym R. Klinger; Dr. Ron Purcell, *Molitor, Simon J.* (California State University, Northridge, Oviatt Library) [Accessed 13 October 2007], <http://library.csun.edu/igra/bios/text/molitor.html>, According to Purcell, Simon Molitor was one of Vienna's most respected musicians. From 1796-97 he was also an orchestral conductor.

[806] Heck, *Mauro Giuliani: Virtuoso Guitarist and Composer*; Heck, *Mauro Giuliani: Virtuoso Guitarist and Composer*, pp. 31-33. Giuliani was apparently using this style of notation in late 1806 on his arrival in Vienna. Heck suggests that this new notation had probably originated elsewhere and was in use in Vienna before the arrival of Giuliani.

Leonhard de Call[807] originated from the Southern Tyrol. Hackl proposes that this location, midway between Italy and Central Europe – a halfway house between the two regions – may have contributed to bringing guitar culture to Vienna.[808] While Mauerhofer appears to regard de Call's compositions (of which there are over one hundred and fifty published) as somewhat mediocre, describing them as 'pleasant chamber music that could be played easily' by amateur musicians,[809] Hackl instead highlights his importance as a composer, by crediting him with establishing the flute, viola and guitar trio as a 'classic Viennese serenade formation (often used by Molitor, Matiegka or Diabelli'), and that this gave the guitar its place as both a melodic and accompanying instrument in chamber music.[810]

Prominent in Vienna during the first decade of the nineteenth century, Alois Wolf was recognized as being an accomplished guitarist, whom the *Allgemeine musikalische Zeitung* reported as playing a guitar concerto with full orchestra as early as 1804,[811] and later in 1810, performing in public on a *Doppelgitarre*.[812] According to Heck, between about 1800 and 1812, he had around two-dozen pieces published for solo guitar and as duets with piano.[813]

Anton Diabelli, another key figure in this early Viennese guitar scene, besides playing and teaching, arranging and composing, contributed original pieces to the growing body of Viennese guitar music, in his role as a major music publisher. Hackl considers that his strength was his ability to find repertoire suitable for the amateur market by adapting 'operatic airs and other popular music of the day [which] provided the essentials of musical expression without demanding too much technical prowess on the player's part'. He maintains that, 'with his imaginative titles such as *Apollo am Damentoilette* (Apollo in the Ladies' Boudoir), Diabelli brought the music of the masters into Viennese bourgeois homes'.[814]

[807] Also known as Leonhard von Call.
[808] Hofmann, *Stauffer & Co., the Viennese Guitar of the 19th Century*, p. 242.
[809] Alois Mauerhofer, 'Call, Leonhard Von', *Grove Music Online*.
[810] Hofmann, *Stauffer & Co., the Viennese Guitar of the 19th Century*, p. 260.
[811] Allgemeine musikalische Zeitung, 16 December 1804, vol. 7, col. 252.
[812] Allgemeine musikalische Zeitung, March 1810, vol. 12, col. 476.
[813] Thomas Heck, F. , 'Wolf, Alois Joseph Anton Balthasar', *Grove Music Online*.
[814] Hofmann, *Stauffer & Co., the Viennese Guitar of the 19th Century*, pp. 244-245.

10.1.1 Giuliani

It was however the arrival of Mauro Giuliani (1781-1829) in Vienna that had the effect of strengthening the burgeoning appreciation of the guitar and increasing its popularity. Giuliani, known as the *Neapolitan*, was born in Bisceglie, Italy. He moved to the nearby capitol of the region, Naples, to continue his musical studies in around 1798. After travelling north, via a stay in Trieste (where he probably played his debut concert in 1803),[815] he arrived in Vienna in 1806, and remained there until he returned to Italy in 1819. He was welcomed into Viennese musical life with critical acclaim: the *Allgemeine musikalische Zeitung*, in the first known report of a Giuliani performance 21 October 1807, praised both his virtuosity and compositional skills.[816] As well as being a supremely talented guitarist who raised the level of composition for the instrument, he performed as a cellist in the debut of Beethoven's seventh symphony, and was reported to have also played the thirty-string harp guitar.

Giuliani was a prolific composer for the guitar, producing nearly a hundred and fifty works with opus numbers, and seventy without. These comprise of solo and duo pieces; chamber ensembles combining guitar, violin and flute, together with the pianoforte; sonatas, *lieder*, arias and character studies; and three grand concertos, as well as numerous exercises. In his role as a pedagogue he taught with the new form of guitar notation outlined in Molitor and Klingenbrunner's method.[817] Giuliani often employed a terz guitar in his work for two guitars. Evidence of this can be found in the instruction at the beginning of the manuscript for both his third concerto for two guitars [Op. 70], and his *Grand Pot-Pourri* for two guitars [Op. 67], where the first guitar is to be capo'd at the third fret or tuned to terz (a minor third higher than standard guitar pitch).[818] An advert for the third concerto by its publishers, Cappi & Diabelli, appearing in the

[815] Heck, *Mauro Giuliani,* pp. 26-27. Heck cites an announcement in *L'Osservatore triestino* of 5 September 1803, which states that Mauro Giuliano [baptismal spelling of his family name] the Neapolitan, wished to give an *Academia* (concert) in the public hall on the 7 September.
[816] Heck, *Mauro Giuliani,* p.38. Quoting the *AmZ* 1X (4 Nov 1807), p. 89, 'Among the very numerous guitarists here one Giuliani is having great success, even creating quite a sensation, as much by his compositions for the instrument as by his playing. He truly handles the guitar with unusual grace, skill, and power'.
[817] Thomas Heck, F, 'Giuliani, Mauro', *Grove Music Online*; Heck, *Mauro Giuliani: Virtuoso Guitarist and Composer*.
[818] The Rischel & Birket-Smith Collection REX; The National Library and Copenhagen University Library, "Mauro Giuliani," (Det Kongelige Bibliotek, 2006)., https://rex.kb.dk [Accessed, 4 March 2012]. Op. 70 & Op. 67.

Allgemeine musikalische Zeitung (12 August 1822), states that it had been especially composed for the terz guitar.[819]

In Op. 67, during passages for the guitar designated as terz where the key signature is D major, an $f\#''$ is notated. Given that the instrument when capo'd at the third fret then is being played three frets higher, the $f\#''$ (played on the first string in the seventeenth fret) would sound a''. So it follows that Giuliani was playing instruments with at least that many frets, similar to the Staufer guitar SAM 513 [Fig. 21], which has a string length of 564 mm and eighteen frets. According to Hofmann, Staufer's earliest terz guitars are from around 1813-1814, and he claims that it was Giuliani who suggested to Staufer the idea of a guitar designed to be tuned a third higher.[820] Whether or not Giuliani made this suggestion or whether it is speculation on Hoffman's part, Staufer did in fact make many terz guitars, which were very popular in Vienna, due not least to the status of Giuliani and his use of the instrument. Just as Giuliani was highly regarded as a guitarist so was Staufer as a guitar maker, and at the time both were leaders in their field. It is probable, as Hofmann suggests, that Giuliani, alongside Molitor and Diabelli, was a 'customer, colleague and friend' of Staufer's,[821] and the two may well have exchanged ideas on guitar form, but unfortunately no records have been found to support this.

In keeping with the aesthetic of the Biedermeier movement in arts and crafts folkloric values were embraced, and this represented a move away from the ornate neo-classical style of the previous century to simplicity of form. This was evident not only in architecture and furniture, but also in the visual arts, music, musical instruments and its musical repertory. Mattingly presents this view of daily Viennese life:

> For the first time in recent memory, middle-class Viennese citizens were able to enjoy simple pleasures in life, such as afternoons in a coffee house, trips to Vienna's surrounding nature parks, and informal parlor visits. Amidst this casual atmosphere was the ever-present sound of a new, light hearted, musical tradition that included songs, dances, and serenades accompanied by the increasingly popular guitar.[822]

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[819] Allgemeine Musikalische Zeitung (Vienna); Allgemeine musikalische Zeitung. 12 August 1822.
[820] Hofmann, *Stauffer & Co., the Viennese Guitar of the 19th Century*, p. 46.
[821] Hofmann, *Stauffer & Co., the Viennese Guitar of the 19th Century*, p. 36.
[822] Stephen Mattingly, "Franz Schubert's Chamber Music with the Guitar: A Study of the Guitar's Role in Biedermeier Vienna" (Florida State University, 2007) , p. 6.

Just as major composers resident in Vienna, such as Beethoven and Schubert, incorporated folkloric themes in their work, often through the inclusion of traditional dance such as *ländler*,[823] so too did player-composers like Giuliani.

Mattingly suggests that popularity for the guitar grew at a time when a sense of freedom was emerging in Biedermeier Vienna.[824] In illustrating how the guitar could be heard casually within a house or salon as well as in more formalised settings, he declares,

> The guitar's popularity was its portability, which allowed for casual music in local taverns, coffee houses, and parks. Music at these venues was commonly played by Schrammel ensembles including violin, clarinet and guitar. Schubert certainly heard this music when he frequented coffee houses such as Bogner's, a favourite among Viennese artists and composers, including Beethoven.[825]

Although Mattingly is right to acknowledge the place of the guitar outside the concert hall and in an accompanying role, the Schrammel brothers (Johann and Joseph, with Anton Stohmayer) did not found the Schrammel trio until 1878 (the addition of Georg Danzer, making the group a quartet, was not until 1886).[826] As Schubert died in 1828 and Beethoven in 1827, it is more likely that they were listening to popular folk music known as *ländler-kapelle*, which was not yet classified as *Schrammel*.[827] Alice M. Hanson, paraphrasing contemporaneous popular travel guides, provides the following description of Viennese city life: 'Very often one hears in a house violin playing on the ground floor, piano on the first floor, flute on the second, singing and guitar on the

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[823] *Ländler* is a form of dance that inspired the waltz.
[824] Stephen Mattingly, *Franz Schubert's chamber Music with Guitar: A Study of the Guitar's role in Biedermeier Vienna,* doctor of Music: Treatise, Florida State Uni, College of Music, 2007, p. 10.
[825] Mattingly, Franz Schubert, p. 10.
[826] Andrew Lamb, *Schrammel, Johann,* Grove Music Online, ed. L. Macy [Accessed 25th October 2007], <http://www.grovemusic.com> Johann Schrammel was a violinist and composer who along with his brother Joseph studied violin at the Vienna Conservatory under Hellmesberger. Joseph became leader and manager of the Schrammel Trio that included his brother Johann and bass guitarist Anton Stohmayer. The Trio was founded in 1878 and evolved into a quartet with the inclusion of Georg Danzer playing a C clarinet in 1886. This was the origin of a style of enormously popular ensemble playing that became known as Schrammel music played by 'Schrammel Quartets'.
[827] Heck, *Mauro Giuliani,* pp. 185-6. Heck quotes Karl Liebleitner, "Einiges über den", *Zeitschrift füf die Gitarre* (Vienna, 1926), p.155. Ländler-Kapellen is small groups of musicians traditionally made up of two fiddle players and a clarinettist. The music was in a 3/4 time signature and represented the Austrian dances beloved of the Viennese then. Heck points out that adding a guitar would make up an Schrammel quartet, which developed later in the Viennese wine gardens.

third….'.[828] The guitar then, could be heard casually within a house or salon, outside in a park, or in more formal settings.

10.1.2 Schubert

Many of Schubert's published *Lieder* (over twenty while he was still alive) were arranged for guitar accompaniment. This has resulted in debate amongst some scholars as to whether they were composed on the guitar originally. Schubert moved seventeen times in his life,[829] with sixteen of these in the twelve-year period between 1816 and 1828 when he was living in rented accommodation on a small income.[830] This has led to a presumption by some that he was without a piano and that the guitar with its portability was his main compositional tool during these years. Mattingly, while acknowledging the plausibility of this argument, points to correspondence between Schubert and his sister in 1818 regarding his piano, which suggests he had access to that instrument for composition if he so wanted.[831] On the other hand, accounts from his friends describe Schubert habitually composing straight to manuscript (as did most composers at that time) while sitting at a writing desk, without the aide of any musical instrument.

Despite the debate over which instrument or not he may have used to compose on, primary source material shows that Schubert wrote specifically for the guitar, and that he possessed two during his lifetime. Mattingly points to the autograph manuscript with guitar accompaniment of *Terzetto* [D. 80] and of the first version of *Das Dörfchen* [D. 598 a] as 'evidence of the extent of Schubert's ability and knowledge of the

[828] Alice M. Hanson, *Musical Life in Biedermeier Vienna* (Cambridge: Cambridge University Press, 1985), p. 118
[829] John Duarte, 'Notes from Europe: Schubert Revisited', *Soundboard* 8(August 1981)., p. 192.
[830] Mattingly, "Franz Schubert's Chamber Music with the Guitar: A Study of the Guitar's Role in Biedermeier Vienna."
[831] Mattingly, "Franz Schubert's Chamber Music with the Guitar: A Study of the Guitar's Role in Biedermeier Vienna.", pp. 22-23.

instrument.'[832] Further evidence of Schubert's involvement with the guitar can be found in D. 96, a quartet for flute, viola, guitar and cello, written [by him] in 1814, although this is in fact an arrangement with added cello of *Noturno* [Op. 21], an original piece by Wenczlaus Matiegka published in 1807.[833] Mattingly notes that although there are six works for male voices (trios and quartets) with guitar, not all have the accompaniment part written, as it was common practice at that time in Vienna to have a flexible approach to vocal accompaniment, which could be tailored to specific performances. *Geist der Liebe* [D. 747], a piece with no written guitar part for example, was performed at a *Gesellschaft* concert on 3 March 1822 and again on 27 August 1822 with guitar accompaniment played by a Mr. Schmidt. According to Mattingley 'guitarists such as Johann Umlauff participated in the first performances of these works', and, 'at a more intimate gathering, Mauro Giuliani was among the company that formed male voice quartets'.[834]

In support of his view that it likely that Giuliani and Schubert were part of a social circle meeting and playing music informally on a regular basis, Heck cites Deutsch, who quotes from the memoirs of Victor Ritter Umlauff von Frankwell (the son of Schubert's good friend, Johann Karl Umlauff):

> Close friends of his [Victor Umlauff's father] were also the brothers Karl and Friedrich Gross, of whom the former played the violin and the latter the viola, both excellently; the brothers Karl and Josef Czerny, both of them composers of merit; Linke the ablest 'cellist of the time; the older and younger Giuliani; Bath and Binder, both tenors; and Rauscher, baritone at the Kärntnertor Theater. All of these, as well as Schubert, used to meet regularly every week, on a pre-arranged day, at the house of Frau von André, where they made music far in to the night.[835]

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[832] Mattingly, "Franz Schubert's Chamber Music with the Guitar: A Study of the Guitar's Role in Biedermeier Vienna.", p. 47.
[833] Mattingly, "Franz Schubert's Chamber Music with the Guitar: A Study of the Guitar's Role in Biedermeier Vienna.", pp. 85-89. Mattingly states that Georg Kinsky hailed the piece, discovered in 1918 and published in 1926, as an original Schubert masterpiece, but the discovery by the Danish guitarist Thorwald Rischel in 1931 of a first edition showing Matiegka as the composer, proved the piece had been erroneously presented as a Schubert original, a misconception Bone still propagated in 1954.
[834] Mattingly, "Franz Schubert's Chamber Music with the Guitar: A Study of the Guitar's Role in Biedermeier Vienna", p. 55. Mattingly is quoting from Deutsch in Reinhardt van Hoorick, "Schubert's Guitar Quartet, D. 96", *Revue belge de Musicologie* 31 (March-April 1977), p. 122, regarding the guitar accompaniment of Mr. Schmidt; and Newman Flower, *Franz Schubert: The Man and his Circle* (New York: Tudor Publishing, 1936), p. 345, regarding the presence of Johann Umlauff and Mauro Giuliani at these musical gatherings.
[835] Heck, *Mauro Giuliani: Virtuoso Guitarist and Composer*, p. 90; Otto Erich Deutsch et al., *Schubert. Memoirs by His Friends. Collected and Edited by O. E. Deutsch, Etc. [a Translation by Rosamond Ley and John Nowell of Part of \201cfranz Schubert: Die Dokumente Seines Lebens Und Schaffens.\201d with Plates, Including Portraits.]* (London: Adam & Charles Black, 1958).

Umlauff remarks that his father often visited Schubert in the mornings before going to his office and 'generally found him lying in bed putting musical thoughts on paper, or composing at his writing table. On these occasions he [Umlauff] often sang freshly composed songs to the composer, to guitar accompaniment'.[836] As Heck points out, it is not clear who was playing the guitar or whose guitar it was, however Schubert was known to have possessed two guitars:[837] one by Enzensperger [Fig. 179] and according to the Schubert Museum from c1805;[838] the other by Georg Staufer [Fig. 180] and according to the *Schubertbund* from c1815.[839] Although the Schubert Museum dates the Enzensperger guitar as 1805, it displays design characteristics (an angled fingerboard, cut away on the bass side, sitting on top of the soundboard and not inlaid, eighteen frets joining the body at the twelfth fret, and no vine decoration extending from the bridge) that suggest it is later, possibly from around 1815. Equally the Staufer instrument appears to be later than 1815, perhaps from the mid to late 1820s. Although Staufer first used mechanical tuners on guitars from around 1814, they were rare and of an earlier design than those present on this instrument. Other characteristics that suggest the guitar is of a later date include its raised and angled fingerboard, Persian slipper peg head, the proportions of the body, the style of bridge, and the twenty-two frets and its Legnani-endorsed label, all of which appear after 1822.

[836] Heck, *Mauro Giuliani: Virtuoso Guitarist and Composer*, p. 89; Deutsch et al., *Schubert. Memoirs by His Friends. Collected and Edited by O. E. Deutsch, Etc. [a Translation by Rosamond Ley and John Nowell of Part of \201cfranz Schubert: Die Dokumente Seines Lebens Und Schaffens.\201d with Plates, Including Portraits.]*.

[837] Kay Griffin Belangia, "The Influence of the Guitar and the Biedermeier Culture on Franz Schubert's Vocal Accompaniments" (East Carolina University, 1983), p.33. According to Belgania, estate records show that Schubert owned two guitars.

[838] This guitar was previously owned by Major Hans Umlauff and now in the Schubert Museum in Vienna A. P. Sharpe, *The Story of the Spanish Guitar*, 4th Edition. ed. ([S.l.]: [s.n.], 1968); Bone, *The Guitar and Mandolin: Biographies of Celebrated Players and Composers*. Both of these sources refer to this guitar and use the Photograph in Figure 179.

[839] This guitar is now in the possession of the *Schubertbund (Gesellschaft der Musikfreunde)* and its photograph appears in Konrad Ragossnig, *Handbuch der Gitarre und Laute* (Mainz: Schott, 1978). According to Mattingly this particular instrument has frequently been depicted in editions of Schubert's Lieder with guitar, and although the *Schubertbund* confirm it is form Schubert's estate, no other conclusive evidence has yet been presented to support its connection to Schubert.

Fig. 153.

Fig. 144.

Fig. 153. Schubert's guitar by Enzensperger, Vienna, c1815 [Photo: in Bone, *The Guitar and Mandolin*].
Fig. 154. Schubert's guitar by Georg Staufer, Vienna, c1825 [Photo: in Konrad Ragossnig, *Handbuch der Gitarre und Laute*].

According to Bone (also quoting Victor Umlauff's account) Schubert enjoyed playing the guitar in bed in the morning, and this has become somewhat mythologized in social histories of his life.[840] While it is an endearing image, there is no hard evidence to support that it was part of his daily routine.

Schubert and Giuliani, besides attending musical sessions at the house of Frau von André, were both members of the *Unsinnsgesellschaft* (Nonsense Society): a secret club of Bohemian artists who adopted alter egos for meetings (Giuliani's was *Vilac Umo*

[840] Bone, *The Guitar and Mandolin: Biographies of Celebrated Players and Composers*, pp. 315-319.

Capodastro) and got up to all sorts of mischievousness that included drunken brawls and dressing in drag.[841] While 1819 saw the departure of Giuliani from Vienna, it was also the year that Luigi Legnani first came to Vienna.

10.1.3 Legnani

Legnani (1790-1877) was born in Ferrara, Italy. His music studies began in 1799 when his family moved to Ravenna. According to George C. Krick, Legnani had an exceptional tenor voice and by the age of seventeen was appearing in productions at the Ravenna theatre, singing arias accompanying himself on the guitar. In 1819 Legnani gave a recital in Vienna that was a huge success with both audiences and critics.[842] Legnani continued to prove himself as Giuliani's natural musical heir, returning to Vienna in 1822 and again in 1833 and 1839, when on each occasion he was unanimously critically acclaimed.[843] Krick, claims that as well as being a guitarist Legnani was an instrument maker in his own right, and that while in Vienna after his second tour (1822) he collaborated with Staufer and Ertl, as well as other [Viennese] makers such as Nikolaus Georg Reiß. According to Bone, Legnani frequently visited the workshops of Staufer and Reiß, which between 1818-1822 were located in the same district.[844]

While many of the characteristics Staufer guitars from the second period of making (detachable necks with elevated fingerboards, shorter string lengths, mechanical tuners, the Persian slipper headstock design, and body proportions) became associated with the endorsement of Legnani (whose name appears on instrument labels), from around 1822 guitars both with wooden friction-peg tuners and rounded upper bouts, as well as those with the mechanical tuners and sloping shoulders also bear his inscription. Although

[841] Thomas F. Heck, "The Birth of the Classic Guitar and Its Cultivation in Vienna, Reflected in the Career and Compositions of Mauro Giuliani (D. 1829)" (Thesis, Yale., 1970) , p. 117.
[842] George C. Krick, 'Luigi Legnani, Guitar Virtuoso and Composer', *Etude*, vol. 59, no.5 (May 1941), pp. 351-2.
[843] Giuseppe Gazelloni, *Luigi Legnani,* Grove Music Online, ed. L. Macy [Accessed 21 October 2007], <http://www.grovemusic.com> His association with Niccolo Paganini is of particular interest. They had become friends, Paganini himself being an excellent guitarist, and planned to appear as a duo in concert. Some biographers have reported that they toured together although these claims appear to be unsubstantiated. 'They planned to play as a duo in a series of accademie …..three contracts, for 7,16 and 23 August 1836…..cancelled by mutual agreement 30 October that year.
[844] Bone, The Guitar and Mandolin, pp. 204-7.

Bone claims that Legnani instructed both Reiß and Staufer in the construction of this new model of guitar,[845] Legnani's name does not appear in any *privileges*, and not one particular model can be exclusively associated with him. It seems more likely that discussions took place between musician and maker on how to improve ease of playing, and the tonal response of the instrument to meet changing musical requirements. In this respect certain elements of these Staufer instruments are obviously designed to facilitate the musical style demanded by the repertoire: such as a fingerboard with an extended playing compass, elevated to give ease of access to high notes and radiused to allow the fretting of bass strings with the thumb. By 1822 the Viennese publishing company Artaria, had published Legnani's *36 Capricci per tutti i tuoni maggiori e minori, Op.20.* The 5th Capriccio opens with the note d''', necessitating a fingerboard with twenty-two frets. This extended compass, along with a radiused fingerboard and narrower neck, facilitating the playing of passages in a higher register, starts to appear on guitars identified with Legnani [with some guitars extending to twenty-three frets].

Timmerman refers to a publication by the Guitarre Club München in 1904, in which is mentioned an Italian guitar built by Legnani.[846] If it is accepted that Legnani himself was making guitars, it is possible that he could have been using a self-built instrument when he first arrived in Vienna, characteristics of which Staufer then incorporated into his guitars bearing the *Legnani* label. However, Hofmann considers that the main features associated with Staufer *Legnani* guitars are rather the evolution of Staufer's own design; defined by the proportions of a body with a tighter waist and heavily arched back, a shorter scale length that incorporates a minimum of nineteen frets, and an adjustable neck.[847] It is probable then, that in a mutually profitable association between maker and performer, Georg Staufer designed a form of guitar with the virtuosic capabilities of Legnani in mind, happy for his instruments to carry the endorsement of such a popular and successful guitarist.

Hofmann claims that it was the success of the Staufer and Legnani association that prompted other makers (the first being Reiß) to produce a *Legnani* model and that to

[845] Bone, *The Guitar,* p. 206
[846] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age*, pp. 96-97. Timmerman cites the Guitarre club München, *Festschrift zum VI. Internationalen Guitarrestentage in München,* (1904) 15. This mentions an Italian guitar built by Legnani.
[847] Hofmann, *Stauffer & Co., the Viennese Guitar of the 19th Century*, pp. 52-59.

capitalise on their success (the wording of the Staufer *Legnani* label itself was not legally protected), instruments declaring the guitarist's endorsement appeared from diverse workshops in Vienna and its surrounding areas, In support of his claim that Staufer was the inventor of the original *Legnani* model, Hofmann presents the label in a guitar [c1835 by] made by Johann August Schuster (a former pupil of Staufer's) where the same style of engraving declares *Nach dem Modell des Johann Georg Staufer* rather than *Nach dem Modell des Luigi Legnani.*[848]

Legnani composed around two hundred and sixty works for the guitar, mostly for the solo instrument. Many of the longer pieces were written in the form of variations, pot-pourris, and fantasias, often based on operatic themes, while shorter works include scherzos, rondos, waltzes, and caprices.[849]

Although short in length, Legnani's *36 Caprices in all Major and Minor Keys* [Op. 20][850] are technically demanding to play, requiring a thorough knowledge of the fingering of scales in different fretboard positions, and demonstrate both his compositional style and ability as a guitarist. Douglas Goff James describes Legnani's *Scherzo with Four Variations for One Finger of the Left Hand* [Op. 10] as a performance showpiece, having 'an almost inconceivable Paganini-like conception'.[851] The shorter Staufer scale length of 608 mm, combined with the access to the upper frets provided by the elevated fingerboard found on many *Legnani* guitars , is conducive to a rapid left hand technique.

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[848] Hofmann, *Stauffer & Co., the Viennese Guitar of the 19th Century*, pp. 52-59. According to Hofmann, although Staufer & Ertl's *privilege* (1822) had been registered, the inscription 'after Luigi Legnani' had not, and therefore many makers unscrupulously added this endorsement to their instruments to cash in on Legnani's fame, resulting in a blurring of the *Legnani* model's defining characteristics.

[849] Douglas Goff James, "Luigi Rinaldo Legnani: His Life and Position in European Music of the Early Nineteenth Century, with an Annotated Performance Edition of Selections from 96 Capricci Per Tutti I Tuoni Maggiori E Minori, Opus 20" (The University of Arizona, 1994) , p. 28.

[850] Published as *36 Capricci per Tutti i Tuoni Maggiori e Minori, Op. 20*.

[851] James, "Luigi Rinaldo Legnani: His Life and Position in European Music of the Early Nineteenth Century, with an Annotated Performance Edition of Selections from 96 Capricci Per Tutti I Tuoni Maggiori E Minori, Opus 20", p. 29. James refers to Romolo Ferrari 'A Guitarist of Yore', in *The Chesterian*. 11.86 (1930), p. 72, in which Ferrari quotes a reviewer's account of the second 1822 concert in Vienna: *"Capriccio* was performed with a single finger of the left hand, but so cleverly that it gave one the impression that all the fingers were engaged in it, and now and again a trill would spring up so beautifully that [it] made the performance a real treat not to be missed. It would be difficult to imagine greater skill [and]; it would also be difficult to do what Legnani did on this instrument of limited means. Not any of his rivals, not Giuliani himself, could compete with him ... "

Three Legnani pieces, Opus numbers 201, 202 and 203, all include instructions for the use of one or two extra sub bass strings (notated as *c* and *d*) with the respective references of 'seventh string' and 'eighth string'. It would follow therefore, that where *c* and *d* are notated with the reference, these notes should be played an octave below as *C* and *D* on the seventh and eight strings tuned thus. Given their association, it is likely that Legnani was using a Staufer eight-string guitar (two extra basses) for the performance of these pieces at a time that would have coincided with his third visit to Vienna in 1839. [852]

Like Paganini, who was a passionate and highly accomplished guitarist besides being a violin virtuoso, Legnani too was a flamboyant and virtuosic performer. The two men were friends and colleagues and planned to play as a duo in concert in Turin in August 1836, which probably due to Paganini's ill health was unfortunately cancelled. Legnani, having returned to Ravenna, is reported to have retired from public performance in about 1850.

10.1.4 Mertz and Makarow

Soon after Legnani's last bout of Viennese concert performances another important guitar virtuoso, Johann Kasper Mertz (1806-1856),[853] arrived there from his native Pressburg.[854] His first appeared at the Hofburgtheater in November 1840 under the patronage of Empress Carolina Augusta, and according to Brian Torosian, the apparent success of that performance introduced him to the Viennese social and artistic elite, resulting in the prestigious firm of Haslinger publishing his work.[855] In 1841 he embarked on an extensive concert tour taking in Austria, Poland, Russia, and Germany, during which [in 1842] he met the pianist Josephine Plantin. After marrying in Prague in December 1842 they returned to Vienna, where they both become active as teachers, composers, and concert artists, often performing duets of their own composition for

[852] See chapter Nineteenth-Century Viennese Guitar Developments after Staufer from this thesis.
[853] Mertz's baptismal records give his name as Caspar Josef Mertz. During his lifetime he signed his name as J. K. Mertz and many later publications refer to him as Johann Kaspar Mertz. Mertz's widow confirmed that the initials in fact stand for Josef Kaspar.
[854] Press burg is now Bratislava, the capitol of the Slovak Republic.
[855] Johann Kaspar Mertz & Brian Torosian, *J. K. Mertz Opern-Revue, Op. 8, Nos. 1-8* (Digital Guitar Archive, 2006), pp. 4-10.

guitar and piano. In 1846 Mertz was diagnosed with neuralgia, for which he was prescribed strychnine. Having no familiarity with the drug, his wife Josephine dispensed the entire prescription in one dose and Mertz's health weakened. After nearly eighteen months of care Mertz eventually regained his health and resumed his concert career in February of 1848.[856]

Makarow first met Mertz in 1852, describing him 'as a tall man, about 50, neither fat nor thin, very modest and with no hint of a pretence to greatness about him'. He continued with his account:

> I had already become well acquainted with him through a large number of his published compositions and especially through his transcriptions of famous opera music for the guitar. However, with little exception, his music, and, in particular, his transcription was uninteresting. It seemed quite dull to me, rather hurriedly composed without proper attention, simply to satisfy the guitar amateurs of his time. Aware of this, I did not expect anything unusual from his playing.

However, on asking Mertz to play, who apparently treated Makarow to a selection of his unpublished works, he was apparently 'dumbfounded with surprise and admiration', stating that:

> I felt like a Columbus discovering a new America, for here was the great guitar composer I had long given up hope of finding. I had been searching for him everywhere, among the countless pieces of music I bought throughout Russia and Europe. Afterwards, I had thrown them away in despair, finding them worthless rubbish, cooked up by talentless modern composers such as Padovetz, Carcassi, Bobrovich, Bayer, Soussman, Kuffner, Pettol [Pettoleti?], etc.
> In contrast, the music played by Mertz, to which I listened with ever-growing rapture, contained everything -- rich composition, great musical knowledge, excellent development of an idea, unity, novelty, grandeur of style, absence of trivial expression and multiplicity of harmonic effects.
> At the same time, there was the clear basic melody, which kept surging above the surface of arpeggios and chords. The effects were brilliant and daring. Basic to all this, he had a deep understanding of the instrument with all its possibilities and hidden secrets. In his full-hearted compositions, I liked the finales and introductions especially well, because they were unusual and were wonderfully developed. They could be removed from the rest and played separately without losing their power and musical significance. Thus, they could give full satisfaction to any listener.[857]

[856] Torosian, *J. K. Mertz Opern-Revue, Op. 8, Nos. 1-8*.
[857] Makarow, "*The Memoirs of Makaroff*."

Makarow questioned Mertz as to why these pieces he was so impressed by remained unpublished, to which Mertz replied:

> First, on seeing these, the publishers would say it was too difficult, that I would have to rearrange them. That would spoil the compositions. Second, as long as these compositions remain in my briefcase, they remain new; and are mine for my own concerts. Within six months after publication, they would become old. Further, they would become distorted and mutilated by those miserable guitarists who can only scratch the strings of the guitar.[858]

This reply clearly indicates the then practice of publishing simplified versions of guitar music for the amateur market, and shows the demand for such works those publishers sought to meet. Makarow, from the time of his first meeting with Mertz, became his avid supporter, considering him to be an outstanding composer for the guitar.

There are over one hundred opus works by Mertz (not including those where the numbers are missing), as well as others without opus numbers. He wrote for solo guitar; two guitars; guitar and piano (often with his wife); guitar, viola, and violin or flute; and some music for other plucked string instruments such as the zither and mandolin. Torosian describes his concert works as 'expansive and rhapsodic' and his miniatures as 'poetic and descriptive', and regards the piano music of Mendelssohn, Liszt and Chopin as an influence on his style of writing.[859]

Makarow mentions Mertz using a ten-string guitar and evidence of an instrument with extra bass strings can be found in *Opern-Revue* [Op. 8], no's 8, 20, 22 and 30, where the bass notes *C* and *D* are occasionally written, and also in many of the unpublished works now in the Boije collection. *Harmonie du Soir (Grande Fantaisie)* [Boije 413] for instance, features passages that require an instrument (such as those made by Scherzer) with three extra sub bass strings and twenty-two frets (to enable the fretting of a high treble d^3). During his lifetime however, Mertz's published work [with the exception of the pieces mentioned above] was in a format for the six-string guitar, in either standard or terz tuning.[860]

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[858] Makarow, "*The Memoirs of Makaroff*."
[859] Torosian, *J. K. Mertz Opern-Revue, Op. 8, Nos. 1-8*, p. 5.
[860] Torosian, *J. K. Mertz Opern-Revue, Op. 8, Nos. 1-8*, pp. 6-7.

Later in 1902 [after Mertz's recovery from accidental strychnene poisoning]his wife recounted an incident that took place that gives particular insight into an aspect of his playing technique: In 1855 while on tour Mertz travelling with two guitars and a large quantity of strings, was stopped for questioning by a customs official who suspected him of selling musical merchandise without a licence or the payment of duties. Mertz responded that he was using a new method of playing with his fingernails, which caused the strings to deteriorate rapidly.[861] Circumstantial evidence of Mertz's use of a ten-string guitar from this same year [1855] is provided in a documented account of a concert he gave in Salzburg attended by King Ludwig (1) of Bavaria. Amongst other pieces, Mertz played a fantasia for guitar solo in harmonics. Bone describes the king's examination of Mertz's instrument at the end of the performance:

> King Ludwig was most interested throughout the whole performance, and at the conclusion took the guitar from Mertz, turned it over, thorougly examined it inside and out, and then remarked that he could scarcely believe the music he had heard with so much pleasure, could have been produced from such a simple instrument with but ten strings.[862]

Torosian comments on the performance practice of the guitar music that Mertz wrote:

> All of the extant music for guitar by Mertz was intended for a standard six-string guitar, a terz guitar, or a guitar with added bass strings. With few exceptions, his application of these three instruments was routine. Apart from *Opern-Revue, Op. 8, No. 20* (which requires three low D's), *Opern-Revue, Op. 8, No. 23* (which requires a single low C), and *Opern-Revue, Op. 8, Nos. 8* and *30* (which each require a single low D), all of the music published by Mertz during his life was written for the six-string guitar. This was presumably to enhance the accessibility of these works to a broader audience. The terz guitar (tuned a minor third higher) was used in duets with piano and in combination with a standard guitar in his guitar duets. An instrument with added bass strings, usually eight to ten in total, was employed in the unpublished concert works of Mertz.[863]

Torosian goes on to describe the type of ten-string guitar built by Scherzer that won first prize in Makarow's 1856 competition, concluding this was the type of instrument Mertz used in the latter stage of his career, and notes that all of the unpublished works found

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[861] Josephine Mertz, 'Johann Kaspar Mertz', *Mitteilungen* 3, no. 1 (1902), p. 11. It is probable that Mertz was travelling with a ten-string guitar for solo work, and a terz guitar for performing with his wife, while she was playing the piano. Plucking the strings with the fingernails was rare at this time: commonly players would use the pads of their fingers.
[862] Bone, *The Guitar and Mandolin: Biographies of Celebrated Players and Composers*, p. 203.
[863] Torosian, *J. K. Mertz Opern-Revue, Op. 8, Nos. 1-8*.

in the Boije Collection require an instrument with at least two added bass strings.[864] With reference to guitar design he states:

> The only known work by Mertz which explores the extended higher frets of the Scherzer design is his, *Harmonie du Soir (Grande Fantasie)* (Boije 413), a late work for solo guitar that requires an instrument of at least 22 frets and three added bass strings.[865]

The final testament to Makarow's support for Mertz came in 1856 (shortly after the guitaist's death) when he was posthumustly awarded first prize for best composition, in Makarow's well-publicised competition to promote guitar culture.[866]

10.1.5 Padovec

The Croatian Ivan Padovec (1800-1873), another exponent of the guitar with extra bass strings, was active in Vienna in the decade prior to Mertz, between 1829 and 1837.[867] Zdravko Blažeković summarises his compositional style one of brilliance and virtuosity.[868] Padovec wrote over two hundred pieces for guitar in solo or duet form, and while many are variations and fantasies on popular operatic themes, a number are original songs with guitar or piano accompaniment. He also wrote an important pedagogical guitar method entititled [in its full form] *Theoretisch-practische Guitar-Schule vom ersten Elementar-Unterrichte au bis zur wolkommenen Ausbildung nebst der Anweisung zum Spiele einer zehnsaitigen Guitare*.[869] Although his published work is written for the six-single-string guitar, the last and third section of his method, is

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[864] *Boije Collection. Http://Www.Muslib.Se/Ebibliotek/Boije/Indexeng.Htm*. Carl Oscar Boije af Gennäs (1849-1923) was an insurance agent as well as an amateur guitarist. His collection includes printed editions from the early 19th century and manuscripts, e.g. autographs by J.K. Mertz.
[865] Torosian, *J. K. Mertz Opern-Revue, Op. 8, Nos. 1-8*; Torosian, *J. K. Mertz Opern-Revue, Op. 8, Nos. 1-8*.
[866] Makarow, "*The Memoirs of Makaroff*."
[867] Vjera Katalinić, *'Ivan Padovec I Nnjegova Djelatnost U Beču', in Ivan Padovec (1800-1873) and His Age* ed. Vjera Katalinić and Majer-Bobetko (Sanja Editors, 2007) , pp. 69-75. Katalinić refers to the biographical study of Padovec by Franjo Ksaver Dujač, *Illirski glazbenici* (1893), as weel as other texts.
[868] Zdravko Blažeković, "Padovec, Ivan," in *Grove Music Online* (Oxford Music Online, 2012); Blažeković, "Padovec, Ivan."
[869] Ivan Padovec, *Theoretisch-Practische Guitar-Schule Vom Ersten Elementar-Unterrichte Au Bis Zur Wolkommenen Ausbildung Nebst Der Anweisung Zum Spiele Einer Zehnsaitigen Guitare* (Vienna: Werner & Comp., 1842); Padovec, *Theoretisch-Practische Guitar-Schule Vom Ersten Elementar-Unterrichte Au Bis Zur Wolkommenen Ausbildung Nebst Der Anweisung Zum Spiele Einer Zehnsaitigen Guitare*.

devoted to the ten-string guitar (four extra basses). Padovec cites Staufer as a maker of the ten-string instrument, and gives the tuning of the additional bass strings as *D, C, B* and A_1 in descending order, before continuing by explaining the chromatic tuning produced by the capo-like device attached to his own specially built instrument.[870] In addition to his concertizing, Padovec also taught the guitar, singing and the violin, which as he became progressively more blind in later years, became his main source of income.

10.1.6 Regondi

Although Guilio Regondi (1822-1872) spent most of his early life living in England where he was hailed as a child prodigy, during the 1840s he made concert tours of the major European cities and first appeared in Vienna in 1841.[871] Not only was his skill on the guitar so great that he was likened to an infant Paganini, he also excelled on the newly invented Wheatsone concertina, which he promoted and used in concerts. Although highly talented as a guitarist and composer, Regondi left behind only five solo works for the instrument [Opus numbers 19-23] and ten etudes, preferring to perform others' compositions.[872] Besides using the guitar with extra basses [he was known to have owned an eight-string Staufer (two extra basses), which he gave to his friend and physician Dr. T Gaisford],[873] he is also reported to have played a melophon[e], sometimes erroneously confused with the concertina or even described as a free-reed guitar.[874] The London operation of the Roudloff firm was producing its eight-string (two extra bass) *melophonic* guitar at this time, and it is reasonable to assume that Regondi played one of these instruments as well as the Staufer.

[870] Padovec's special ten-string guitar made by Friedrich Schenk is discussed in Chapter 5.2 of this thesis.
[871] Regondi's last visit to Vienna was probably around 1846. He was born in either Geneva or Lyons: sources are unsure and conflict.
[872] Some pieces for guitar and voice, piano, and concertina also exist.
[873] Coldwell in 'Morishige Takei and Jiro Nakano' in *Guitar and Lute Issues*, http://www.guitarandluteissues.com/influ-j.htm#nakano, refers to a Staufer 10-string guitar, however the accompanying Photograph of instrument supplied by Bone is of an 8-string guitar by Anton Staufer.
[874] Stringed instruments, whether bowed or plucked, and Free-Reed instruments produce sound by completely different methods.

10.1.7 Dubez

Johann Dubez (1828-1891) was Mertz's most distinguished pupil.[875] Besides the ten-string guitar (four extra basses), he also played the violin, harp, zither and concertina. His guitar compositions, particularly *Fantaisie sur des motifs hongrois* and *Fantaisie sur des motifs de l'Opéra: Lucia di Lammermoor, Op. 2*, are very much in the style of Mertz, requiring a ten-string instrument equipped with twenty-two frets to play.[876] There is some debate as to whether Regondi also instructed Dubez in both the guitar and concertina: the two were thought to be friends and may well have become acquainted on Regondi's visits to Vienna. There is certainly some weight to this argument as the concertina, common to both men, was a new and unsual instrument in concert performance at the time. Music manuscripts by Dubez are preserved in the Boije Collection of the Statens Musikbibliotek, Stockholm, and the ten-string guitar (c1860) [Fig. 181], was signed by Dubez on 24 February 1889.[877]

[875] Michael Sieberichs-Nau, "Johann Dubez," in *Guitar Research Meeting* (Bregenz, 2009).
[876] Copies of *Fantaisie sur des motifs hongrois* and *Fantaisie sur des motifs de l'Opéra: Lucia di Lammermoor, Op. 2*, can be found in the Rischel and Birket-Smith Collection of the Danish National Library and the Bickford Collection (International Guitar Research Archive in the Music Department at California State University, Northridge). Given his association with Mertz, who was known to have used such an instrument made by Staufer's pupil Sherzer, it might be presumed that he too would have used an instrument from this maker. A ten-string guitar, now in the collection of Brigitte Zaczek, has come to light, bearing Dubez's signature and dated 1889. The identity of the maker is uncertain, but as Hofmann concludes, it is unlikely to be Dubez himself, although he may have added his signature as the commisioner. See: Hofmann, *Stauffer & Co., the Viennese Guitar of the 19th Century*, pp. 224-225.
[877] This instrument is currently in the collection of Brigitte Zaczek, Vienna.

Fig. 155. Ten-string *baßgitarre* signed by Dubez, maker unknown, c1860. Private collection [Photo: Brigitte Zaczek].

Up until in the middle of the century, a fascination with the guitar gripped the concert-going public who attended the performances of its virtuosos, with amateur players studying the repertoire of their published work and learning from their methods. All of these leading players were active in Vienna during the first three-quarters of the nineteenth century and published methods with the exception of Regondi, who did however add to this body of pedagogical works with his 'etudes'.

Within the activity of social music-making, either in the salon or in the open-air, traditional folkloric themes were embraced in the spirit of Biedermeier. This is depicted in the engraving *Ballspiel in Atzenbrugg* [by Ludwig Mohn (1820)], in which Schubert

is depicted relaxing and watching an informal violin and guitar duet accompanied by dancing; and in both *Die Ausfart* and *Die Nachmittasgrube* from the series *Die Landpartie auf den Leopoldsberg* [by Moritz von Schwind (c1820)], where he is captured amongst friends boarding a carriage for a trip to the gardens of Atzenbrugg, and then is pictured there enjoying an afternoon tea party. In these engravings, Shubert's friend the singer Johann Michael Vogl carries and plays a guitar, an easily portable instrument to facilitate social music making. While folkloric themes were present in the concert works for guitar, in this relaxed social setting it was used to accompany singing, or as part of a small ensemble playing traditional folk dances such as ländler (from which the waltz was derived), schottisches, polkas, polonaises and mazurkas. The second half of the century witnessed a gradual decline in the popularity of the six-string guitar in Vienna, both in chamber music with the piano becoming dominant in the concert hall, and in fashionable song accompaniment where it was being replaced by the zither. As the guitar's role, for a time shifted from predominantly accompanying the voice, so too was this reflected in its changing form. Its dynamic range, firstly with the addition of a sixth string at the beginning of the century, and then with the gradual addition of futher bass strings in the second quarter of the century, had been extended to provide more musical possibilities in a lower register. This made it ideally suited to support other instruments playing in a higher register such as the violin and clarinet. The first of these new guitars with an extended range [with the exception of Georg Staufer's *Helikan* guitar],[878] conceived of by the Staufers and developed by Schenk and Sherzer, were fitted with sub basses that owing to their diatonical tuning limited the player to certain keys. The introduction by Sherzer of a guitar with sub basses tuned chromatically allowed the possibilty of multiple key changes, which was a distictive facet of popular Viennese music in the second half of the nineteenth century.

Sherzer's development of the eleven, twelve and then in around 1867, thirteen-string

[878] Hofmann, *Stauffer & Co., the Viennese Guitar of the 19th Century*, pp. 39-40 & 152-153. Hofmann cites Wilhelm Hebenstreit, "Helikan-Guitare," in *Wissenschaftlich-literarische Encyclopädie der Aesthetik* (Wien: Carl Gerold, 1843). 'HELIKAN-GUITARE (From the Greek *helikos*: big, strong), invented in 1838 by Stauffer in Vienna. Sixteen strings (three of gut and thirteen of metal) are disposed side by side on two necks; their range is extended into the bass register, which improves the tone and creates an effect something like a harp. Through specific tuning, all bass notes are available without stopping by the left hand, which can thus be devoted to the melodic line and achieve passages which otherwise cannot normally be played simultaneously with bass accompaniment. The instrument is intended to make it possible to play an accompaniment in any key'. From its original label, Hofmann dates the extant example of this instrument in his collection as from around 1825, concluding that it was invented earlier than the date mentioned by Hebenstreit.

guitar (seven extra basses),[879] expanding on Anton Staufer's model in c1848[880] and Georg Staufer's prototype *Helikan* guitar in c1825,[881] laid the foundation for the development of the contra guitar. Featuring a fully chromatic bass, making it suitable for playing chordal and extended bass parts that supported the melodies of other instruments [usually the violin and clarinet], it found a new place in the typically three or four piece *schrammel* ensembles of the last quarter of the nineteenth century. The music, born out of mixture of Central and Eastern European folk influences coupled with those of the Austrian *ländler*, waltz and song tradition was a Viennese phenomenon that grew from its social roots in the city's bars and taverns to become embraced by the middle-class and high society on an international level.

10.2 North America

In the 1830s and 1840s, the repertoire of concert guitarists in America consisted of pieces selected from the works of European guitar pedagogues such as Sor, Aguada, Carulli, Carcassi and Giuliani, but during the 1850s home grown American material started to be included. Variations on popular songs by the likes of Stephen Foster, and then later George Root, who found fame during the American Civil War (1861-65), presented American social and political themes that were embraced by the concert-going public.

At the beginning of the nineteenth century the only methods available to American guitarists were by Europeans; Carcassi's in particular, and with Sor's being the only one fully translated. The first American-written guitar method was *New Instructions for the Spanish Guitar…by a* Professor [1816].[882] While miscellanies of studies by European guitarists such as Carulli and Giuliani were published in America as instruction manuals during the intervening years, it was not until James Ballard's *Elements of Guitar-*

[879] Hofmann, *Stauffer & Co., the Viennese Guitar of the 19th Century*, p. 219. Thirteen-string guitar by Johann Gottfried Scherzer, Vienna, c1867.
[880] See 'Examination of Staufer Instruments' in this thesis. *Kontragitarre* by Anton Staufer, c1848 (KHM), SAM 1059.
[881] Hofmann, *Stauffer & Co., the Viennese Guitar of the 19th Century*, p. 153.
[882] *New Instructions for the Spanish Guitar, Containg a Variety of Songs and Pieces by a Professor*, (Philadelphia: G. Willig, ca. 1816). According to Gura the music historian and bibliographer, Richard Wolfe, has dated the American Antiquarian Society's copy of this book.

Playing (1838)[883] that a method as refined as its European counterparts was produced. While Ballard fully acknowledged his debt to Sor (both in teaching style and choice of pieces), his own book made instruction accessible to the American amateur player. Gura points out that 'Ballard's *Elements of Guitar-Playing* offers a benchmark of guitar culture at the same time that C. F. Martin moved to Nazareth, Pennsylvania, to devote his career to guitar making',[884] and in so doing underlines a period of evolution for the American guitar both in its societal use and manufacture.

Jimmy Everett Moore identifies three main categories of published early American guitar music:

> 1. Stylised 'society' dances, such as waltzes, schottisches, mazurka, marches and polkas.
> 2. Potpourris and arrangements of light operatic melodies and popular songs of the day.
> 3. Theme and variation 'fantasies' based on operatic works and other popular works of the day.[885]

This represents the same repertoire as that favoured by European players during the *guitaromanie* of the early nineteenth century in London, Paris and Vienna and which, in the second quarter of that century, began to make its way to North America through touring European concert performers. A. T. Huerta was one of the first of these to visit America, arriving in New York in 1824 and touring the country throughout 1825. During the 1830s and 1840s he was followed by: John Coupa (later to become C. F. Martin's New York agent), Antonio Martinez, F. Benedid, G. E. Bini, Vincent Schmidt, Madame Dolores de Goni and Marco Aurelio Zani de Ferranti, amongst others. Though they performed works that would primarily appeal to concert-going Americans seeking to maintain their connection with a European musical heritage, certain notions of American independence were also catered for. Zani de Ferranti, for instance, is reported to have included variations on both the *Star Spangled Banner* and *Yankee Doodle* in his performances.[886]

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[883] James Ballard, *Elements of Guitar-Playing* (New York: Geib & Walker, 1838).
[884] Gura, *C.F. Martin and His Guitars, 1796-1873*, pp. 24-26.
[885] Jimmy Everett Moore, "The Significance of Justin Holland's Modern Method for the Guitar" (Florida State University, 2009), p. 9.
[886] 'Musical Intelligence', in *The New York Herald*, Aug 13, 1846, p. 6.

Although in the early 1830s, the guitar in America was distinctly European, made up of influences in design and repertoire from France, Italy, Spain and Austria, by the middle of the century these different aspects began to merge into the beginnings of a unique American guitar culture, reflected not only in the instrument's use but also in its form.

10.2.1 Martin's association with celebrated guitarists

Christian Friedrich Martin embraced this new America. Soon after arriving in New York, he anglicised the spelling of his middle name to Frederick, and although his first accounts (presumably written by himself) are in German, by 1835 entries, albeit in the hand of his then bookkeeper Charles Bruno, are in English.[887] While remaining at the centre of his own community of German immigrants, Martin explored the opportunities afforded him by his relocation to America, both outwardly with the commercial expansion of his business, and by absorbing design characteristics from other styles of making that were made available to him by being part of New York's cultural melting pot. In addition to promoting the sale of his instruments through teachers, Martin also nurtured professional relationships with concert performers, such as Madame Delores de Goni and S. de la Cova, both of whom he probably met through his New York agent, John Coupa.[888] When Madame de Goni arrived in North America in 1843 she is reported to have brought a Spanish guitar with her. This instrument was copied by both Martin and his associates Schmidt & Maul, and is likely to have been an important source for the Spanish stylistic elements that were introduced into their guitars at this time. Martin named a model after de Goni (identified as a 1-26 by the Martin Company), but as Coupa in an order from 1849 refers to 'two small Degoni[s] at twenty dollars each, [and] two large ones with pegs', more than one size must have been available. In the same order Coupa requested one 'Ferranti', a model of guitar named after Marc Aurelio Zani de Ferranti (guitarist to the king of Belgium). De Ferranti was reported as concertizing in America during 1845 using an instrument whose description resembles a

[887] Gura, *C.F. Martin and His Guitars, 1796-1873*. Of the first and the later account entries, deducing that Bruno's was the later hand, and pointing out that it made him a partner of Martin's from an earlier date than had been presupposed.
[888] Gura, *C.F. Martin and His Guitars, 1796-1873*, p. 89. Correspondence between de la Cova and Martin in 1855 regarding maintenance of his Martin guitars refers to a small guitar, which may well have been the terz mentioned by Coupa in 1849.

Staufer *Legnani* model but with a second interior soundboard.[889] In his order, Coupa continued by inquiring of Martin as to which of the two, the [Spanish] Degoni or [Viennese] Ferranti, was the best form for terz, so identifying the two different models of guitar. In securing the endorsement of de Goni and de Ferranti by copying their instruments, Martin was offering two different models: one Spanish, the other Viennese in style, that would through their association with these celebrated players appeal to his customers. From around 1852 Martin's records show that besides supplying musical instrument dealers, he sold both his cheaper and more expensive guitars through provincial music teachers, including for example William Schubert, Edward Pique, Augustus Fiot and Franz Sulzner.[890] Occasionally he also made lavishly adorned instruments as special orders and exhibition pieces: in 1852, William C. Peters ordered an instrument where the patent head [headstock] was to be gold-plated; the ends of the screws [machine heads] to be pearl-tipped; the frets eighteen carat gold; the fingerboard in pearl; and the soundboard a pale yellow, all at a price not exceeding $110. A guitar made with these materials and appointments is probably the type of instrument Martin won a Bronze Medal for at the New York Exhibition of the Industry of All Nations [Crystal Palace Exhibition] in 1853.[891]

Professional guitarists too were experimenting with the design of the instrument: G. E. Bini was a popular concert fixture in the New York area during the 1840s and regularly appeared in P. T. Barnum's American Museum, billed as 'the Unrivaled Guitarist'.[892] David Bradford thinks it likely that G. E. Bini was almost certainly Joseph Bini [in some concert programs listed as J. Bini] the guitar maker who held a patent for an early X-bracing design.[893]

The German concert guitarist Vincent Schmidt was also involved with new American inventions to the guitar. He came to America with the *Tyrolese Minstrels* in 1831,[894]

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[889] James Ballard, *A History of the Guitar : From the Earliest Antiquity to the Present Time* (New York: W. B. Tilton, 1855)., p.22; Bone, *The Guitar and Mandolin: Biographies of Celebrated Players and Composers*, pp.113-117.
[890] Gura, *C.F. Martin and His Guitars, 1796-1873*, pp.85-86.
[891] Gura, *C.F. Martin and His Guitars, 1796-1873*, pp. 90-91. An exact description does not exist of the Crystal Palace guitar, but it is likely that it was adorned in a similar way to one requested by Peters.
[892] Douglas Back, "Guitar on the New York Concert Stage, 1816-1890 as Chronicled by George C.D. Odell and George Templeton Strong," *Sounboard* 1999.
[893] Bradford, "The First Steel String Guitars ".
[894] His role with the *Tyrolese Minstrels* is discussed later in this chapter.

later settling in Baltimore. He became known as a virtuoso on the harp guitar patented by E. N. Scherr of Philadelphia, which he also promoted.[895] This instrument was neither like the guitar with extra bass strings that evolved from the Staufer workshop in Vienna, nor like the Symphony harp guitar made in North America by Knutsen (and later the Larson Brothers), but rather resembled an over-sized six-string guitar whose tail rested on the floor while the player held it between the knees. Sherr's patent features a drawing of his design [Fig. 182] and describes the instrument as some four feet ten inches long.[896] Although it was well received at the Franklin Institute in Philadelphia in 1832, the design did not catch on.[897]

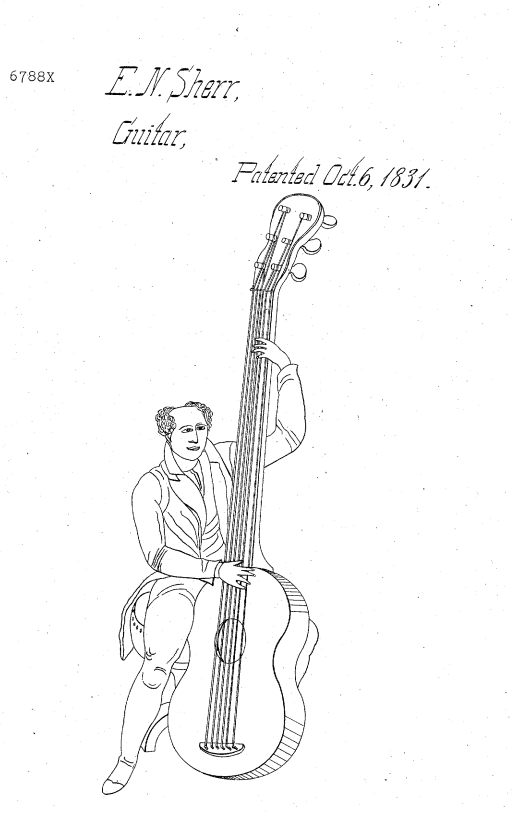

Fig. 156. US Patent X6788. Guitar patent by E. N. Scherr. 1831.[898]

After Coupa's death in 1851, one Charles de Janon, a teacher of the guitar and piano (likely to have been related to, Leopold de Janon, a celebrated American singer,

[895] Bradford, "The First Steel String Guitars ".
[896] E. N. Scherr. 1831 Guitar. US Patent X6788, filed 6 October 1831, and issued 6 October 1831; Gura, *C.F. Martin and His Guitars, 1796-1873*.
[897] Gura, *C.F. Martin and His Guitars, 1796-1873*, p. 31.
[898] The author would like to acknowledge the view of Darcy Kuronen (Musical Instrument Curator at the MFA, Boston), that as the patent drawing of Scherr's harp guitar was reconstructed after 1832, it is not as such an adequate representation.

guitarist, violinist and concert performer during the early 1840s)[899] became Martin's New York agent. He is not though to be confused with the Colombian-born guitarist, also named Charles de Janon (1839-1911),[900] who became popular during the latter part of the century. Like his contemporary Charles James Dorn (1839- c1910), this Charles de Janon was highly respected as a guitarist both with audiences and within the BMG community.[901] The repertoires of these two [de Janon and Dorn] represent styles of guitar music that was to later polarise in the different playing approaches of the two deities of early twentieth-century-American concert guitarists, William Foden and Vahdah Olcott-Bickford. Dorn, like many prominent American guitarists during the second half of the nineteenth century, was influenced by the work of J. K. Mertz,[902] whose technically demanding musical style was also embraced by Foden. Olcott-Bickford on the other hand, cites de Janon and her tutor Manuel Y Ferrer (another American Latin guitarist) as her preferred players, venerating their artistic ability to express music beyond mere technical capability.[903] At the mid-point in the nineteenth century, the African-American guitarist Justin Holland (1819-1897), having studied the methods of earlier European [guitar] masters in their original language, was content to arrange their works as an aide to his teaching activities. This resulted in the publication of his own important methods: *Holland's Comprehensive Method for the Guitar* (1874), and *Holland's Modern Method for the Guitar* (1876). But during the last quarter of the century, American and American-domiciled guitarists, whose repertoire had hitherto predominantly featured earlier European pieces, started to include their own compositions: thus there existed a Spanish Latin influence, with its sensual musical style witnessed in the work of Luis T. Romero, Manuel Y Ferrer, and then later Charles de Janon and Olcott-Bickford. At the same time Foden, while not exclusively limiting his repertoire to the technically demanding Germanic and East European repertoire of

[899] John Coupa, Leopold de Janon and James Dorn were New York concert performers, their shows much in the same mould as A.F. Heurta, Jenny Lind and Ole Bull before them, consisting of a mixture of variations on European operatic themes and original songs,
[900] Bone, *The Guitar and Mandolin: Biographies of Celebrated Players and Composers*, pp.182-183. It is unlikely that Martin would have made a twelve-year old his New York agent, and Gura suggests that the agent Charles de Janon may have been an older relative of the celebrated guitarist Charles de Janon, and that he may have been the nephew of Leopold de Janon; Douglas Back, *Hispanic-American Guitar* (Pacific, MO: Mel Bay, 2003), p. 8. Back gives Charles de Janon's [the celebrated guitarist], professional debut as 1850 in Brooklyn.
[901] Dorn's father, Valentine Dorn, was an orchestral French horn player, and his uncle and early teacher James Dorn was a talented horn and guitar player, who was employed as a court musician to the Duke of Baden.
[902] Bone, *The Guitar and Mandolin: Biographies of Celebrated Players and Composers*, p. 90.
[903] Vahdah Olcott-Bickford, 'Guitar Repertoire', *Crescendo* 1, no. 11 (1909).

Legnani and Mertz, certainly embraced the challenge of their compositions and emphasised the importance of technical excellence on the guitar. He adopted this form of virtuosity to his own performance, so becoming known as the 'Wizard of the Guitar'. According to Noonan, throughout the last quarter of the nineteenth century and into the first quarter of the next, the leading figures of the BMG movement were predominantly a group of 'Anglo males' suspicious of the romantic sensibility of the guitar associated with Latin and women players, and dominated the movement's ideology with their emphasis on powerhouse performance, pedagogy and business acumen.[904]

As with de Goni and de Ferranti before them, some of these players were associated with particular instruments and makers. Holland bought his first Martin guitar in 1861 (a size 2 ½ style 24) and continued purchasing from them, for both himself and his students, for the rest of his life.[905] In 1890 Foden was endorsing Washburn guitars, but he changed his allegiance to Martin in 1900, who then produced the 'Foden Specials', which on his suggestion featured twenty, rather than the previously installed nineteen frets. Olcott-Bickford also played Martin guitars, and starting in 1913 they produced a high quality instrument but with restrained decoration on her request, known as the 'style 44'. Jennie M. Durkee (active from the 1890s) played a terz guitar made by her father George B. Durkee, the foreman for Lyon & Healy in Chicago (and it seems likely that she would have played other of their instruments).

10.3 The Influence of Folk Music

Amateurs playing dance tunes in the American parlour, mirrored the stylistic musical forms, such as the waltz, schottische and polka, presented in the repertoire of concert guitarists. The established role of the guitar in Central Europe for vocal accompaniment was ideally suited to lend support to the English, Scottish and Irish ballads also popular in both America's city salons and rural homesteads. The celebration of traditional Folk values in music and dance, and its subsequent embracing by a middle class society can be witnessed in the mid-nineteenth-century rage for Tyrolean folk music that gripped America.

[904] Noonan, *The Guitar in America: Victorian Era to Jazz Age*, pp. 68-76.
[905] Gura, *C.F. Martin and His Guitars, 1796-1873*, pp. 163-167.

The introduction of Tyrolean folk music to American audiences started when a group called the Tyrolese Minstrels toured the country in 1831. They were followed first by another group also calling themselves the Tyrolese Minstrels in 1834, and then by the German Minstrels and the Tyrolese Alpine Singers in 1837.[906] However it was the tours between 1839 and 1843 by the [Austrian] Rainer family performing as The Tyrolene Minstrels that initiated a craze with Alpine folk music, dance, and its yodelling singing style, that then swept through the country. According to Hackl, the Tyrolienne was already a 'much-appreciated musical form' in Europe by this time, with variations of the song *Wann i in der Fruah aufsteh* appearing in works by Diabelli, de Call, Matiegka, Carulli, François de Fossa, Joseph Küffner, Antoine Marcel Lemoine, Luigi Legnani and Zani de Ferranti, amongst others. He goes on to point out that during his Viennese period, Giuliani also incorporated Austrian folk music influences into his work.[907] In the lithograph of the Tyrolese Minstrels [Fig. 183] two members are depicted playing the guitar, which the group was used to accompany their singing and dancing, and for solos and duos during interludes between songs. The American Antiquarian Society describes the figures depicted in the lithograph of the Tyrolese Minstrels as Rainer family members, although at times there may have been other non-family members in the troupe. In 1831 for example, Vincent Schmidt was reported to have been with them as a featured soloist on the guitar.[908]

[906] Bradford, "The First Steel String Guitars ".[Accessed 27 March 2012]. According to Bradford it is the second *Tyrolese Minstrels*, in 1834 that may have contained Rainer family members; on the other hand the American Antiquarian Society describes the Rainer family as being depicted in the lithograph of 1831, entitled *Tyrolese Minstrels* [Fig. 183].
[907] Hofmann, *Stauffer & Co., the Viennese Guitar of the 19th Century*, pp. 270-271.
[908] Germanicus, *'The Appearance of the Tyrolese Minstrels, in Mr. Norton's Farewell Concert at Castle Garden Saloon', in the Euterpeiad, 2/11* (1831), p. 124.

Fig. 157. 'Tyrolese Minstrels,' Endicott & Swett [litho: American Antiquarian Society, 1831].

The enormous success of the Rainer family led to other European groups, all from a broadly German background, adopting a Tyrolean identity and touring America. The Hauser family further symbolised the folk elements of this musical form by typically presenting themselves in national dress, and adding the zither as well as the guitar to their line-up.

As a result of the American infatuation with Alpine folk music, homegrown acts exemplified by the Hutchinson family sprang up imitating the Tyrolean style of four-part close harmony singing. The Hutchinson Family, made up of eleven brothers and two sisters, promoted a pastoral image of their rural upbringing in New Hampshire and emphasised their national identity by introducing pertinent American themes into their songs, such as the abolition of slavery and women's rights. Although known primarily as a singing group, they did at times utilise musical instruments in their act, with 'sister Abby' playing guitar accompaniment.[909]

[909] Charles Hamm, *Yesterdays: Popular Song in America* (New York: W. W. Norton, 1979), p.144. Hamm quotes John Wallace Hutchinson, *Story of the Hutchinsons (Tribe of Jesse)*, [1896].

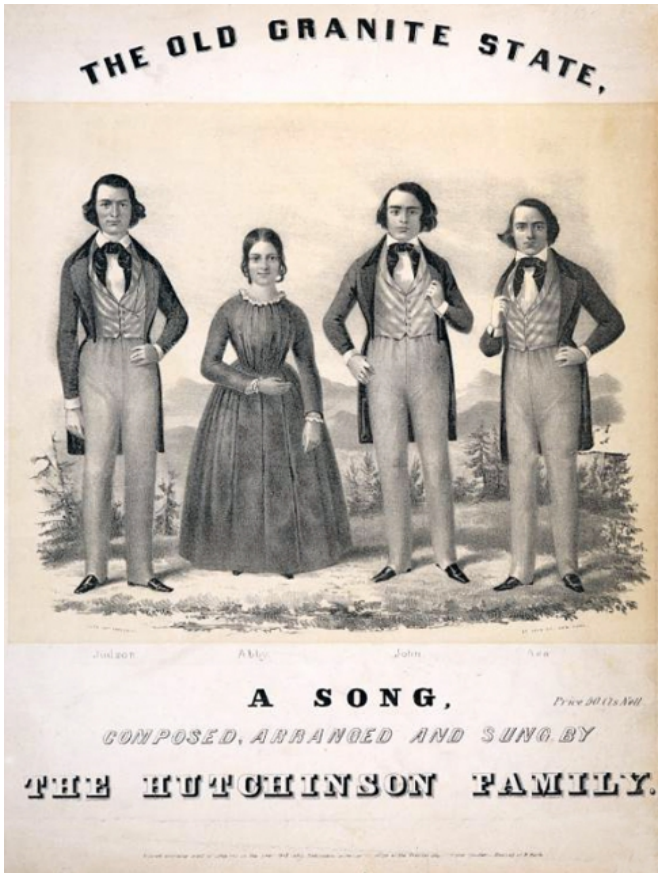

Fig. 158. Sheet Music 'The Old Granite State' by The Hutchinson Family, c1845. Joseph Muller Collection of Music and Other Portraits [Photo: NYPL Digital Gallery (2010)].

10.4 The Guitar in Minstrelsy

The guitar also found its place in the blackface minstrel shows that became popular in the middle of the [19th] century. Typically a show would be made up of two major sections, with the main instrumentation during the first part consisting of tambourine, bones, banjo and fiddle. The guitar appeared more frequently during the *entr'acte* and *Olio* [second part], where it was usually cast as a middle-class foil to the 'Negro' banjo. Bradford suggests that the influence of the Tyrolean guitar style, through being parodied, may also have had an influence on the way the guitar was played in these shows:

> One avenue through which Tyrolean guitar styles may have influenced American guitar performance practices was the minstrel show. Alpine groups were obvious targets of parody by minstrel comedians – in fact the name of the first minstrel troupe, the Virginia Minstrels, apparently was a parody of the then enormously popular Tyrolese

> Minstrels. It seems highly likely that American minstrel guitarists imitated the Alpine style of playing, and either consciously or unconsciously incorporated the lessons learned in other aspects of their performances in this new, distinctively American type of music and theatre'.[910]

By caricaturing not only the Tyrolean guitar but also the genteel parlour guitar, elements of playing style and technique from both genres must have found their way into the repertoire of the blackface minstrel guitarists, and while it is impossible to know the particularities of this today without documentation, it is reasonable to suggest that the mixture of both of these genres within the musical and theatrical language of Minstrelsy resulted in another style of playing.

Much as the banjo might best embody the stereotype of the African-American plantation worker or slave and as such was gaining in popularity from its association with minstrelsy, judging from the number of guitarists featured in minstrel acts, it would appear that the guitar still had a supporting role in blackface minstrel shows. Bradford lists the following as being employed as featured guitarists in minstrelsy in the years leading up to the American civil war:

Guitarist	Minstrel Troupe
Napoleon Gould	Christy's Minstrels
	Pierce's Minstrels
	Bryant's Minstrels
	Campbell's Minstrels
	George Christy & Wood's Minstrels
A. M. Hernandez	Morningstar's Minstrels
	Hernandez Minstrels
	Hernandez & Smith's Minstrels
G.W.H. Griffin	George Christy's Minstrels
Frank Curley	Campbell's Minstrels
W.D. Corrister	Charles White's Serenaders
	Birch's Minstrels
	The San Francisco Minstrels
	Backus' Original Minstrels
E.J. Melville	Durant & Haywood's Campbells
	Hooley & Campbell's Minstrels
	Lloyd's Minstrels
	Carncross & Dixey
	Duprez & Benedict
C.L. Huntley	Thayer's Boston Sable Harmonists

[910] Bradford, "The First Steel String Guitars ". *Yodeling Mountaineers: The Alpine Roots of the American Guitar.*

The middle of the nineteenth century saw the beginning of a change in American societal use of the guitar, perhaps reflecting a general desire to establish a musical culture that was not necessarily governed by European taste. This change would not be instantaneous, and indeed the parlour tradition of genteel music making continued to be associated with the European model. America at this time was a miscellany of cultural musical influences, stemming both from refined society in the major cities of Europe, and from the folk traditions that its immigrant populations brought with them, not only European but African also. The full extent to which different idiosyncrasies of regional and cultural musical style would overlap and merge did not become apparent until into the twentieth century, but that they did then bore the fruit of various musical characteristics that are now regarded as having a particular American identity: the evolution of the falsetto in the yodel to the 'high lonesome' of bluegrass; the double-stopping and slides of the fiddle in Scottish, English and Irish music that were re-interpreted, often incorporating the flattened fifth present in a blues pentatonic scale, and then; the rhythmic syncopation of a barrelhouse cake-walk that may have borrowed from a *ländler* hop. All are examples that might be seen as far-fetched, but are in fact conceivable, and are variations on the musical cross-fertilization that happened in the second half of nineteenth-century America.

It wasn't until the turn of the twentieth that the guitar was included in the line up of the string bands that represented the folk music of rural communities. Rather these bands, where tunes and songs were passed on by oral tradition, were led by the combination of the fiddle and early banjo.[912] In the period immediately after the American civil war, the guitar's position on the concert stage was in decline, largely due to the phenomenal rise in popularity of blackface minstrelsy and in turn its association with the banjo. Noonan points to the very different social environments that these two instruments

[911] Bradford, "The First Steel String Guitars ". *Burnt Cork and Guitars: The Blackface Minstrel Show.* Napoleon Gould was a guitarist of English origin, who immersed himself professionally within the milieu of black-faced minstrelsy. As a maker, in 1853 New York Exhibition of the Industry of All Nations, he exhibited an, 'improved transposing guitar'.
[912] This genre is commonly referred to now as 'old time music'.

represented: the guitar on the one hand symbolised highbrow culture and was more often played with reserve in the private sphere of the parlour, while the banjo was associated with lowbrow culture and played with ostentation in the public sphere of popular theatre and minstrel show productions. In quoting Cockerell, he summarises the division: 'Public music of this era featured "noise, excess, unrestrained emotionalism, and showy professionalism," all inappropriate for the refined entertainments of the sequestered world of the middle-class nuclear family'.[913]

10.5 American Guitar Repertoire in the Last Quarter of the Nineteenth Century

Although not as in evidence on the concert stage in the 1860s as it had been a decade earlier, the number of works and tutors printed for the guitar suggest that in the parlour it was still a fashionable instrument to play. Although its prominence in this setting both as a solo instrument and for vocal accompaniment continued after the American civil war, a survey of its music appearing in BMG periodicals during the last quarter of the nineteenth century also places it, although not exclusively, in a supporting role to the banjo or mandolin. In this ensemble context its parts were often simple alternating bass and chordal patterns, designed to provide the backing for dance tunes. From the *New Musical Era* in April 1891 [in which its proprietor C. Edgar Dobson claims publishing copyright to all the scores], *Annie's Waltz* by J. A. Robinson[914] is notated in the key of *C major*, to be played in standard guitar tuning without moving above the fifth fret position. In the same issue *Yeddy Waltz*[915] also written by Robinson, is more adventurous, starting in the key of *D major* before modulating to *A major.* However, even though this piece moves above the fifth fret with an *f*♮'' played on the first string in the thirteenth fret, and with the third and first string sometimes played in their octave position at the twelfth fret, it still requires only a rudimentary playing technique. This simplified style of guitar transcription is apparent in others' adaptations of pieces that appeared in the *New Musical Era*. For example *Le Petit Carnival* by L. Streabbog and

[913] Noonan, *The Guitar in America: Victorian Era to Jazz Age*, pp. 15-16; Dale Cockerell, "Nineteenth-Century Popular Music," in *The Cambridge History of American Music*, ed. David Nicholls (Cambridge: Cambridge University Press, 1998), p. 159.
[914] J. A. Robinson, 'Annie's Waltz' in *New Musical Era*, 2/4 (April 1891).
[915] J. A. Robinson, 'Yeddy Waltz' in *New Musical Era*, 2/4 (April 1891).

arranged by C. H. Stickles,[916] is a simple waltz in *D major*, modulating to *G major*. It employs one example of e'' played on the first string in the twelfth fret position, and d'' and a' double-stopped at the tenth fret on the first and second strings, together with some simple harmonics at the seventh and twelfth frets.

In the first issues following its release in 1887, *Gatcomb's Banjo and Guitar Gazette* included guitar arrangements by W. H. Harris of themes from works of celebrated European composers. Harris' arrangement of *Menuet from Don Juan* by Mozart[917] is transcribed in *F major* and does not require the player to extend above the sixth fret, likewise his arrangement of *The Happy Peasant* by Robert Schumann[918] is scored in *A*, and does not extend past the guitar's fifth fret. These simple re-workings of original themes are squarely aimed at the amateur market. An easy approach to playing the guitar, needing only limited skill, is also evident in Harris' own piece *Etude*.[919] Appearing in the same issue as *The Happy Peasant*, the piece appears to stretch the player's understanding of harmony by modulating to the key of *G major* from its opening in *C major* before ending in *E minor*, but with the exception of one c'' played in the seventh fret, its playing compass does not extend pass the firth fret.

Two pieces from separate issues of *Gatcomb's* in late1891 serve to illustrate differences in the guitar's use at this time. Both place the instrument in an accompanying role: the first, a hymn-like piece called *Comrades*,[920] to the guitar supports group singing; in the second, an arrangement of an instrumental *La Zingara* by the popular German composer Carl Bohm,[921] it underpins the mandolin part.

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[916] L. Streabbog, arr. C. H. Stickles, 'Le Petit Carnival' in *New Musical Era*, 1/ 1 (April 1890). Stickles makes regular appearances in the New Musical Era, and in an earlier issue in May 1890 (vol. 1, No, 2), in the column *Entertainments*, there is a reference to a guitar and mandolin concert given by the pupils of Sig. Ricci (Mando) and Mr. C. H. Stickles (Gtr) attended by about 1200. [An exaggeration?].
[917] Mozart, arr. W. H. Harris, 'Menuet from Don Juan' in *Gatcomb's Banjo and Guitar Gazette,* 1/1 (Sept 1887).
[918] Robert Schumann, arr. W. H. Harris, ' The Happy Peasant', in *Gatcomb's Banjo and Guitar Gazette,* 1/3 (Jan 1888).
[919] W. H. Harris, ' Etude', in *Gatcomb's Banjo and Guitar Gazette,* 1/3 (Jan 1888).
[920] Felix, arr. Frank N. Scott & McClennon, 'Comrades', in *Gatcomb's Banjo and Guitar Gazette,* 4/1 (Sept 1891).
[921] Carl Bohmm, arr. G. Lansing, 'La Zingara', in *Gatcomb's Banjo and Guitar Gazette,* 5/1 (Dec 1891). Carl Bohm (11 September 1844 – 4 April 1920) was a German pianist and composer, popular in the 19th century, who wrote for salons and chamber, much of his work considered light *hausmusik*. He composed across the genres, and Shimrock his publisher, thought of his work as saleable.

S. S. Stewarts Banjo & Guitar Journal, likewise from 1886, included in its pages musical manuscript for the amateur guitar player. An example is *New Year's Schottische* by Fred O. Oehler.[922] The piece, whilst modulating between the keys of *C* and *F major*, again remains within the compass of the first five frets, and with the exception of the inclusion of a *C major* in the second inversion, chords are notated in the first inversion, making them easy to execute. The trend for simplified guitar transcription continued in 1887 as exemplified by a minuet for two guitars by Oehler,[923] written in *C major* and played in the first position with the highest note an a' at the fifth fret. Another example written in *A major*, *The Woodbourne Waltz* by W. H. Murphy of Manchester, England,[924] extends the playing compass by the inclusion of a high $c^{\#''}$ in the ninth fret but otherwise remains in the first few frets. In the following issue of *Stewart's* the player's technical ability is extended a little. In *Rustic Dance*, arranged for the guitar by Charles H. Loag,[925] the time signature is in 6/8 and the piece modulates between *D* and *A major*, featuring a riff that requires the open fourth string [*d*] to sustain while a'-b'-a' is played with first and third fingers on first string. However this still demands only a rudimentary playing ability. In 1889 Oehler's transcriptions become a little more challenging: *American Cadet March*[926] has main part in *D major* with a high note of d'' on first string at the tenth fret, while its middle section in *G major* has a high note of g'' played on the first string in the fifteenth fret. This march makes more use of the guitar's compass than in his previous simple accompaniments.

From these examples in BMG periodicals, the repertoire for the guitar during the 1880s reflected the taste for music in the American middle class home, and while respected pedagogues established in the previous decade such as Justin Holland (1819-1887) continued to use the European model from the early part of the century, many leading professional guitarists associated with these BMG journals propagated a lighter and more sentimental style of music. Stewart, in the August-September 1889 edition of his

[922] Fred O. Oehler, 'New Year's Schottische', in *S. S. Stewarts Banjo & Guitar Journal,* 3/12 (October-November1886).
[923] Fred O. Oehler, 'Minuet for two guitars', in *S. S. Stewarts Banjo & Guitar Journal,* 4/4 (June-July 1887).
[924] W. H. Murphy, 'The Woodbourne Waltz', in S. S. Stewarts Banjo & Guitar Journal, 4/7 (December 1887-January 1888).
[925] Charles H. Loag, 'Rustic Dance', in *S. S. Stewarts Banjo & Guitar Journal,* 4/8 (February-March, 1888).
[926] Fred O. Oehler, 'American Cadet March', in *S. S. Stewarts Banjo & Guitar Journal,* 6/1 (April-May, 1889).

journal, placed an advert for a collection of pieces especially transcribed for the guitar that reflected this stylistic trend. Published by him in one folio entitled *The Guitarist's Delight (A collection of good music for the guitar)*,[927] and obtainable for 25 cents cash or U.S. postage stamps, it included the titles: *Lillie March, Wigender Waltz, Woodbourne Waltz, Lullaby from Erminie, Easy Pieces for Beginners, Minuet for Two Guitars, Reverie, Sleighbell Schottisches, Anticipation for Two Guitars, American Cadet March, Aspen Waltz, Twilight Musing, Lucifer Quick Step, Neptune and the Elf Polka, Nina Adilita Polka, Rustic Dance, Auld Lang Syne, The Loreley, Otto's Wedding Waltz, New Year's Schottische, The Long, Long, Weary Day, Longing for Home (Heimweh), Old Oaken Bucket.*

Many of the pieces contained either in the BMG periodicals or the folios additionally published by their leading personalities are in dance formats, but their titles frequently reflect a sentimental character, often carrying dedications to women proclaiming admiration or love. *Flora Waltz (to Miss Flora Herman)* by E. H. Frey[928] is one such example; others include *May Waltz (respectfully dedicated to Miss May Engel)* by Otto H. Albretch,[929] and *Dulces Pensantmientos (dedicated respectfully to Miss Cox)* by A. A. Babb.[930]

10.6 Women and the guitar

During the nineteenth century female influence held more weight in the private than in the public sphere, and in the typical aspiring American middle class home women were expected to be accomplished in areas of the arts, which included music making. While men also played musical instruments, often joining in at soirées in the home, a great proportion of amateur musicians were women, many of whom played the parlour guitar. The C. F. Martin company claims that the majority of its guitars made in the third quarter of the nineteenth century were for the female market, and that the more highly

[927] Advertisement placed by Stewart, *S. S. Stewarts Banjo & Guitar Journal,* 6/3 (August-September, 1889).
[928] E. H. Frey, 'Flora Waltz (to Miss Flora Herman)', in *S. S. Stewarts Banjo & Guitar Journal,* 6/3 (August-September, 1889). This piece is written with the sixth string tuned up to *G* to facilitate playing in the key of *G*.
[929] Otto H. Albretch, 'May Waltz (respectfully dedicated to Miss May Engel)', in *S. S. Stewarts Banjo & Guitar Journal*, 6/5 (December 1889-January 1990).
[930] A. A. Babb, 'Dulces Pensantmientos (dedicated respectfully to Miss Cox)' in *Gatcomb's Banjo & Guitar Gazette,* 9/11 (July 1896).

decorated instruments were especially designed to appeal to female sensibilities. In Europe too women had also been central to the popularity of the romantic guitar. In Vienna, from the beginning of the nineteenth century, women in a powerful societal position were often sponsors of the instrument. Hackl lists numerous ladies of the Viennese *haute bourgeoisie* as being 'patrons of the arts, pupils or at least devotees of guitar playing' and as such appear as dedicatees named on compositions by leading player-composers for the guitar.[931] Besides female amateurs there were a number of notable professional women guitarists concertizing both in Europe and America throughout the nineteenth century. Franziska Bolzmann was first active in Vienna in 1814,[932] and Emilia Giuliani, the daughter of Mauro Giuliani and acclaimed as a highly skilled performer in her own right, undertook an extensive concert tour of Europe between 1841 and 1844. In America, Madame de Goni was celebrated on the concert stage during the 1840s and 50s, and in the period before just before the civil war Elizabeth Taylor Greenfield, known as *The Black Swan*, was also highly praised and accompanied herself with the guitar. Meta Bischcoff, born in 1867, began playing in public aged eight, teaching aged eleven, and at the age of nineteen (having married John Henning whom she toured with) was considered one of the best guitarists of her day. According to Noonan, Stewart did much to promote the public profile of the Bischcoff-Hennings in his periodical, which he repeated with another female guitarist, Dominga I. Lynch.[933] In the following decade Elsie Tooker and Jennie M. Durkee first appeared in *Cadenza* in 1895, and then at the beginning of the twentieth century in 1904, Vahdah Olcott-Bickford. So great was the female market for, and so close its association with the parlour guitar, that some BMG proponents of the banjo in attempting to elevate its status tried to promote it to women in preference to the guitar.

10.7 The guitar and the mandolin orchestra

The last two decades of the nineteenth century saw another change in the guitar's societal use as it found a role in the newly emerging mandolin orchestra. After

[931] Hofmann, *Stauffer & Co., the Viennese Guitar of the 19th Century*, p. 254.
[932] Zuth, *Handbuch Der Laute Und Gitarre*, p. 49.
[933] Noonan, *The Guitar in America: Victorian Era to Jazz Age*, pp. 64-65.

performances by the [original] Spanish Students in 1880, interest in the mandolin soared amongst American music lovers and amateur musicians alike. Although the Spanish Students were actually using the Spanish bandurria and not the Neapolitan mandolin, their popularity with the general public was such that mandolin players in the city's Italian community (where the instrument had so far been ghettoised) set up imposter troupes under the nomenclature of the 'Spanish Students'. Prior to 1880 there is little evidence of mandolin use in America, but by 1910 the instrument was the most dominant of the plectral three: the Banjo, Mandolin and Guitar. The first mandolins to appear were of the vaulted, bowl-back design, known in America as the 'potato-bug' [Fig. 187].

Fig. 159. Mandolins from Lyon & Healy catalogue, 1891.

The Neapolitan Vinaccia family was one of its most respected and famous makers, stretching back to around the 1740s when stringing of the instrument was in gut. Later

in the 1770s Fouchetti recommended gut strings for the *e″* course; brass harpsichord strings for the middle courses (plain brass for each *a′* string, and a pair plaited together for each *d″* string), and a pair of violin *g* strings (metal wound onto gut) for the lowest course.[934] In around 1835 Pasquale Vinaccia, a grandson of the father, is credited with introducing steel strings on to the mandolin.[935] The first American mandolin ensembles [known as clubs] were usually built around a mandolin trio of first and second mandolins and accompanied by guitars. Later, with the addition of the newly invented tenor mandola and mando-cello, these clubs grew into orchestras. Paul Ruppa cites the instrumentation of a concert of the Fachutar Mandolin & Guitar club in 1890, noting that it 'was limited to the typical "club format," using only 12 mandolins (when including Fachutar) and 7 guitars (tenor mandolas and mando-cellos had not yet been invented….)'.[936] In 1896 G. G. Turniff, conductor of the Aberdeen Mandolin Band, described the line-up of the prototype mandolin orchestra as consisting of mandolin, [octave] mandola, tenor mandola, mando-cello, and guitars or harp guitar.[937] The aim of the mandolin orchestra was to emulate the role of the strings in the classical orchestra, but rather with plucked than bowed instruments. To this end, a family of mandolins mimicking the sizes, tuning and roles of their bowed-string counterparts was created that in the high treble included a piccolo mandolin, and in the bass the mando-bass. Some purists of the mandolin orchestra preferred their vision to have no guitar accompaniment, its voice taken by the presence of the tenor mandola and mando-cello, thus presenting a plucked string ensemble that echoed the classical form of orchestral string section. According to Ruppa (who distinguishes between the mandolin club and orchestra, although not consistent to either format), some played art music only, some contemporary music that included popular ragtime dances, and some a mixture of the two.[938] As the popularity of these plucked-string ensembles grew, not only as a social vehicle for amateur musicians but also as a format suitable for presenting popular concert works, so too did their size, with some performances taking place incorporating up to one hundred players.

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[934] Paul James Tyler & Sparks, "Mandoin," in *Grove Music Online*. 18 March 2013].
[935] Wölki, History of the Mandolin : The Instrument, Its Exponents, and Its Literature, from the Seventeenth until the Early Twentieth Century; Tyler and Sparks, The Guitar and Its Music : From the Renaissance to the Classical Era.
[936] Ruppa, "The Mandolin in America after 1880 and the History of Mandolin Orchestras in Milwaulkee, Wisconsin", p. 39.
[937] G. G. Glen Turiff, 'On Less Commonly Used Instruments in Clubs', *Cadenza* 2, no. 2 (1896) , p. 4.
[938] Ruppa, "The Mandolin in America after 1880 and the History of Mandolin Orchestras in Milwaulkee, Wisconsin."

The guitar's role in the mandolin club and orchestra was that of rhythm accompaniment, and in this setting the function of the guitar would be better improved when strung with steel, not only to have a comparable timbre in supporting the steel-strung-mandolin melody lines, but also to achieve adequate volume. However, in BMG periodicals, the arguments for and against the use of steel over gut strings continued both in readers' letters as well as in editorial opinion.

10.8 Gut or wire strings

In *The Cadenza* from May-June 1895, H. J. Isdell claims in contradiction to 'prevailing opinion that wire strings have more volume and carry better than gut strings, because they sound louder to the player', that 'with a fine American rosewood instrument, however, the result is exactly the opposite, but of course if you play on a three dollar "box" you may as well use wire strings'.[939] Conversely, in the September-October issue from the same year, the writer (one Q. S.) of a column entitled *Steel Strings on the Guitar* writes that in many parts of the States 'the use of steel strings on a guitar by a gentleman would be considered eccentric, but if used by a lady would be considered evidence of dementia', also claims that Kansas City is one of a number of places where steel strings are preferred, both by men and women players.[940] The author concludes:

> It is asserted by dozens who are in a position to know, that steel strings in so far as this city [Kansas City] is concerned, date from the advent of certain gentlemen who without any particular musical education, were brilliant performers; the volume of jangle they got out of steel strings came like a revelation. In an effort to have their instruments heard by all out of doors, they used these strings. Instantly it became a fad, and the merry jangle of boxes of wire have been disturbing the night air of Kansas City ever since'.[941]

In the following November-December issue, J. Earl Rade responds to Q. S. by deriding the use of steel strings, repeatedly referring to them as 'broom wires', and stating that if a gentleman used them 'it ought not only be considered eccentric, but unmusical and

[939] H. J. Isdell, 'Strings', *Cadenza* 1, no. 5 (1895), p. 3.
[940] Q. S., 'Steel Strings on the Guitar', *Cadenza* 2, no. 1 (1895). p. 8.
[941] Q. S., 'Steel Strings on the Guitar', p. 8.

devoid of any taste whatever'.[942] Whereas Q. S. had suggested that it would be absurd to see a lady destroying her fingers plucking steel strings, and therefore her use must show that she had noticed a 'quantity' (if not the improved 'quality of tone'), Rade remarks that 'there is neither musical quantity nor quality produced by steel strings, but merely a *burlesque on both*'.[943] Emma S. Scott, a teacher in Lexington, Missouri, continues this discourse in *Steel vs. Gut Strings for the Guitar* in the following issue, by fighting back at those who champion gut over steel, claiming their defence contains no logical argument for gut's superiority but rather that they confine themselves to satire and scorn to bolster their argument.[944] She points out that contrary to the notion that the steel-strung guitar is unmusical, it is no less so than other instruments strung with wire such as the piano, mandolin, zither, autoharp and dulcimer, and that a purity of tone (from whatever string material) can only be accomplished by a delicacy of touch from a proficient player. She counteracts the claim that steel is hard on the fingers by pointing out that all strings are hard on the fingers until they become accustomed to them. It seems the argument for or against the use of steel was polarised geographically within the guitar community, as Scott cites a letter from a fellow teacher in Chicago revealing that peer pressure favoured the use of gut there, unlike Kansas, where steel appears to have been more fashionable. Lee Rogers, continuing the debate in the March-April 1896 issue although noting that many notable players such as Romero opposed the use of steel, confirms that it was preferred by a ratio of 50:1 in Virginia, his part of the country. He agrees with Scott's views:

> Like E. S. Scott, I say there is no need for the 'clanking' of steel strings – it is the fault of the performer and not the strings. A guitar so strung can be played as softly and more musically than with gut strings; particularly in andante movements does their superiority appear.[945]

However in the same issue, Richard M. Tyrrell argues the superiority of gut, belittling the credentials of the teachers who support the use of steel and commenting that its apologists 'cannot bear satire, which is the best weapon for bringing thoughtless people

[942] J. Earl Rade, 'Steel Strings on the Guitar ', *Cadenza* 2, no. 2 (1895), p. 4.
[943] Rade, "Steel Strings on the Guitar ", p. 4.
[944] Emma S. Scott, 'Steel Vs. Gut Strings for the Guitar', *Cadenza* 2, no. 3 (1896), pp. 10-11.
[945] Lee Rogers, 'Steel Strings', *Cadenza* 2, no. 4 (1896), p. 5.

to their senses'.[946] Tyrell mentions the guitar's tuning of *E* minor, a key whose tonal colour is 'persuasive, soft and tender' to support his view that 'brilliancy of tone is not and never was supposed or intended to be an attribute of the guitar'.[947] While the standard guitar tuning of *E, A, d, g, b, e'* may well include notes common to the key of *E* minor, the instrument's repertoire was not in any way confined to that key, and Tyrell's statement must be seen as colourful rhetoric. The argument between the steel and gut stringers raged on in *Cadenza* throughout 1896, but it would appear that during the immediately following years, even with the leading BMG guitar figures protecting what they saw as the guitar's elevated status in art music by championing solely gut strings, steel had become widely accepted in the guitar community at large.

While the design of the guitar continued to evolve with the subsequent emergence of the steel-strung arch-top (most notably manufactured by the Gibson Mandolin & Guitar Company), it was not this form of guitar that was accepted by the BMG movement, or used in the mandolin orchestra. It is ironical that this new development of guitar, re-modelled with a carved front and back derived from the violin (as had been the Gibson Florentine-style mandolin) was viewed by the leaders of the BMG movement as a 'hybrid' instrument whose function was only suitable for jazz and popular dance music. Not only was its visual aesthetic in keeping with the design of a classical bowed-string instrument but also its acoustic properties, in combination with steel strings, enabled it to provide solid rhythmic accompaniment and project single line melody and harmony, whereas within the mandolin orchestra the flat top guitar had been relegated to playing simple alternating bass and chord accompaniment.

[946] Richrd M. Tyrell, 'The Guitar: The Reason Why It Should Be Strung with Gut Strings', *Cadenza* 2, no. 4 (1896), pp. 9-10.
[947] Tyrell, "The Guitar: The Reason Why It Should Be Strung with Gut Strings."

Conclusions

The combination of historical object, patent, cultural signification, technological change and social use, has afforded a widely spread foundations on which to conduct this research. Integration of historical social perspectives with an examination of extant instruments and an assessment of their evolving design in the context of nineteenth-century technological change has permitted a revised and improved understanding of the development of the American guitar from its European predecessors. With the migration of Viennese guitar design to America through Martin in 1833, the innovations of Staufer (his mentor) permeated the early work of the German immigrant makers, who in turn defined the first American-made guitars. Later new developments in the manufacture of steel that enabled its use as a stringing material, when combined with well-established European instrument-making and design, and together with changing societal musical values, allowed the guitar (already embraced by the burgeoning American middle classes in the parlour) to extend its role and be welcomed into dance halls and larger public spaces.

Georg Staufer in his day was one of the most successful guitar makers in Vienna, his designs influencing competitors, colleagues and successors, his instruments endorsed and used by leading players. According to Lutgendorff, this high regard was evidenced by the sale of a Staufer guitar in 1821 to Professor Shimansky for 32 florins, which although a high price for the time, he considers commensurate with the 'best Viennese guitar maker of his time'.[948] From the number of extant instruments today, it can be deduced that Staufer's workshop was both productive and successful. Serial numbers and dates on label inscriptions suggest that between ninety and two hundred instruments were produced a year, with as many as two hundred and fifty during both in1829 and 1830. Many of Staufer's innovations in string instrument design were applied to both his bowed and plucked instruments, with some characteristics such as the adjustable necks design being found on cellos and arpeggiones[949] as well as on guitars. Allowing for developments that appear concurrently in instruments of the differing forms and overlapping time periods, Staufer guitars can be grouped chronologically into three

[948] Lutgendorff and Drescher, *Die Geigen- Und Lautenmacher Vom Mittelalter Bis Zur Gegenwart,* vol. 2, p. 483.
[949] See Johann Georg Staufer, *Arpeggione,* c1825. Musée de la musique, Paris. Cat. No. E.982.8.1

broad styles: firstly, guitars showing an Italian influence; secondly, those where the waist has become narrower and the back more arched, often with an adjustable neck that may or may not have a Persian slipper headstock with mechanical tuners; and thirdly, those characterised by the introduction of increasing numbers of added bass strings. His first period of making produced the type of guitar that Giuliani played; guitars from his second period were associated with another virtuoso, Legnani; and during the third period, together with his son and pupils, the workshop expanded the range of the guitar in a lower bass register and produced instruments that were used by Padovec, Mertz and Regondi, amongst others.

The popularity and importance of the guitar's development in Vienna at the beginning of the nineteenth century can be witnessed in the number of string instrument makers producing them alongside Georg Staufer. Within the triangle of Vienna and neighbouring Budapest and Prague, these include Bernhard Enzensperger, Nikolaus Georg Reiß, Peter Teufelsdorfer, Martin Stoß, Ambrose Joseph Bogner, Franz Brunner, Franz Charwath, Franz Feilnreiter, Anton Fischer, Johann August Schuster, Johann Michael Rudert, Franz Seraph Schmidt, Andreas Zettler and Staufer's colleague, Johann Ertl.[950] Known to have been pupils of Georg Staufer were, his son Anton Staufer, Johann Bucher, Anton Mitteis, Christian Friedrich Martin, Andreas Jeremias, Friedrich Schenk, Friedrich Philipp Wolff and Johann Gottfried Scherzer. It is possible too that Hienrich Schatz (Martin's close friend from Markneukirchen) also spent some time with Georg Staufer,[951] and that August Paulus (related to Martin through his wife) worked for a time with Anton Staufer.[952]

The influence of the Staufers on Viennese and central European guitar making continued throughout the nineteenth century, not only with the instruments of Schenk, Scherzer, and the other pupils directly connected with the workshop, but also through the next generation of guitar makers and their successors. The Viennese style of Staufer

[950] Hopfner, *Wiener Musikinstrumentenmacher 1766-1900: Adressenverzeichnis Und Bibliographie*.
[951] Schatz, besides claiming Staufer's association on instrument labels when in business with Martin in New York, is also cited in the Guild dispute between the Markneukirchen violinmakers and cabinetmakers as having spent time apprenticing in Vienna.
[952] Waltner, "The Guitars of Richard Jacob "Weißgerber" in the Museum of Musical Instruments of the University of Leipzig." Richard Jacob, in c1949, advertised his workshop and cited his father's training by C. F. August Paulus (1806-1870), who he claims, in turn spent time in the workshop of Johann Anton Staufer, son of Georg Staufer. Paulus's dates correspond with the Markneukirchen violinmakers' testament (made during the guild dispute) that seems at the time to categorise him as a journeyman.

was established in America when his pupil Martin immigrated there in 1833. Even though this was a decade after leaving his employ, Martin's guitars at this time were almost identical both visually and structurally to Staufer's model of the mid to late 1820s, and incorporated features first mentioned in the Staufer and Ertl *privilege* of 1822.[953] Although Martin started to move away from the Viennese model in the early 1840s, introducing a different body shape and new soundboard bracing patterns, his characterises Staufer's own approach for continual instrument improvement. While none of Staufer's soundboard bracing variations can be directly linked to the X-bracing pattern that was implemented and developed by Martin and his associates Schatz, Stumcke and Schmidt and Maul,[954] the air of experimentation and engineering problem-solving they employed in their work can be seen to have originated from his inspiration.

Much of the current debate surrounding the development of the acoustic guitar has focused on the introduction of the X-bracing system, which in the twentieth century became the standard bracing pattern for the steel-string instrument. However this form of bracing was pioneered, and in Martin's case standardised, before the introduction of steel as a stringing material. North America's harsher climatic conditions reportedly took its toll on imported European guitars and it is likely that the pattern was arrived at in an attempt to counteract the ravages of the climate on delicately built instruments (a remarkable amount of Martin X-braced guitars survive from the second half of the nineteenth century in excellent playing condition). The exact circumstances as to the development of this form of bracing for the guitar is uncertain, and in academic circles the possibility that its inspiration is derived from the English Guittar, already in use in America during the eighteenth century, is being openly discussed. Whatever the source of the inspiration, the Martin Company has in its museum collection a guitar labelled Martin & Schatz made in July 1843 for Madame de Goni, which they claim is 'the earliest X-braced guitar ever documented',[955] and as such is an example of one of the

[953] See chapter *Johann Georg Staufer* for details of the 1822 *privilege*, and chapter *Examination of Staufer's Instruments* for further details on the guitar, SAM 489.
[954] It is quite possible that these makers were influenced by the soundboard construction of the English Guittar, which often featured a distinct form of X-bracing.
[955] Martin Museum, 'Earliest X-braced Guitar Martin & Schatz Label, July 1843. For: Madame Delores Nevares de Goñi. This is the very first Size 1 model and the earliest X-braced guitar ever documented, supporting Martin's longstanding claim as the inventor of X-bracing, a primary innovation in the evolution of the modern American guitar. After entertaining her in his home, C. F. Martin made this special guitar for Madame Delores N. De Goñi, who was probably the finest professional guitar soloist of her time. Her performances were widely popular throughout the Americas between 1841 and 1892. She

major innovations in guitar soundboard bracing. Alongside some fan-braced guitars, Martin's pattern of X-bracing remained constant until the company started shipping steel-strung guitars commercially in the 1920s, when the main improvement they made was to add mass to the existing braces, and introduce another diagonal brace in the lower bout of their larger instruments.

A particular feature that emerged from Staufer's workshop and continued to appear in North American guitars was the internal tension rod positioned between an instrument's neck and end block, designed to improve the structural integrity of instruments with both thinner soundboards and larger bodies.[956] As guitar bodies grew proportionally in size (often in pursuit of greater volume) and the forces exerted on the soundboard increased (either from the incorporation of more strings or changing string material) necessity required a more heavily built instrument, or one where the body was held stable. The use of the internal rod was mentioned by Tilton in 1851,[957] and used later in the fabrication of instruments by both Bohmann and the Larsons,[958] as well as in harp guitar design.

Besides influencing the construction and appearance of Martin's earliest guitars, and the conception and use of the internal supporting rod pre-dating Tilton, other important design features appearing in American guitars that can be linked to Staufer include the hollow arm acoustic chamber in the Symphony Harp Guitar (first introduced in Vienna by his pupil Friedrich Schenk) and the heavily arched back of the Larsons' guitars (which mirror the form of his Legnani model). After initially making guitars with extra basses in the Staufer form, by the end of the 1840s Schenk had developed the ten-string *bogengitarre* (four extra basses). This instrument featured a hollow bowed arm extending from the body on the bass side of the fingerboard that acted as an additional sound chamber. Six strings ran from the headstock over the fingerboard to the bridge,

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pronounced Martin guitars to be 'superior to any instruments of the kind (she had) ever seen in this country or Europe for tone, workmanship and facility of execution!'

[956] Makarow mentions the internal tension rod present in the Scherzer nine-single-string guitar [three extra bass] when describing the instruments ordered whilst on the trip to Vienna in the early 1850s. In America, later, both Tilton (1851) and Larson cite additional benefits from the use of interior supporting rods such as improved tone in their patents, however their main intention was to keep the instrument's body in a fixed state of compression between heel and tail block, allowing the installation of a thinner more responsive soundboard, as it was with the same improvement and device introduced earlier by Georg Staufer.

[957] Tilton. Violin.

[958] Larson. Guitar.

while the additional bass strings passed over the extension.[959] Schenk's design was copied by his Viennese contemporary Gabriel Lemböck, and again, with a resurgence of interest in Viennese guitar culture in the prominent guitar clubs of Southern Germany in the early twentieth century, by Karl Müller and Hans Raab amongst others [960] At the same time in Northern Italy, the form was taken up by Luigi Mozzani and served as an inspiration for the various guitars with extra bass strings and hollow-armed acoustic chambers that he started to produce.[961] Although at the end of the nineteenth century the far northwest of America was remote geographically from the contemporaneous guitar culture in Southern Germany and Italy, as well as from the music scene that had first developed around America's Eastern seaboard, it was there that Chris Knutsen began making instruments with both extra bass strings and hollow-arm acoustic chambers that owe their form to Schenk's *bogengitarre*. Knutsen, a Norwegian immigrant who arrived in North America in 1866, received his first patent for a 'one–armed' guitar in 1896 and his second in 1898, which incorporated a design to support additional bass strings.[962] Although instruments with extra theorboed bass strings, such as the harp-lute, were in use in Sweden from the eighteenth century, there is no particular history in the years immediately preceding Knutsen's migration to America, of Schenk's *bogengitarre* in Sweden's neighbouring Norway, yet the resemblance of the extended acoustic chamber characteristic of Knutsen's hollowed-arm instruments to those of Schenk is undeniable. However, Knutsen was not the only American at this time patenting instruments that incorporated hollow-arm acoustic chambers. Pre-dating him by two years, John B. Birrer was awarded a patent (24 April 1894) for an instrument that is also remarkably similar to Schenk's design, and in 1895 Claude Gaskins patented a mandolin also featuring a hollow-arm.[963] Between 1898 and 1899, after producing his original one-arm guitars and one-arm harp guitars, Knutsen

[959] See chapter in this thesis, *Nineteenth Century Guitar Developments After Staufer,* for further information on Schenk and his instruments.
[960] See chapter in this thesis, Nineteenth Century Guitar Developments After Staufer.
[961] Timmerman, 'Guitars with Extra Bass Strings. Johann Georg Stauffer, His Son Johann Anton Stauffer and Their Contemporaries', in *Ivan Padovec (1800-1873) and His Age*, p. 129; Greg Miner states that it was on a trip to Vienna in 1909 that Mozzani first came into contact with Schenk's work. *Harp Guitars* [Accessed 31 January 2012], http://www.harpguitars.net/history/mozzani/mozzani1.htm
[962] Knutsen originally applied for this patent No. 28300 on 17 May 1897, it was granted 15 February 1898. The first patent, No. 26043, was applied for on 23 July 1896 and granted on 15 September 1896. The English patents for these same instrument designs, respectively numbered as 19232 and 19233, were applied for on 19 August 1897 and both received on 27 November 1897. The Canadian versions of the same were applied for at the same time. See http://www.harpguitars.net/knutsen/patents.htm.
[963] One of these instruments, built for Gaskins by the Martin guitar company in 1901, is on display in their museum.

developed the Symphony Harp Guitar.[964] In 1906 he formed the Harp Guitar Company with John W. Bourn, a representative of the W. J. Dyer & Brother Company, and it is from this time onwards that Dyer marketed the Symphony Harp Guitar under license from Knutsen, but made by the Larson Brothers.[965] Contemporaneously in Germany, the Munich Guitar Quartet was performing as a chamber quartet with their preferred combination of Viennese-influenced multi-strung guitars. When Heinrich Albert (a founding member) left the group he was succeeded by Herman Hauser, who as well as building respected guitars in the Spanish style also made guitars after Staufer in the Viennese style.[966]

The guitar with extra bass strings that emerged from the Staufer workshop can be witnessed in three distinct forms: the traditional figure-of-eight shaped body with extra floating bass strings, the *bogengitarre* and the *wappenform-baßgitarre*. From the mid-nineteenth century all found popularity throughout central Europe and adjoining Russian territories, and by the end of the century the guitar with extra bass strings had also migrated to America.

At the turn of the twentieth century, Staufer's inspiration was still evident in the work of many contemporaneous American makers, not only through Martin's direct legacy but also in their use of Staufer's innovations. While the design of the guitar continued to evolve with the subsequent emergence of the steel-strung arch-top, it was not this form of guitar that was accepted by the BMG movement, or used in the mandolin orchestra. Ironically this new development of guitar, re-modelled with a carved front and back

[964] Noe, *Chris J. Knutsen, from Harp Guitars to the New Hawaiian Family*; Noe, *Chris J. Knutsen, from Harp Guitars to the New Hawaiian Family*., p. 19. A Photo, dated 1900, is printed here of Knutsen, his wife and two daughters, where husband and wife are both holding Symphony style harp guitars, obviously manufactured before that date. Although Knutsen was awarded the patents for these early instruments, there is some question as to whether he himself made the first versions or sub-contracted the work out to a colleague, Otto Anderson.

[965] Greg Miner, *The Knutsen Archives*, Harp Guitars [Accessed 2 February 2012], http://www.harpguitars.net/knutsen_images/porttownsendad.gif. There is some evidence to suggest that from as early as 1898, and prior to the Larsons making these instruments, Knutsen had formed a relationship with Dyer, and may well already have been supplying him with the model directly. Miner points to a flyer from Knutsen's years in Port Townsend, showing the connection to Dyer, which pre-dates Larson-made Symphony Harp Guitars.

[966] Morris, 'Heinrich Albert and the First Guitar Quartet'. Morris**,** Heinrich Albert and the First Guitar Quartet; Miner, 'Heinrich Albert and the World's First Harp Guitar Quartet' [Accessed 16 July 2011]. A Photograph of the Munich Guitar Quartet from around 1914, in which they are depicted playing their preferred combination of multi-strung guitars for playing the repertoire of a chamber quartet clearly shows the influence of Viennese guitar design.

derived from the violin was viewed by the leaders of the BMG movement as a 'hybrid' instrument whose function was only suitable for jazz and popular dance music. For not only did it follow the design of a classical bowed-string instrument, an aesthetic in keeping with the mandolin orchestra, but its acoustic properties both enabled it to provide solid rhythmic accompaniment and to project single line melody and harmony, whereas in this context, the flat-top guitar had been relegated to playing simple alternating bass and chord patterns.

During the nineteenth century, female influence held more weight in the private rather than the public sphere. In Europe, from the beginning of the century, women had played a central part in the popularity of the romantic guitar and in Vienna in particular, alongside female amateur guitar players, women in powerful societal positions were often sponsors of the instrument. In the typical aspiring American middle class home women were also expected to be accomplished in areas of the arts, which included music making, and while men also played musical instruments, often joining in at soirées in the home, a great proportion of amateur musicians were women, many of whom played the parlour guitar. The Martin Company claims that the majority of its guitars made in the third quarter of the nineteenth century were for the female market, and that the more highly decorated instruments were especially designed to appeal to female sensibilities.

In the last two decades of the nineteenth century the American manufacture of instruments of the guitar family expanded rapidly. In 1880 Illinois had one musical instrument making company, but in 1900 this had increased to twenty-seven, with the state producing over forty percent of all American guitars, banjos and mandolins. Its capitol, Chicago, was the base of two of the dominant producers of plucked string instruments: Lyon & Healy and Harmony, as well as the home of the Groehsl Company (later to become the enormous Kay Musical Instrument Company). By comparison Oscar Schmidt in New Jersey was producing fifteen percent (about 25,000 instruments a year) of the country's total at that time.[967] With a continually improving transportation system, the trade of musical goods was no longer limited to large-scale music wholesalers supplying lesser cities and smaller provincial towns, but was expanded by

[967] David K. Bradford, 'Made in America', *The Unstrung History of the American Guitar: Guitars and Guitar Makers of the Nineteenth Century* (2009), http://www.19thcenturyguitar.com.

Schmidt and the mail order firms of Montgomery Ward and Sears, Roebuck & Co. to rural communities. The mass production and supply of affordable instruments enabled music making by all, and not just as an occupation pursued mostly by the wealthier middle classes.

Throughout the nineteenth century pitch standards in Europe and in America varied considerably. It is probable that Viennese guitars made in the first quarter of the nineteenth century were designed to be tuned to a pitch of around *a'*=435 Hz (though they would just have likely been tuned slightly higher or lower depending on the mean pitch of any other instruments when played as part of an ensemble). It also follows that while pitch standards in America in the 1860s were also around *a'*=435 Hz, they were likely to have been rising during the latter part of the century, eventually being standardised at *a'*=440 in 1917. This heightened pitch, together with the introduction of steel as a stringing material, increased the forces exerted on the guitar and was a factor in influencing its stronger construction.

A survey of Lyon & Healy's, Sears Roebuck's and Montgomery Ward's catalogues shows that they all disclaimed responsibility for the warranty of their instruments if used with steel strings, noting that they would cause the soundboard to 'spring'.[968] This is a clear indication that guitar string tension was increasing due to this ever more common stringing practice. However, that all of these companies were at the same time happy to offer steel strings in their merchandising catalogues shows that they were in demand by players. Unless concert pitch (at least for guitars with steel strings) was dropping, the use of steel as a string material would have been a major factor in increasing string tension. Evidence of this can be found in the number of patent applications made in America in the last quarter of the nineteenth century for tailpiece improvements, designed to help the guitar withstand this rising tension. Although guitars with factory-installed steel strings did not become available until the middle of the 1890s,[969] steel for plain trebles and (in combination with silk) for the core of wound basses had appeared in J. Howard Foote's musical merchandise catalogue of 1882-3.

[968] Montgomery Ward., *Montgomery Ward & Co. Catalogue and Buyers' Guide 1895*.
[969] Pleijsier, *Washburn, Prewar Instrument Styles, Guitars, Mandolins, Banjos and Ukeleles 1883-1940*, p. 42 Lyon & Healy, for instance, started to ship their Jupiter, Columbus, Marquette, Lakeside and Arion models strung with steel in 1896; Bradford, 'The First Steel String Guitars '. http://www.19thcenturyguitar.com [Accessed 29/7/2012].

Penny's account of winding guitar strings in Connecticut in 1863, and the reference to metal strings in Reed's patent of 1873, suggest that steel strings were already used by some North American guitarists from much earlier in the second half of the nineteenth century and possibly some three decades before they became a factory option on commercially manufactured guitars.

'Gibson Brand' (metal) strings first appeared as an accessory product in the 1909 *Catalog H* but had been available from the company previously.[970] C. F. Martin, on the other hand, did not enter the commercial steel-string guitar market until 1916 (initially providing guitars for both Ditson and the Southern California Music Company, and then from 1918, directly marketing their own models equipped with steel strings). Some guitars strung with steel do however sporadically appear as special orders in company ledgers from as early as 1900. According to Johnston, it was not uncommon for Martin in the early 1920s to ship guitars with steel substituted for the first string [*e'*] in a gut set, suggesting there may have been a playing practice to string the top two treble strings of the guitar with differing materials in combination.[971] As the Martin Company had made a name with prominent American performers playing gut-strung instruments even before the emergence of a distinctive BMG community, and was supplying this type of guitar to the American parlour, it is not surprising that its move to equipping guitars with steel trebles was at first cautious. By including steel-strung guitars in their range, the company was reacting to public demand, but it is evident from the amount of advertising in musical instrument merchandising catalogues, newspapers and BMG journals, that steel strings (whether plain or wound) had been readily available since at least the early 1880s, and that steel as a string material was already emerging earlier. That gut was more expensive than plain steel strings was additionally compounded by its shorter playing life, however aesthetic considerations to do with tone and volume must have had an influence on string material usage. When the guitar was to be used in

[970] Siminoff, 'Gibson Strings', Pp. 138-139. While Siminoff here states that silver-plated copper wire was used for the high strings, in *Gibson's Authorative Guide to Guitar Strings*, he only mentions copper wire as a string material.[970] Peruffo when explaining the highest pitch a particular type of string can be tuned without breaking cites Remy Gug who observed that copper alloy strings had a breaking frequency of 125 Hz per metre.[970] On a guitar with a string length of 635 mm the highest frequency this type of string could be stretched to would be 196.85 Hz or *g*.[970] A copper alloy string is usually made with between 5 % and 30 % of another metal (typically brass) making it stronger than a pure copper string, which would have an even lower breaking frequency, making it unsuitable for guitar trebles.

[971] Richard Johnston, *Martin Guitars: A Technical Reference*, 1st ed. (New York: Hal Leonard Books, 2009), p. 47.

a domestic or other intimate setting, then gut would have been loud enough, and its timbral characteristics were likely to have been preferred for the repertoire of the early nineteenth-century European guitar pedagogues. This would have been true in a professional concert setting too, even with the limitation of the instrument's volume. When the instrument was used for vocal accompaniment or in small musical ensembles gathering informally in the parlour to play dance tunes, the practice of substituting steel for the first, or first and second strings may have developed, and the resulting timbral mixture may have been acceptable – or even desired. When using the guitar alongside other instruments such as the violin or piano (now a louder instrument than the early nineteenth-century-Viennese fortepiano with which the guitar had been paired) in the parlour or for dances outdoors, the increased volume resulting from substituting steel for gut was likely welcomed. When playing alongside the more powerful gut-strung banjo, silk and steel basses would have given the guitar a balancing strength of sound; and when from the 1890s the guitar was used as part of the popular mandolin orchestras, steel trebles in conjunction with either steel-core (or silk and steel-core) basses would have given the increased volume needed, together with a compatible timbre. By the end of the nineteenth century, treble strings for the guitar were available in gut, plain steel, and silver-plated steel, while basses were available with a silk core, a steel core, or a silk and steel core, wound with silver-plated copper wire; and the transition from gut and silk to steel reflected a move away from the solo, duet and accompanimental use of the guitar in the American parlour to its inclusion in ensemble and dance music played in bars, halls and larger outdoors settings.

The circumstances are many and entwined that lead to the evolution of the steel string guitar in the late nineteenth century and its popular acceptance in the early twentieth century by amateur and professional players and their audiences. They can however be summarised as; societal use; the introduction of steel as a stringing material; a need for a louder voice; and the supply of a cheaper form of instrument by large manufacturers. However, just as Christian Friedrich Martin [Snr] created a family-run concern (initially aided by just a handful of employers) that has been at the forefront of American guitar culture and still provides the benchmark for the steel string acoustic flat top guitar, so too historically present in his background are the influences in business management, early design and innovation of his teacher Georg Staufer.

This thesis shows that the steel-string guitar emerged in North America at the end of the nineteenth century from the interweaving of a complex web of cultural and technological change, involving European societal musical values embraced by the burgeoning American middle classes playing the gut-strung instrument earlier in the century; the migration of Viennese instrument-making craft and design; and the later inclusion of steel as a stringing material, which saw the guitar's role and use expanded into the dance halls and public spaces of the American twentieth-century popular lifestyle.

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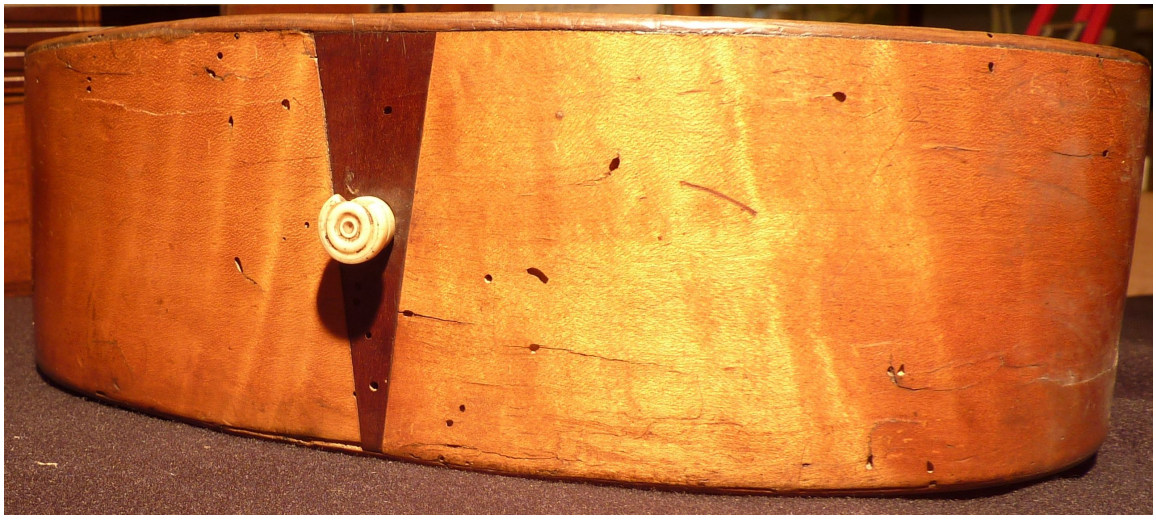
The Viennese Guitar and its Influence in North America: Form, Use, Stringing, and Social Associations

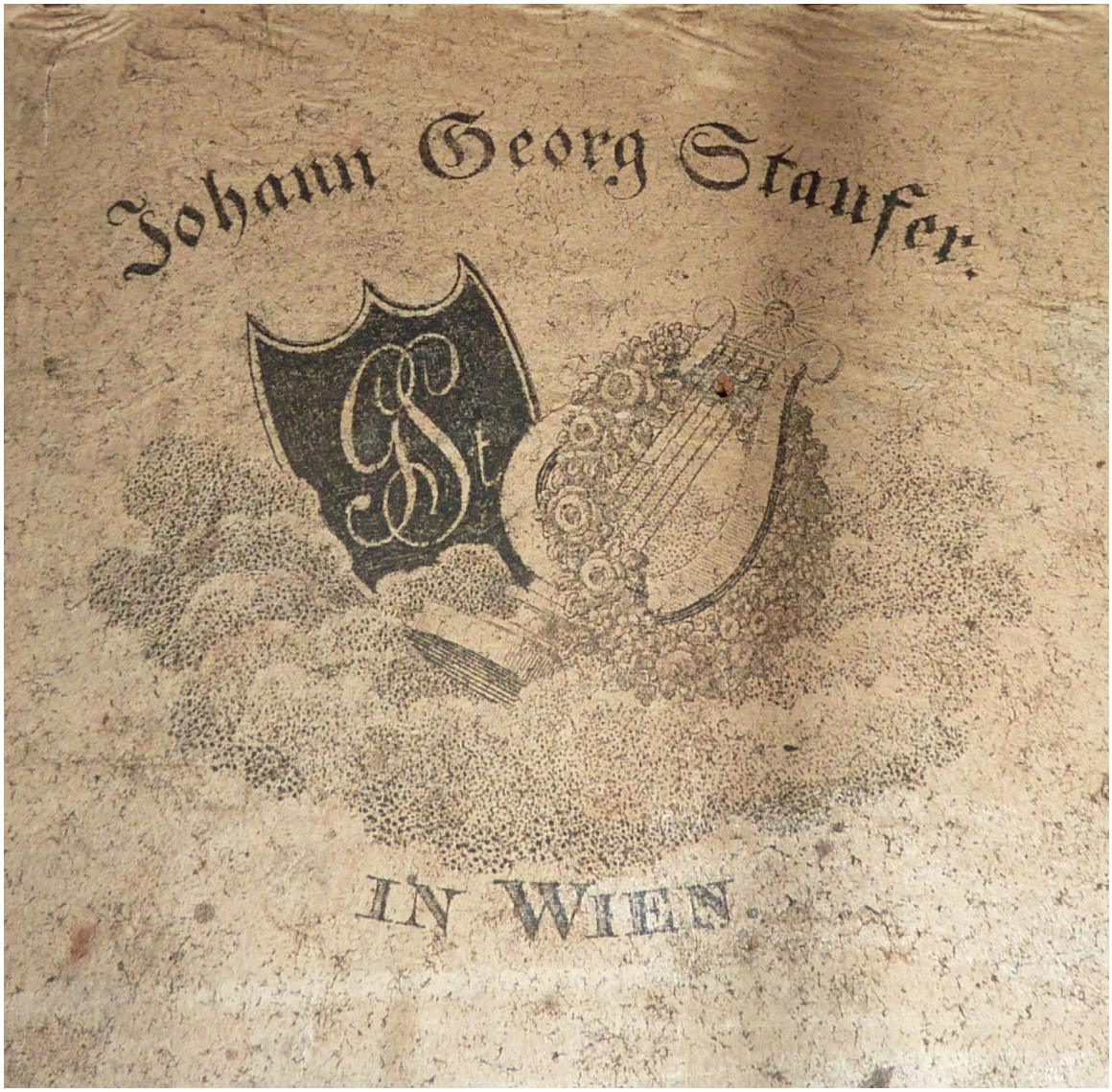
Appendices

Appendix 1 Nineteenth-Century Guitars in the Kunsthistorisches Museum, Vienna

Guitar by Johann Georg Staufer. Vienna c1805-1815. KHM. SAM 486

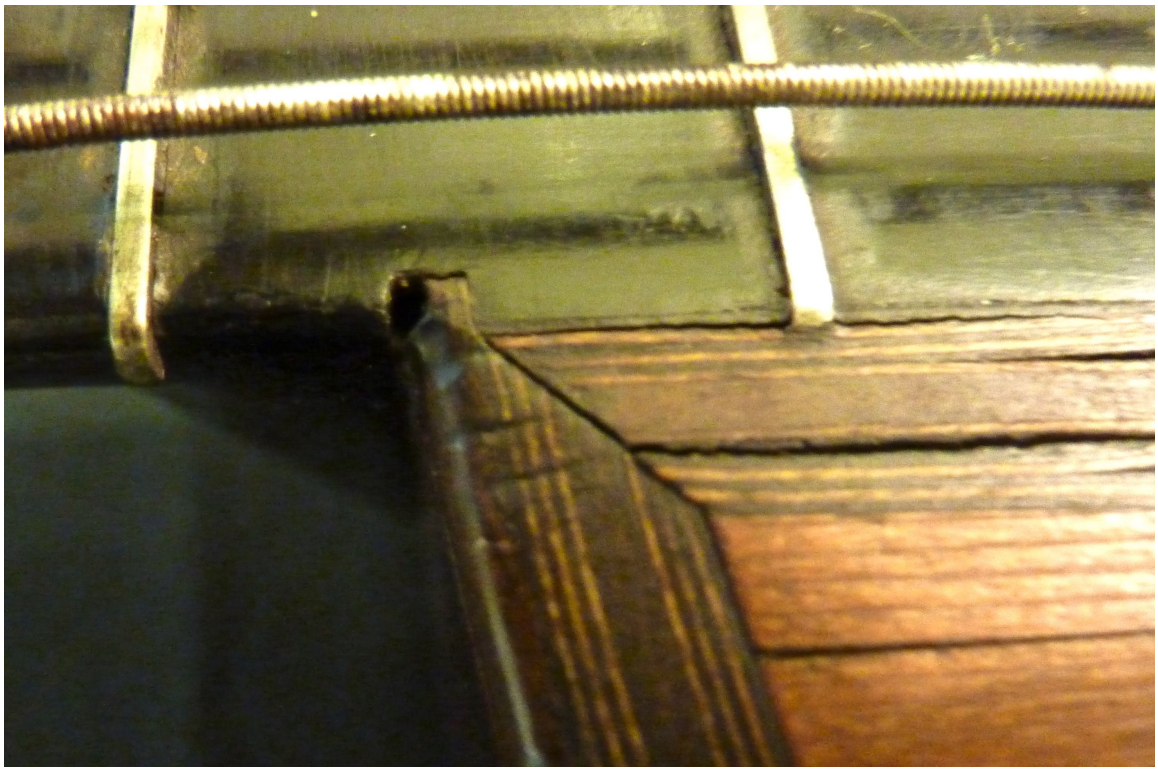
Label	Johann Georg Staufer
Instrument	Guitar
Year	c1805-1815
Location	Vienna
Cat. No.	SAM 486
Origin	Vienna
String Length	611
Width at Nut	43
Width at Heel to Body Joint	55.5
Upper Bout	205
Middle Bout	150
Lower Bout	275
Depth at Shoulders	75
Depth at Middle Bout	82
Depth at Lower Bout	82
Depth at Tail	86
Body Length	425
Bridge	Pear, stained dark. 81 x 20 x 6 (with saddle 6.6). Pin.
Neck	Sycamore, ebonised. Headstock Sycamore, ebonised. V-joint 9.9 long.
Fingerboard	Pear, stained dark. Joins body between 11th and 12th fret.
Fingerboard Extension	Inset.
Frets	19 metal. Square profile.
Soundboard	Spruce. Two-piece, book-matched. Fine grained.
Soundboard Bars	Spruce. Four transverse. 15 x 5.
Back	Sycamore flamed. Fiddle-back. Solid. One-piece.
Back Bars	Spruce. Four transverse. In upper bout 18.5 x 4.5. In lower bout 15 x 4.
Ribs	Sycamore flamed. Fiddle-back.
Linings	Spruce, continuous. 8 x 5.
Rosette	2.0 b/ 0.5 w/b/ w/b/ w/b/ w/b/ w/b/ w/b/.
Bindings Purflings	0.5 b/w/b/w/b/w/b/w/b/w/b/w/. Walnut and Sycamore. Walnut bindings 2 x 3. Purfling design extended around fingerboard.
Headstock Width Top	85
Headstock Width Mid	56
Headstock Width Bottom	70
Headstock Length	165
Headstock Depth Top	10.4
Headstock Depth at Volute	13.8
Tuners	Pegs. Ebony. 46 long. Pearl dot top and bottom.
End Graft	Pear, stained. Ivory endpin.
Notes	

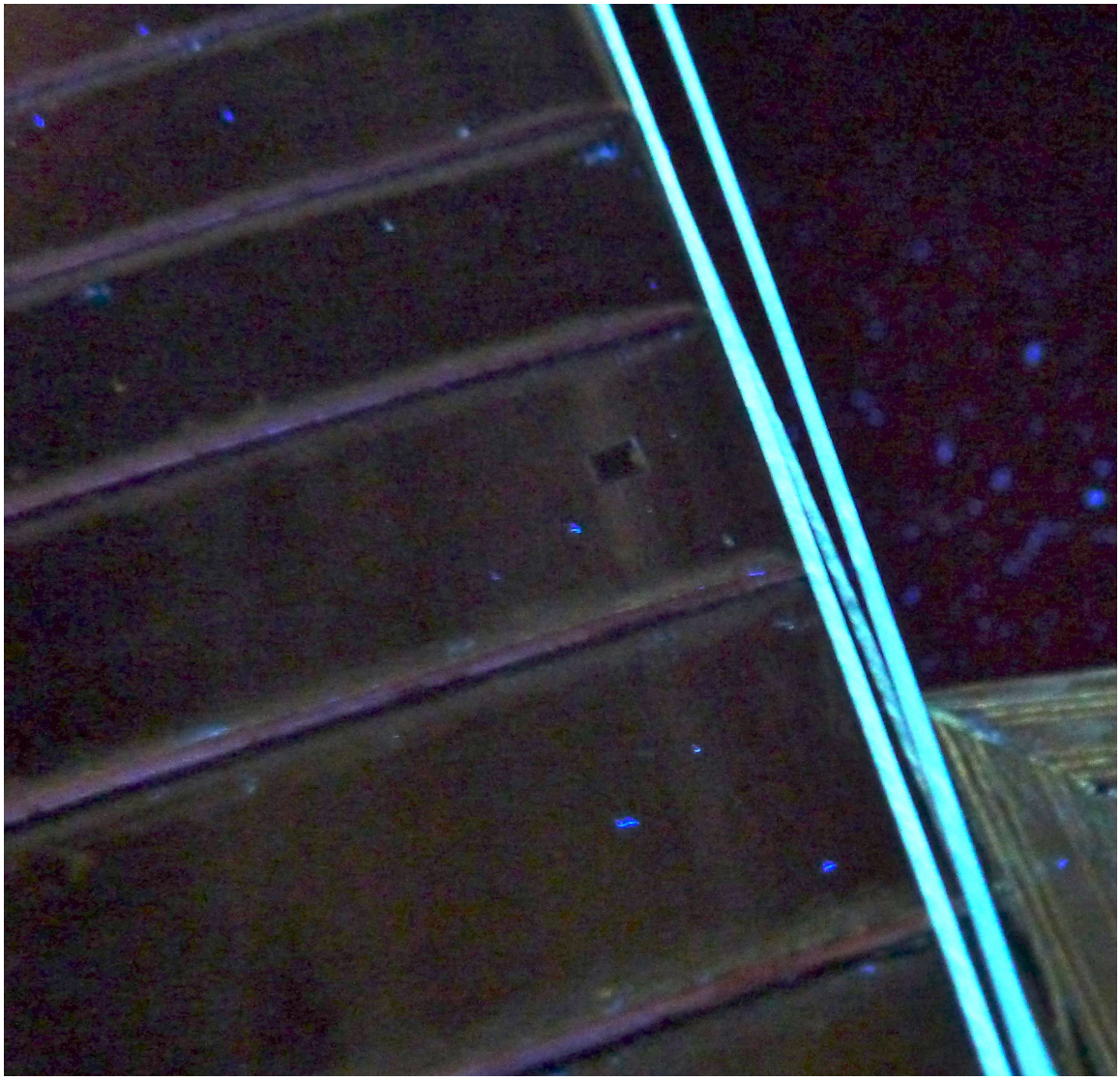



Johann Georg Stauffer.
IN WIEN.

Guitar by Johann Georg Staufer. Vienna c1805-1815. KHM. SAM 487

Label	Johann Georg Staufer
Instrument	Guitar
Year	c1805-1815
Location	Vienna
Cat. No.	SAM 487
Origin	Vienna
String Length	634
Width at Nut	42.5
Width at Heel to Body Joint	54.8
Upper Bout	232
Middle Bout	155
Lower Bout	285
Depth at Shoulders	81
Depth at Middle Bout	88
Depth at Lower Bout	89
Depth at Tail	91
Body Length	450
Bridge	Sycamore, ebonised. 59 x 25 x 7.4 (8.5 with saddle). Nickel silver saddle.
Neck	Sycamore, ebonised. Length 305. Depth at volute 19.5. Depth before heel 23.
Fingerboard	Ebony to 10th fret
Fingerboard Extension	Inset in to top. Probably Walnut, ebonised, after 10th fret.
Frets	19. Nickel Silver. Square profile.
Soundboard	Spruce. Two-piece book-matched. Fine grained. Light amber varnish.
Soundboard Bars	Spruce. Four transverse bars. 16 x 7.
Back	Sycamore flamed. One-piece. Reddish varnish.
Back Bars	Spruce. Three transverse bars. 22 x 7, 17 x 7, 22 x 7.
Ribs	Sycamore flamed. Book-matched. Reddish varnish.
Linings	Spruce. Continuous. 8 x 5.
Rosette	Walnut/Sycamore. 1.5 x b/ 0.5 x w/b/w/b/w/2 x b/ 0.5 x w/b/w/b/w/b.
Bindings Purflings	Walnut/Sycamore. 0.5 x b/w/b/w/b/w/2 x b/ 0.5 x w/b/w/b/w/ 2 x 2 .
Headstock Width Top	80
Headstock Width Mid	54.5
Headstock Width Bottom	65
Headstock Length	176.3
Headstock Depth Top	9.5
Headstock Depth at Volute	15.5
Tuners	Pegs. 7.6 long. Ebony, pearl dot top and bottom.
End Graft	Sycamore, ebonised. Ivory endpin.
Notes	Evidence of square ebony nails used to attach and hold fingerboard to neck during construction. Fingerboard extension doesn't immediately appear to be a repair. Bindings again cut in to fingerboard on bass side of heel to body join.

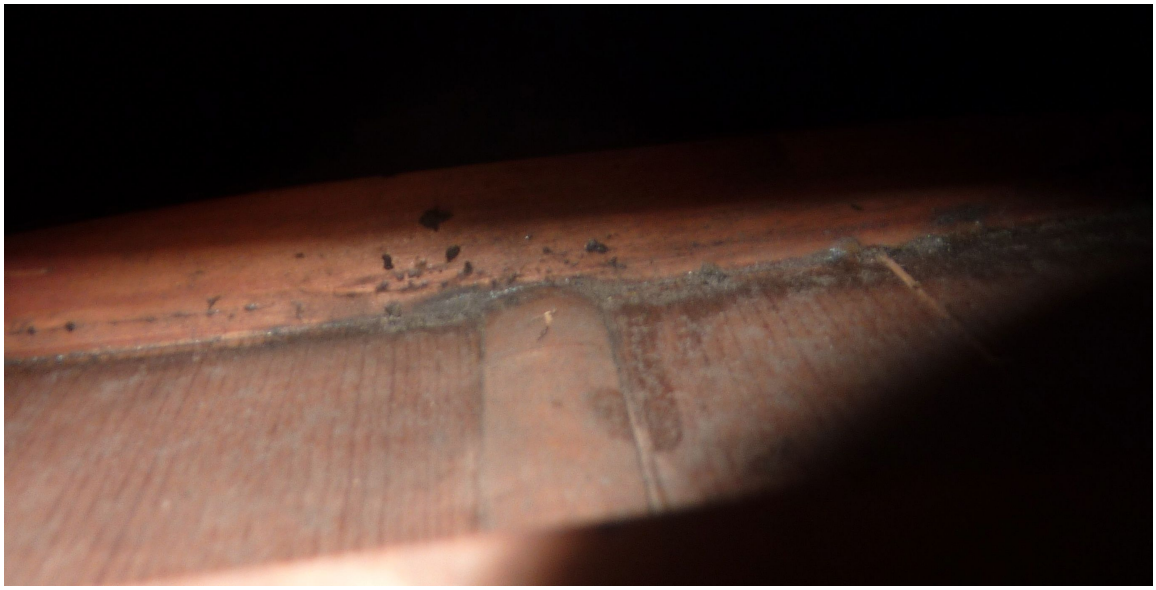




Johann Georg Stauffer.
IN WIEN.

Guitar by Johann Georg Staufer. Vienna c1805-1815. KHM. SAM 488

Label	Johann Georg Staufer
Instrument	Guitar
Year	c1805-1815
Location	KHM, Vienna
Cat. No.	SAM 488
Origin	Vienna
String Length	647.5
Width at Nut	42
Width at Heel to Body Joint	54
Upper Bout	240
Middle Bout	172
Lower Bout	306
Depth at Shoulders	73
Depth at Middle Bout	80
Depth at Lower Bout	82
Depth at Tail	87
Body Length	460
Bridge	Sycamore, ebonised.
Neck	Sycamore, ebonised. 307. V-joint to headstock. Ice-cream cone heel. Depth at volute 18, depth before heel 20.
Fingerboard	Pear, stained dark.
Fingerboard Extension	Inset in to top.
Frets	18
Soundboard	Spruce. Two-piece. Not best matched at centre seam.
Soundboard Bars	Spruce. Four transverse bars. Approx. 13 x 6.
Back	Sycamore. Flamed. Two-piece book-matched veneer lined with Spruce on the interior. Spruce centre strip.
Back Bars	Spruce. Four transverse bars. Approx. 17 x 5.
Ribs	Sycamore. Flamed. One-piece veneered on to a Spruce interior lining.
Linings	Spruce. Continuous. 8 x 5.
Rosette	2.0 b. 0.5 strips /w/b/w/b/w. 2.0 b. 0.5 strips w/b/w/b/w/b. Walnut or Pear stained and sycamore.
Bindings Purflings	0.5 strips /w/b/w/b/w. 2.0 b. 0.5 strips w/b/w/b/w. 2 x 2 Walnut or Pear Stained binding front and back.
Headstock Width Top	86
Headstock Width Mid	69
Headstock Width Bottom	79
Headstock Length	169
Headstock Depth Top	12
Headstock Depth at Volute	15.5
Tuners	Ebony pegs. 76 long.
End Graft	Pear, stained. Ivory endpin.
Notes	Strings: 6th 1.00, 5th 0.7, 4th 0.6, 3rd 0.6, 2nd 0.5, 1st 0.4. 6th to 4th covered, 3rd to 1st gut.



Johann Georg Stauffer
IN WIEN.

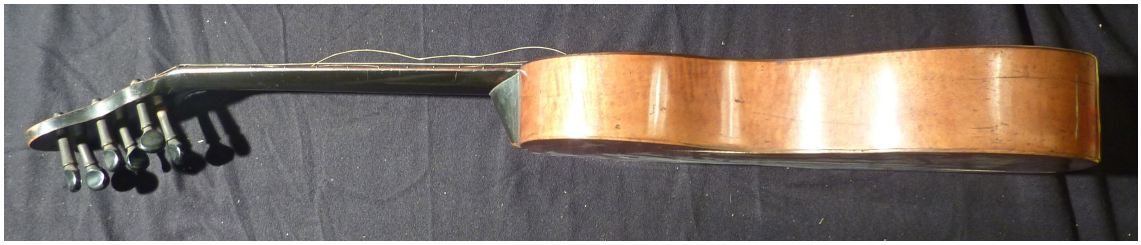
Guitar by Johann Georg Staufer. Vienna c1805-1815. KHM. SAM 512

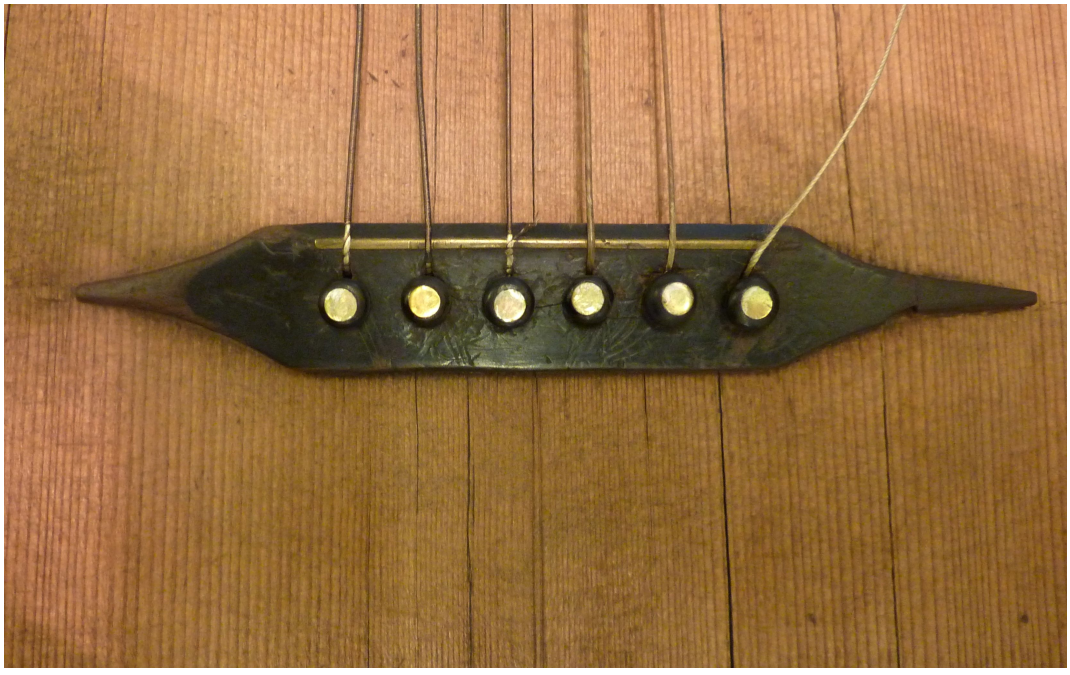
Label	Johann Georg Staufer
Instrument	Guitar
Year	c1805-1815
Location	KHM, Vienna
Cat. No.	SAM 512
Origin	Vienna
String Length	564
Width at Nut	43
Width at Heel to Body Joint	58
Upper Bout	203
Middle Bout	144
Lower Bout	258
Depth at Shoulders	67
Depth at Middle Bout	72
Depth at Lower Bout	76
Depth at Tail	78
Body Length	397
Bridge	Pear stained dark and ebonised. 85 x 22 x 6.3 (7 with saddle). Brass saddle.
Neck	Sycamore, ebonised. Ice cream cone heel. Depth at nut 18. Depth before heel 22.5. Neck to body joins between frets 11 and 12.
Fingerboard	Pear stained dark. Ebony nut. Fingerboard cut at 12th fret Bass edge and small section of binding inlaid.
Fingerboard Extension	Inset in to top.
Frets	Metal, square bar frets. Brass. 18 frets.
Soundboard	Spruce. Two-piece. Not particularly book-matched, grain tighter at seam on left-hand piece.
Soundboard Bars	Spruce. Four transverse bars, two above, two below sound hole.
Back	Sycamore, light fiddle-back flamed figure. One-piece, interior-lined with spruce.
Back Bars	Spruce. Four transverse bars approx. 14.5 x 6.
Ribs	Sycamore, light flamed figure. Two-piece, not book-matched.
Linings	Spruce. Continuous. 8 x 5.
Rosette	2.0 b. 0.5 strips /w/b/w/b/w. 2.0 b. 0.5 strips w/b/w/b/w/b. Walnut or Pear stained and sycamore.
Bindings Purflings	0.5 strips /w/b/w/b/w. 2.0 b. 0.5 strips w/b/w/b/w. 2 x 2 Walnut or Pear Stained binding front and back.
Headstock Width Top	80
Headstock Width Mid	
Headstock Width Bottom	60
Headstock Length	165
Headstock Depth Top	9
Headstock Depth at Volute	13
Tuners	Pegs
End Graft	Walnut or Pear stained. Ebony endpin, pearl dot.
Notes	String dimensions: 6=0.9, 5=0.9, 4=0.8 (over-wound silk), 3=0.8, 2=0.6, 1=0.5 (gut).

Johann Georg Stauffer
VIEN

Guitar by Johann Anton Ertl. Vienna 1821. KHM. SAM 469

Label	Johann Anton Ertl
Instrument	Guitar
Year	1821
Location	KHM, Vienna
Cat. No.	SAM 469
Origin	Vienna
String Length	548
Width at Nut	44
Width at Heel to Body Joint	57
Upper Bout	230
Middle Bout	163
Lower Bout	292
Depth at Shoulders	67
Depth at Middle Bout	72
Depth at Lower Bout	73
Depth at Tail	79.5
Body Length	455
Bridge	Pear, stained dark. 80 x 22. 12 average string spacing. Ebony pins, pearl dot.
Neck	Sycamore, ebonised. Fixed. V-joint to headstock. Ice cream cone heel. Body join between 11th and 12th fret.
Fingerboard	Pear, stained black.
Fingerboard Extension	Inlaid flush into top.
Frets	18. Nickel silver bar frets.
Soundboard	Spruce. Two-piece, book-matched. Average thickness 2.4. Thin varnish (clear).
Soundboard Bars	Spruce. Four lateral transverse bars. 15 x 6.
Back	Sycamore, figured but not highly flamed. Two-piece, book-matched. Solid no interior lining. Thin.
Back Bars	Spruce. Three lateral transverse bars. 15 x 6.
Ribs	Sycamore, figured but not highly flamed. One-piece. Solid no interior lining. Thin Varnish.
Linings	Spruce. Continuous. 6 x 4.
Rosette	0.5 x b/w/b/w/b/w/ 3.0 x b/0.5 x w/b/w/b/w/b. Walnut and sycamore.
Bindings Purflings	0.5 x b/w/b/w/b/w/ 3.0 x b/0.5 x w/b/w/b/w/ 3 x 3 walnut bindings. Walnut and sycamore, to top only. Inlaid around fingerboard extension.
Headstock Width Top	80
Headstock Width Mid	53.5
Headstock Width Bottom	61.5
Headstock Length	165
Headstock Depth Top	12
Headstock Depth at Volute	15
Tuners	Pegs, ebony. 73.5. Pearl dot top and bottom.
End Graft	Pear, stained.
Notes	

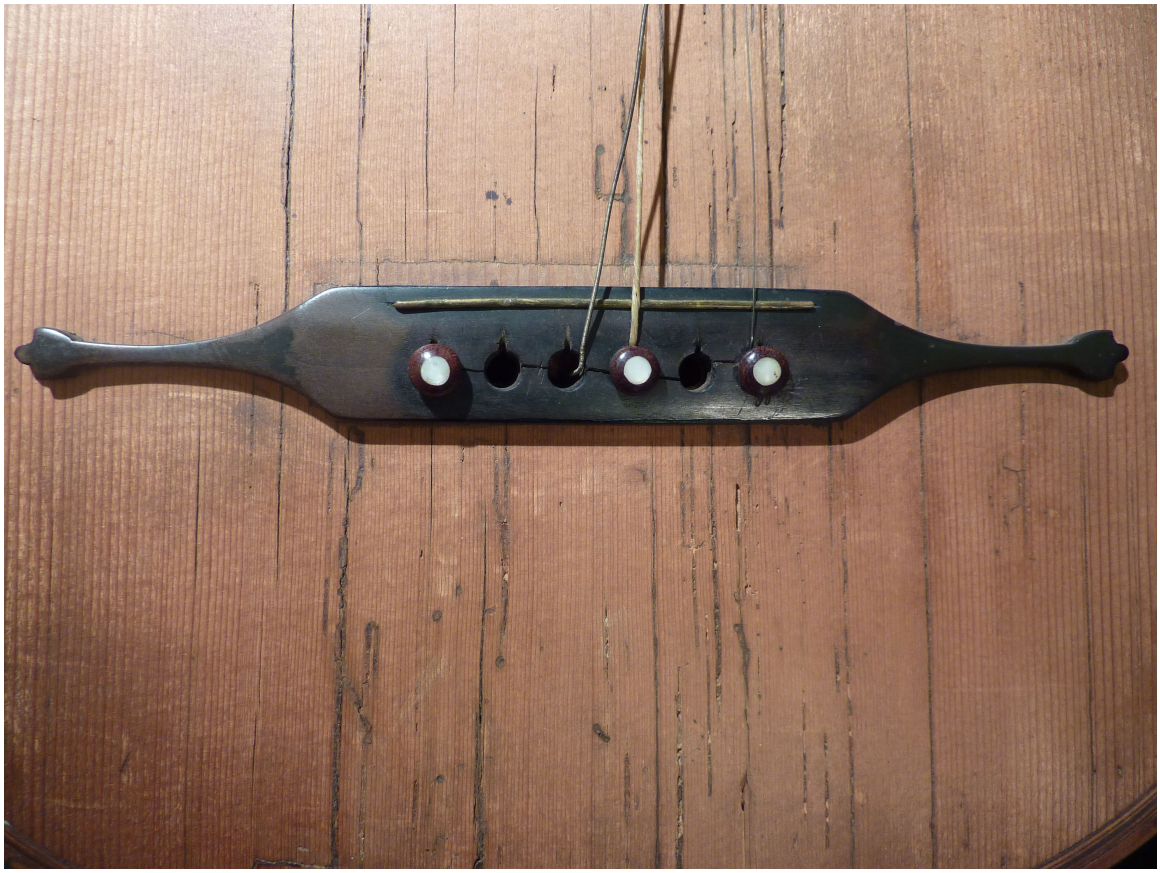




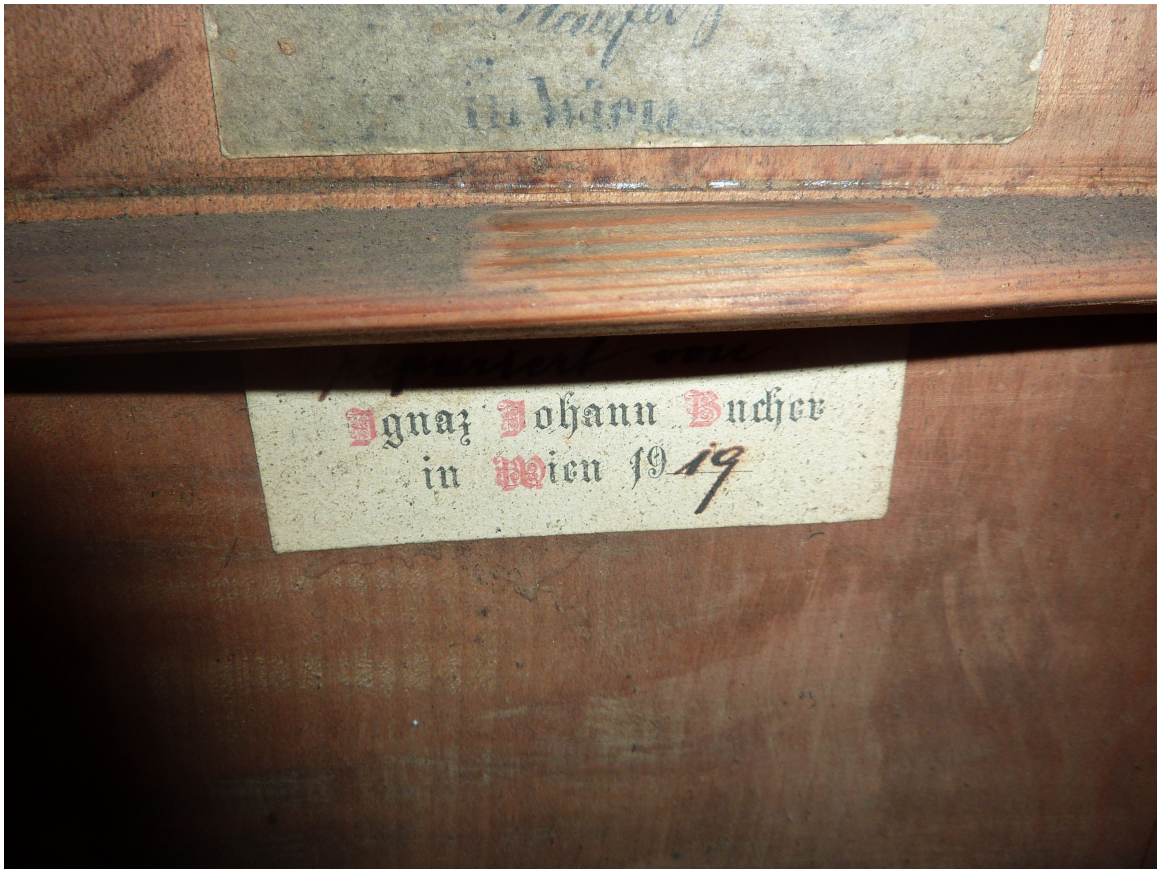
JOHANN ERTL
in Wien
1821

Guitar by Johann Anton Staufer. Vienna c1825. KHM. SAM 674

Label	J. A. Staufer Jun
Instrument	Guitar
Year	c1825
Location	KHM, Vienna
Cat. No.	SAM 674
Origin	Vienna
String Length	606.5
Width at Nut	43
Width at Heel to Body Joint	55
Upper Bout	220
Middle Bout	158
Lower Bout	293
Depth at Shoulders	63
Depth at Middle Bout	79
Depth at Lower Bout	79
Depth at Tail	81
Body Length	423
Bridge	Pear, stained and ebonised. 90 x 22 x 7.9 (8.5 with metal alloy saddle). Bridge pins not original: rosewood with pearl dot.
Neck	Sycamore, ebonised. Ice-cream cone heel. V-joint to headstock. Strap button on heel probably disguises a once adjustable neck.
Fingerboard	Pear, stained dark.
Fingerboard Extension	Glued to top, cutaway on bass side, extending over sound hole. Probably once elevated.
Frets	21, metal alloy. Pearl dot markers 5th, 7th and 12th fret. 12th fret to body join. Square frets.
Soundboard	Spruce. Two-piece, book-matched.
Soundboard Bars	Spruce. Three transverse bars. 15 x 6.
Back	Sycamore, flamed. One-piece. Lined wit spruce on interior.
Back Bars	Spruce. three transverse bars. 18.5 x 10.
Ribs	Sycamore, flamed. Two-piece, book-matched.
Linings	Spruce. Continuous. 8 x 5.
Rosette	2.0 x b/ 0.5 x w/b/w/ 1.0 x b/ 0.5 x w/b/w/b. Walnut and sycamore.
Bindings Purflings	0.5 x b/w/b/w/ 1.0 x b/ 0.5 x w/b/w/ 2 x 2 walnut bindings to top only. Walnut and sycamore.
Headstock Width Top	78
Headstock Width Mid	50
Headstock Width Bottom	64
Headstock Length	150
Headstock Depth Top	10.2
Headstock Depth at Volute	13.9
Tuners	Pegs, ebony.
End Graft	Pear, stained. Ebony endpin with pearl dot.
Notes	Label states J A Staufer jun, suggesting an early Anton Staufer instrument. The Legnani endorsement also does not bear the red seal, nor does it have any numbering. The bridge is not in its original position and if it is the original bridge (unlikely) is somewhat crude. The instrument also bears a repairer's label from Ignaz Johann Bucher in 1919.



Luigi Legnani


Ignaz Johann Bucher
in Wien 19

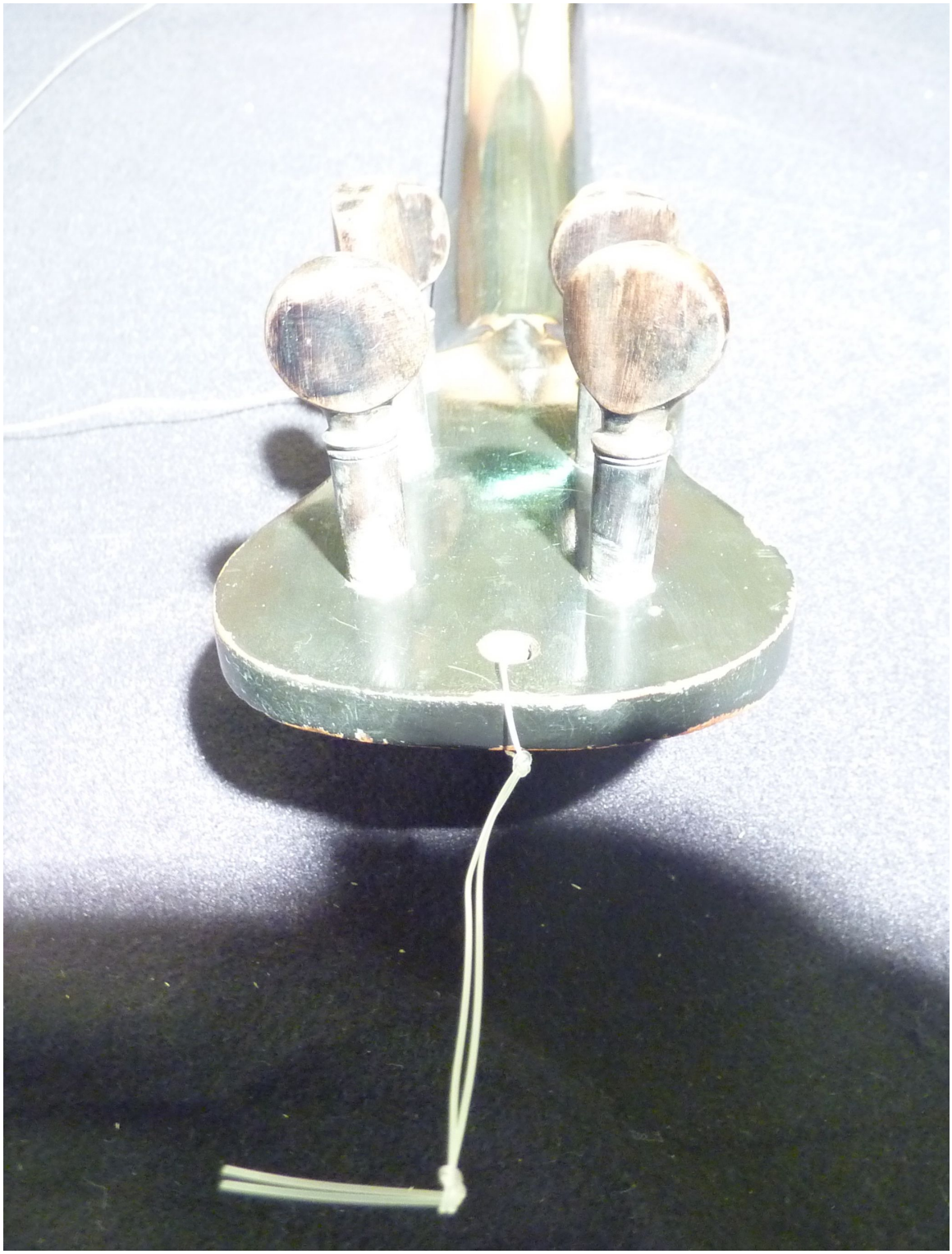
Guitar by Johann Georg Staufer. Vienna 1829. KHM. SAM 513.

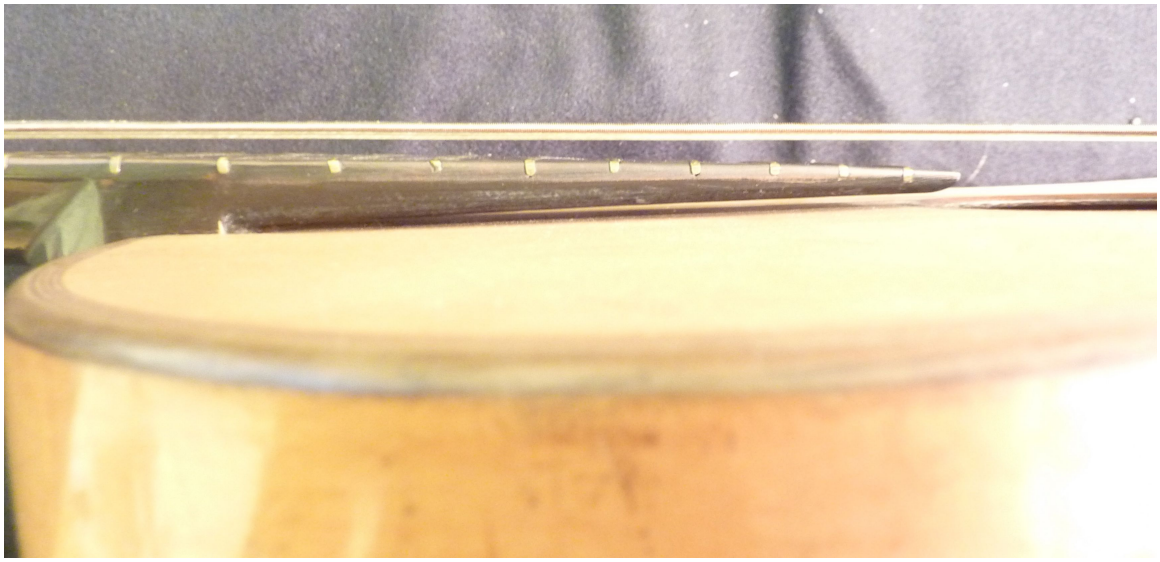
Label	Johann Georg Staufer
Instrument	Guitar
Year	1829
Location	KHM, Vienna
Cat. No.	SAM 513
Origin	Vienna
String Length	559
Width at Nut	45.5
Width at Heel to Body Joint	55.6
Upper Bout	229
Middle Bout	171
Lower Bout	293
Depth at Shoulders	61
Depth at Middle Bout	74
Depth at Lower Bout	78.5
Depth at Tail	83
Body Length	392
Bridge	Main area: 86.5 x 22.5 x 6, with saddle: 6.6. Inc moustaches 190. Pear stained and ebonised. Bridge pins: Ebony with pearl dots. Bridge to tail: 92.
Neck	Sycamore, ebonised. Length: 280. Depth at nut 18.5. Depth before heel; 21.5. Ice-cream cone heel.
Fingerboard	Pear stained dark.
Fingerboard Extension	108. Floating.
Frets	22. Body join 12th fret. Metal alloy, lightly domed bar.
Soundboard	Spruce. One-piece. Average thickness 2.5.
Soundboard Bars	3 x transverse. Spruce, slab sawn. Approx 16.5 high x 8.8 thick.
Back	Sycamore, lightly flamed. One-piece. Solid. Average 3.0.
Back Bars	3 x transverse. Spruce, slab sawn. Approx 21 high x 9 thick.
Ribs	Sycamore, lightly flamed. One-piece, joined at heel. Solid. Average 2.0.
Linings	Continuous. Spruce. 8 x 4.
Rosette	b/w/b/w/b/w/b/w/b. pear or walnut stained/ sycamore. Inner ring 2 x 2.
Bindings Purflings	b/w/b/w/b/w/b/w/b. pear or walnut stained/ sycamore. Inner and outer ring 2x2.
Headstock Width Top	
Headstock Width Mid	
Headstock Width Bottom	
Headstock Length	65. V- joint to neck.
Headstock Depth Top	10.5.
Headstock Depth at Volute	13.5.
Tuners	Pear, ebonised. Endpin: Ebony.
End Graft	
Notes	

Nach dem Modell
des Luigi Legnani 1527.
Johann Georg Stauffer
Anno 829.
in Wien
480.

Guitar by Johann Georg Staufer. Vienna 1829. KHM. SAM 489.

Label	Johann Georg Staufer
Instrument	Guitar
Year	1829
Location	KHM, Vienna
Cat. No.	SAM 489
Origin	Vienna
String Length	645
Width at Nut	44.4
Width at Heel to Body Joint	54.7
Upper Bout	245
Middle Bout	174
Lower Bout	298
Depth at Shoulders	62
Depth at Middle Bout	81
Depth at Lower Bout	81
Depth at Tail	84
Body Length	450
Bridge	Pear, stained and ebonised. 82 x 20 x 7.7 (7.9 with saddle). Saddle, metal alloy.
Neck	Sycamore, ebonised. Adjustable, with key. Ice cream-cone heel. V-joint to headstock.
Fingerboard	Pear, stained.
Fingerboard Extension	Floating.
Frets	21. Metal alloy. Neck joins body at 12th fret.
Soundboard	Spruce. Two-piece, book-matched. Very fine straight grain.
Soundboard Bars	Spruce. Three transverse bars. 15 x 4 and 5 x 5.
Back	Sycamore. Flamed. One-piece.
Back Bars	Spruce. Three transverse bars. 19 x 5.
Ribs	Sycamore. Flamed. Two-pieces.
Linings	Spruce, continuous. 8 x 5.
Rosette	2 x 2 Walnut, 0.5 w/b/w/b/w/b/w/b Walnut and Sycamore.
Bindings Purflings	0.5 b/w/b/w/b/w Walnut and Sycamore, 2 x 2 Walnut binding.
Headstock Width Top	80
Headstock Width Mid	57
Headstock Width Bottom	68
Headstock Length	168
Headstock Depth Top	9
Headstock Depth at Volute	16.5
Tuners	Pegs. Ebony. Pearl dot top only.
End Graft	
Notes	

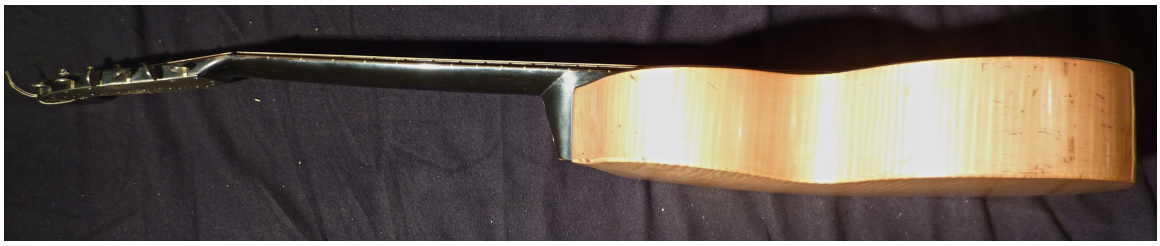


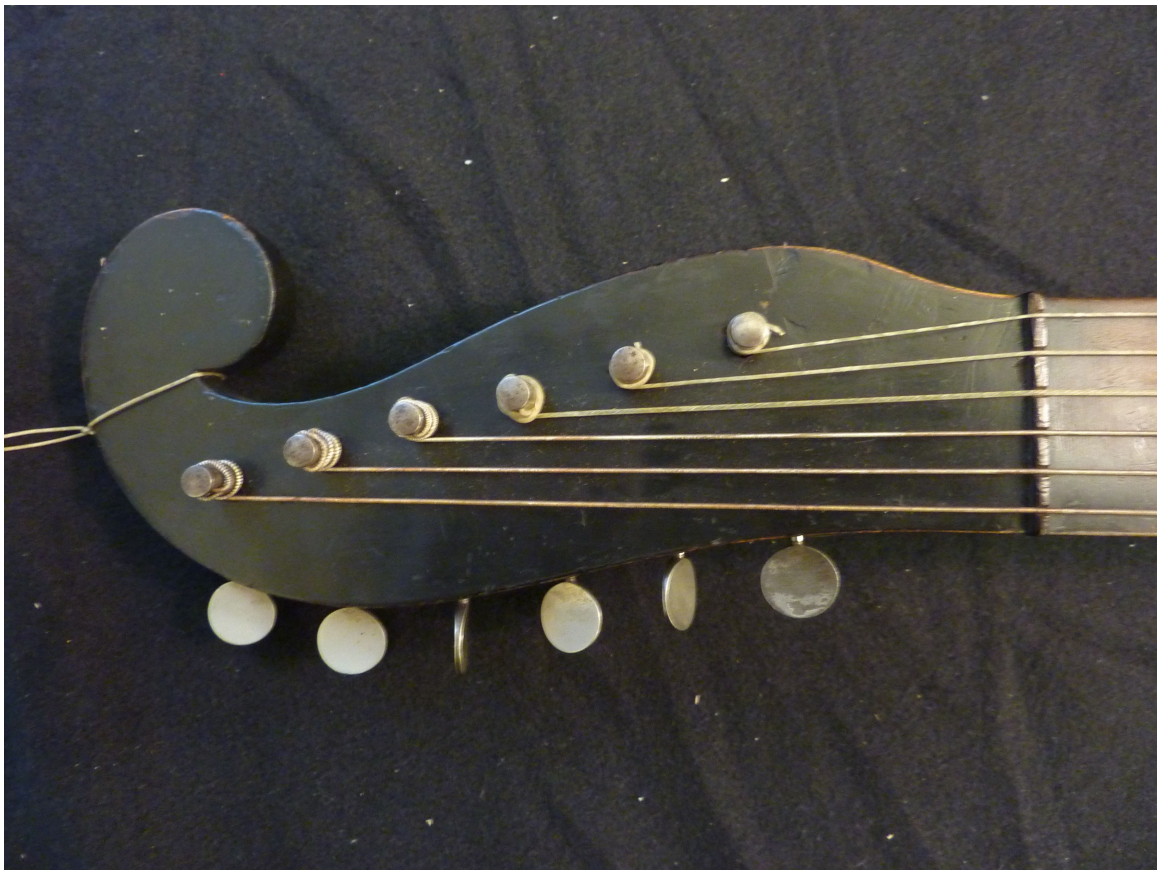


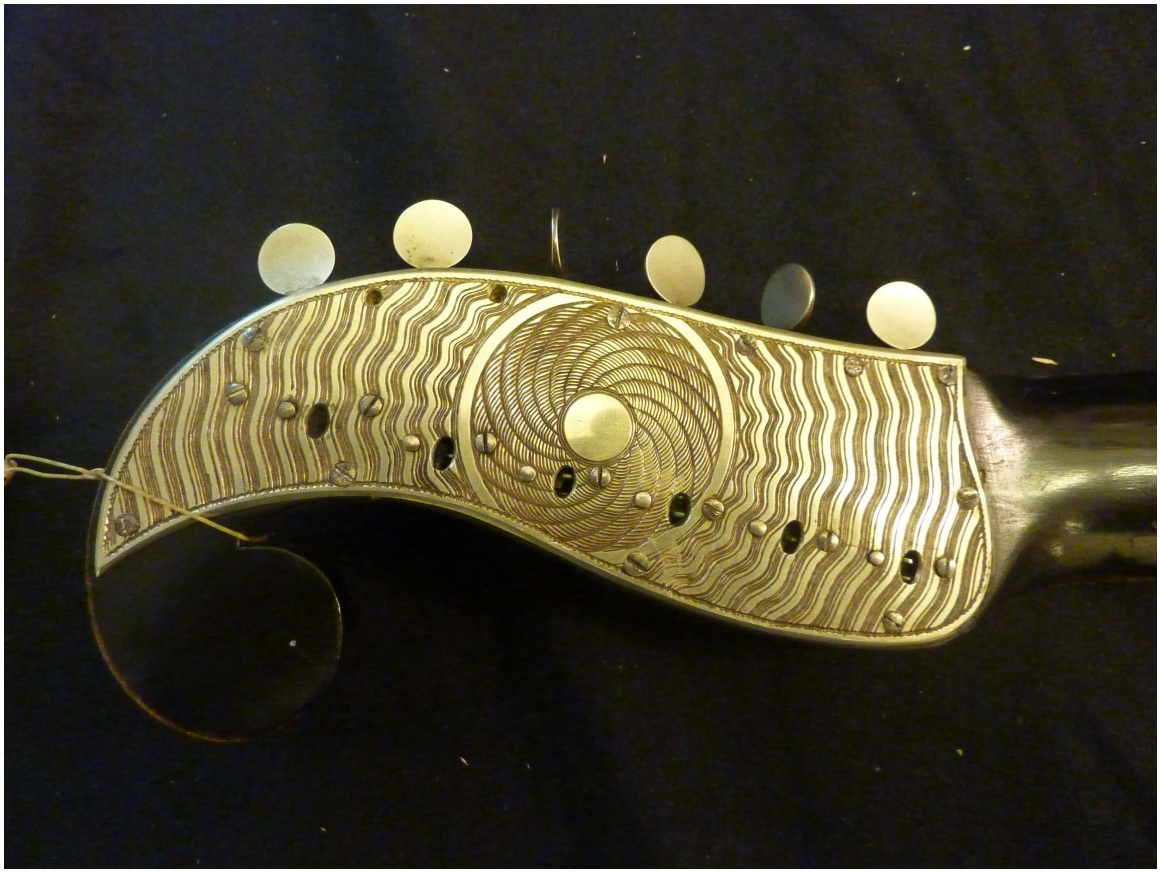
Nach dem Modell
des Luigi Legnani
in Wien

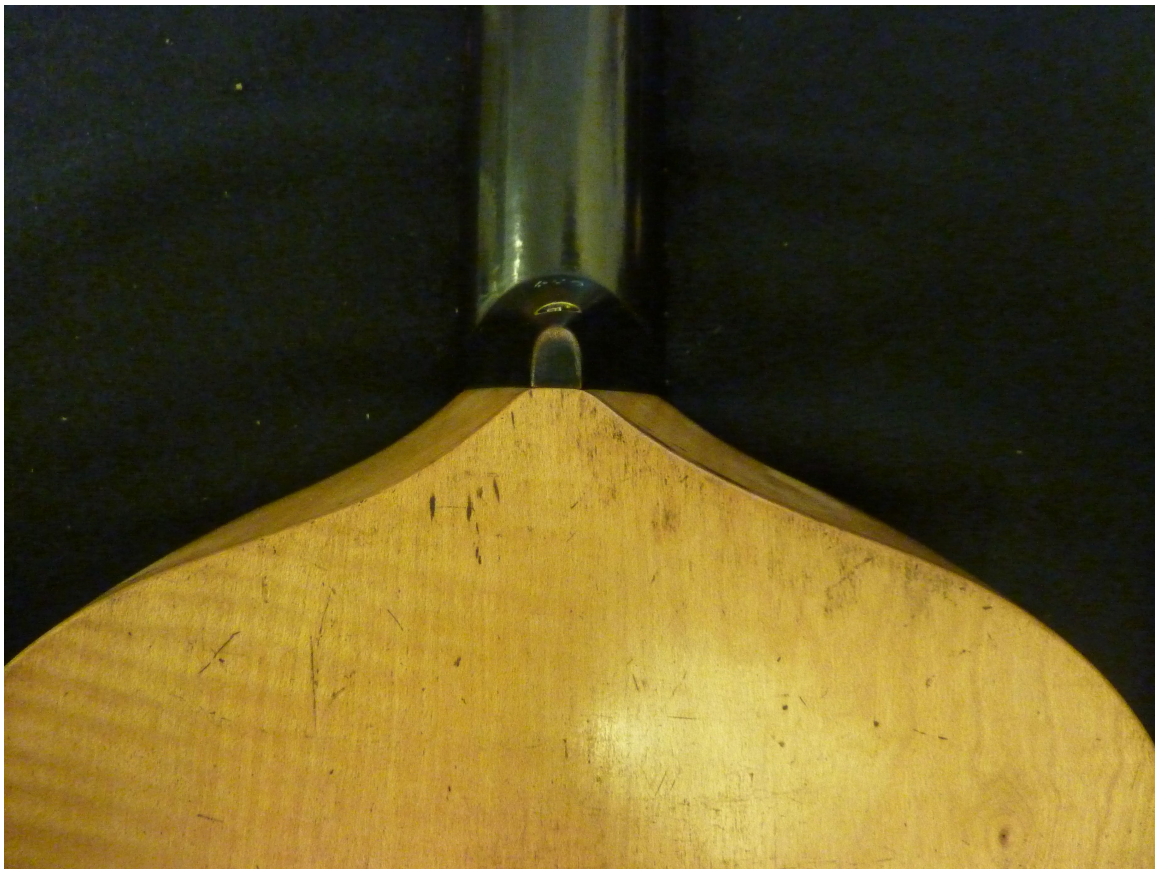
Guitar by Johann Georg Staufer. Vienna 1830. KHM. SAM 490.

Label	Johann Georg Staufer
Instrument	Guitar
Year	1830
Location	KHM, Vienna
Cat. No.	SAM 490
Origin	Vienna
String Length	561
Width at Nut	43.5
Width at Heel to Body Joint	55
Upper Bout	231
Middle Bout	170
Lower Bout	295
Depth at Shoulders	62.5
Depth at Middle Bout	74
Depth at Lower Bout	74.5
Depth at Tail	77.5
Body Length	406
Bridge	Pear, stained and ebonised. 90 x 22 x 6.8 (7.5 with metal alloy saddle). Bridge including moustaches 190. Ebony pins, pearl dot.
Neck	Sycamore, ebonised. 281. Adjustable. Ice-cream cone heel. 12th fret to body neck join.
Fingerboard	Pear, stained dark. Floating. Pearl dot fret makers at 7th, 12th and 17th frets. 17th fret marker offset.
Fingerboard Extension	Fingerboard extends 145 from 12 fret, floating above soundboard and cut away on bass side.
Frets	24 frets, alloy slightly domed profile.
Soundboard	Spruce. Two-piece, book-matched. 2.5 average thickness around sound hole area. Light amber varnish.
Soundboard Bars	Spruce. Three transverse bars 15 x 6.5. Not quarter-sawn.
Back	Sycamore, flamed. One-piece.
Back Bars	Spruce. Three transverse bars. 23 x 6.5.
Ribs	Sycamore, flamed. Two-piece, book matched.
Linings	Spruce. 8 x 6.
Rosette	3.0 x b/1.0 x w/0.5 x b/1.0 x w/2.0 x b/1.0 x w/0.5 x b/1.0 x w/2.0 x b. Walnut and Sycamore.
Bindings Purflings	2.0 x b/1.0 x w/0.5 x b/1.0 x w/2.0 x b/1.0 x w/0.5 x b/1.0 x w. Walnut and Sycamore. 3 x 3 Walnut bindings.
Headstock Width Top	
Headstock Width Mid	
Headstock Width Bottom	
Headstock Length	94
Headstock Depth Top	11.5
Headstock Depth at Volute	12.5
Tuners	Mechanical
End Graft	Ebony. Ebony endpin with pearl dot.
Notes	Engraved nickel silver plate covering tuning mechanism, with nickel silver tuning buttons.





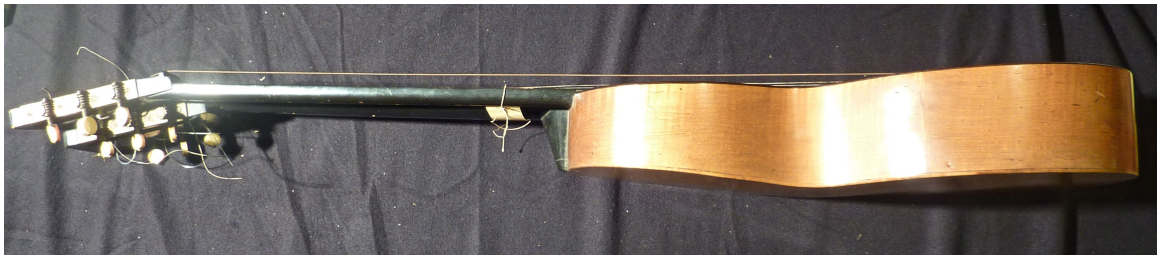


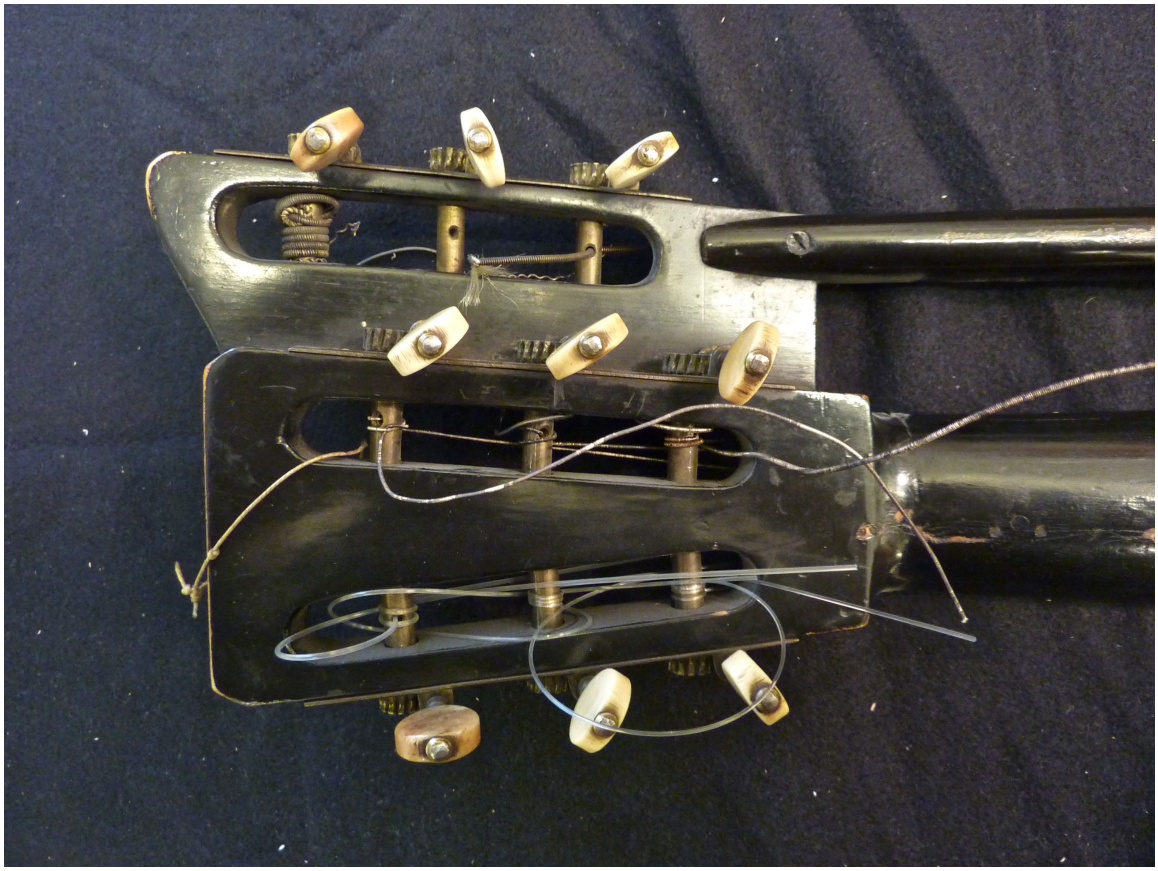


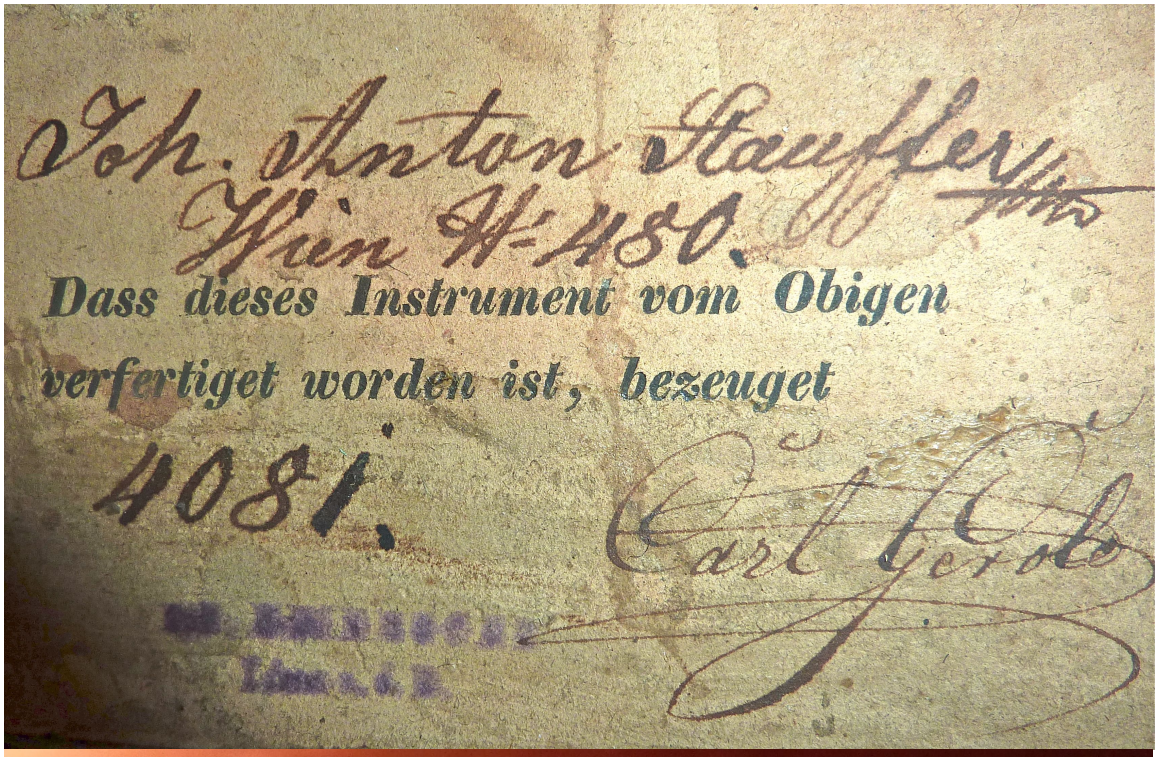
Nach dem Modell
des Luigi Legnani. 1811.
Johann Georg Stauffer
Anno 1830. in Wien A=480.

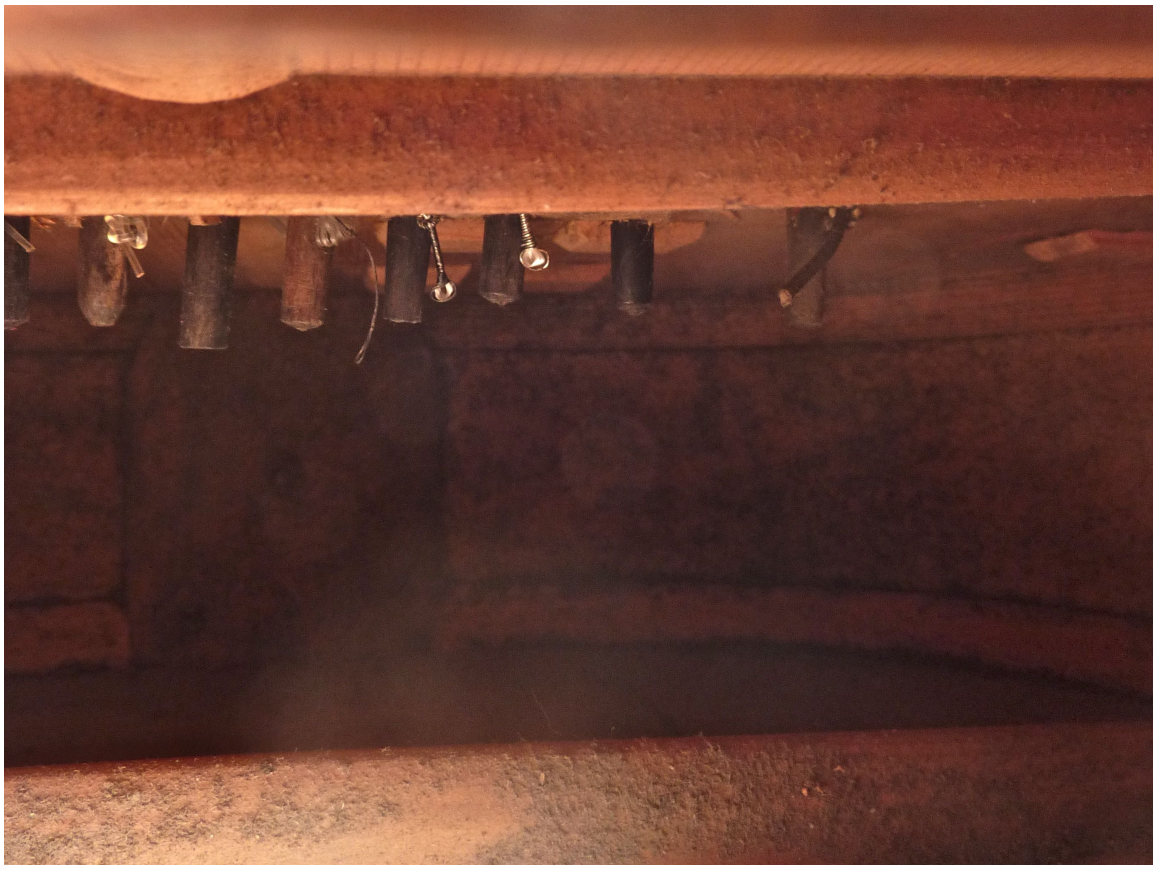
Bassgitarre by Johann Anton Staufer. Vienna c1840-1842. KHM. SAM 697.

Label	Johann Anton Stauffer
Instrument	Bassgitarre 6 + 3
Year	c1840-1842
Location	KHM, Vienna
Cat. No.	SAM 697
Origin	Vienna
String Length	642. 669 sub bass.
Width at Nut	42.5
Width at Heel to Body Joint	56
Upper Bout	242
Middle Bout	171
Lower Bout	295
Depth at Shoulders	61.5
Depth at Middle Bout	78
Depth at Lower Bout	77
Depth at Tail	78.2
Body Length	450
Bridge	Pear, stained and ebonised. 195 x 28. Metal alloy saddle. String spacing average 11.5.
Neck	Sycamore, ebonised (both necks). 322. 17.5 at volute. 21.1 before heel. Sub bass support screwed through back to headstock. 12th fret neck to body join. Fixed. Ice cream cone heel, standard only.
Fingerboard	Pear, stained and ebonised.
Fingerboard Extension	127.5 from neck join. Fixed to top, cut away on bass side.
Frets	21. Metal alloy, slightly domed bar frets.
Soundboard	Spruce. Two-piece, book-matched. Fine grain. 2.4 to 2.8 thick.
Soundboard Bars	Spruce. Four lateral transverse bars. 15.5 x 6.
Back	Sycamore, flamed. One-piece. Solid, no internal lining.
Back Bars	Spruce. Three lateral transverse bars. 18.5 x 6.
Ribs	Sycamore, only lightly flamed. Two-piece, book-matched.
Linings	Spruce, continuous. 10 x 6.
Rosette	3.0 x b/w/b/w/b/w/b/w/b (w=1.00, b=0.5). Walnut and sycamore.
Bindings Purflings	b/w/b/w/b/w/b/w/b (w=1.00, b=0.5). Walnut and sycamore. 3 x 3 Walnut bindings. Only to top.
Headstock Width Top	73 standard. 48 sub bass. Total 118.
Headstock Width Mid	
Headstock Width Bottom	52.5 standard.
Headstock Length	
Headstock Depth Top	17.5
Headstock Depth at Volute	17.2
Tuners	Mechanical to slotted headstock design both standard and sub bass. Ivory buttons.
End Graft	
Notes	






Joh. Anton Stauffer
Wien N: 480.
Dass dieses Instrument vom Obigen
verfertiget worden ist, bezeuget
4081.
Carl Gerle



Guitar by Johann Anton Staufer. Vienna c1845. KHM, SAM 484.

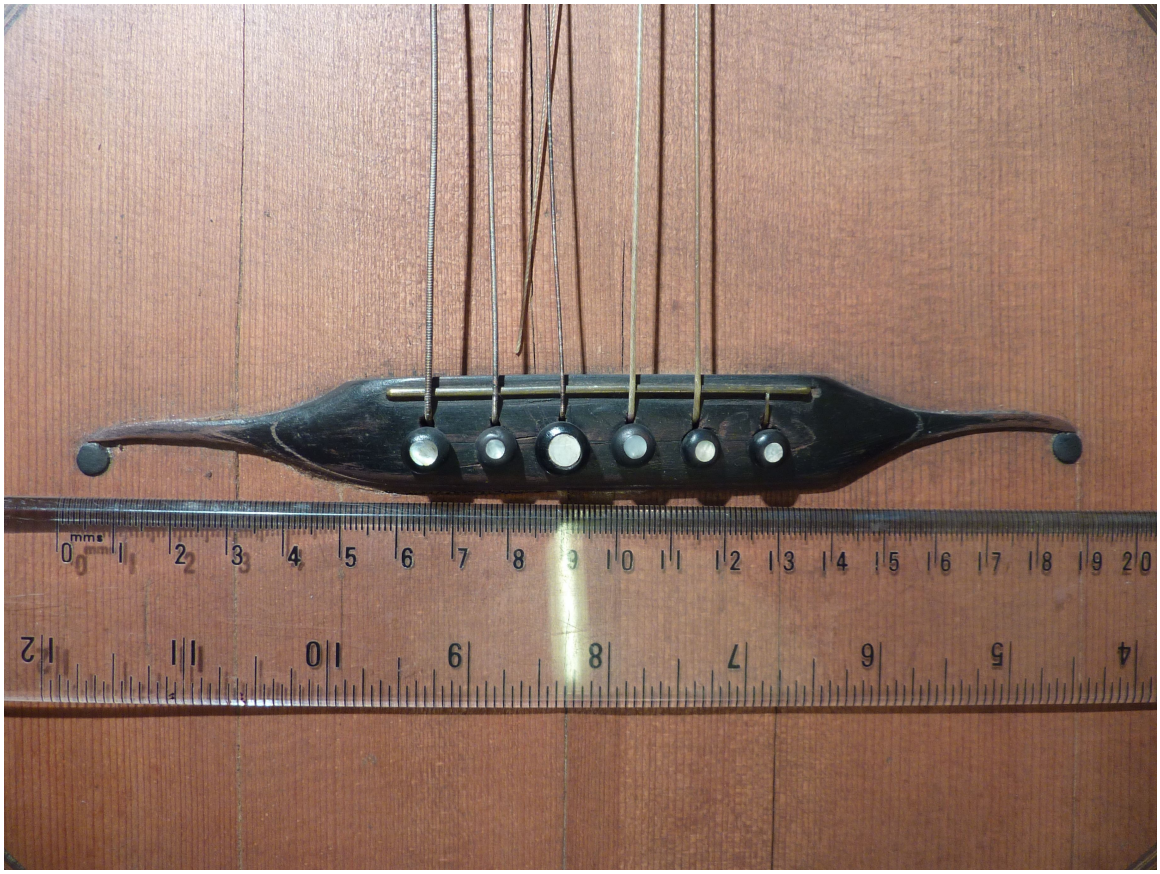
Label	Johann Anton Stauffer
Instrument	Guitar
Year	c1845
Location	Vienna
Cat. No.	SAM 484
Origin	Vienna
String Length	642
Width at Nut	44.3
Width at Heel to Body Joint	56.4
Upper Bout	245
Middle Bout	173
Lower Bout	297
Depth at Shoulders	63
Depth at Middle Bout	78
Depth at Lower Bout	79
Depth at Tail	80
Body Length	448
Bridge	Pear, stained dark. 90 x 21 x 7.4 (8.2 with metal saddle). String spacing approx 11.75. Ebony pins, pearl dot.
Neck	Sycamore, ebonised. V-joint to headstock. Ice-cream cone heel, fixed but possibly designed originally as adjustable. 16.5 at nut. 19 before heel.
Fingerboard	Pear, stained.
Fingerboard Extension	Fixed to top. Note the design (cut away on bass side) that would usually have been floating above top.
Frets	21. Metal alloy.
Soundboard	Spruce. Two-piece, book-matched. Wider grain at centre seam.
Soundboard Bars	Spruce. Three transverse bars.
Back	Sycamore, flamed. One-piece.
Back Bars	Spruce. Three transverse bars.
Ribs	Sycamore, flamed. One-piece.
Linings	Spruce. Continuous. 10 x 5.
Rosette	2.0 x b/ 1.0 x w/b/w/b/w/b/w/b. Walnut and sycamore.
Bindings Purflings	1.0 x b/w/b/w/b/w/b/w. 2 x 2 Walnut binding.
Headstock Width Top	80
Headstock Width Mid	55
Headstock Width Bottom	65
Headstock Length	159
Headstock Depth Top	10
Headstock Depth at Volute	12
Tuners	Pegs, ebony.
End Graft	Pear, stained. Ebony endpin.
Notes	Strings 6th 1.1, 5th 1.1, 4th 1.05 (all covered), 3rd 1.1, 2nd 1.05, 1st 1.02 (all gut).

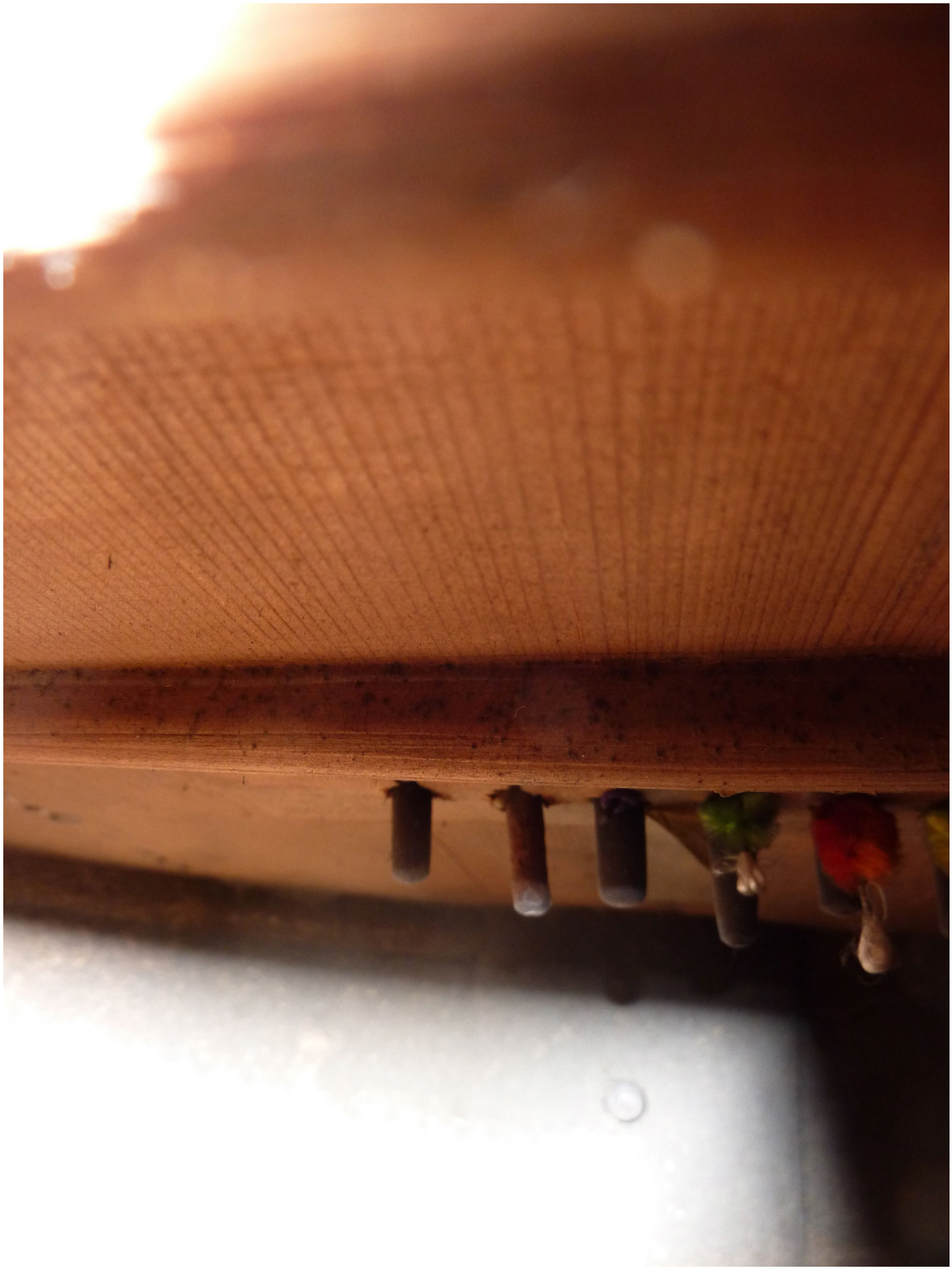
Joh. Anton. Stauffer
Wien
Da viele von Obigem nicht verfertigte Instrumente
fälschlich mit seinem Namen bezeichnet sind,
so wird die Echtheit dieses, so wie eines jeden
von Obigem verfertigten Instrumentes bezeuget
durch die eigenhändige Unterschrift von
4656.
Carl Geyer

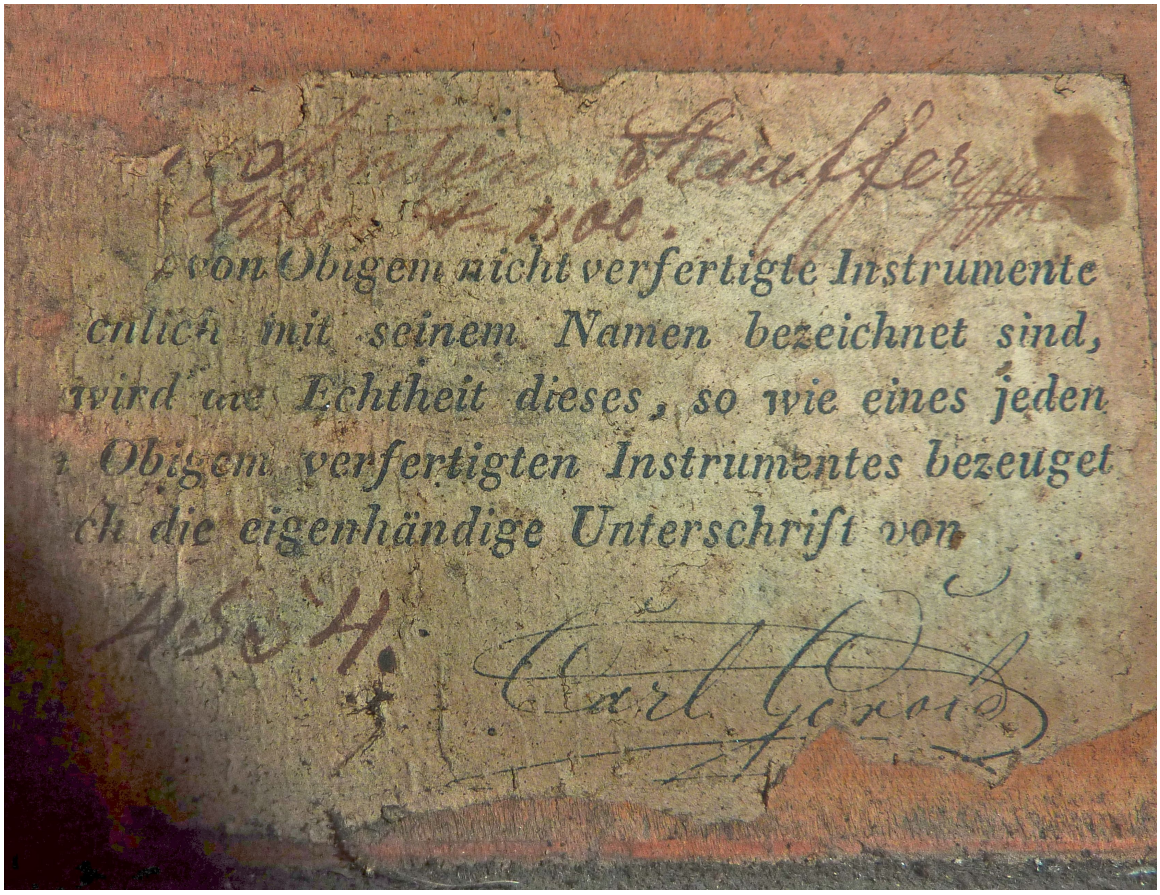
Guitar by Johann Anton Staufer. Vienna c1845. KHM, SAM 485.

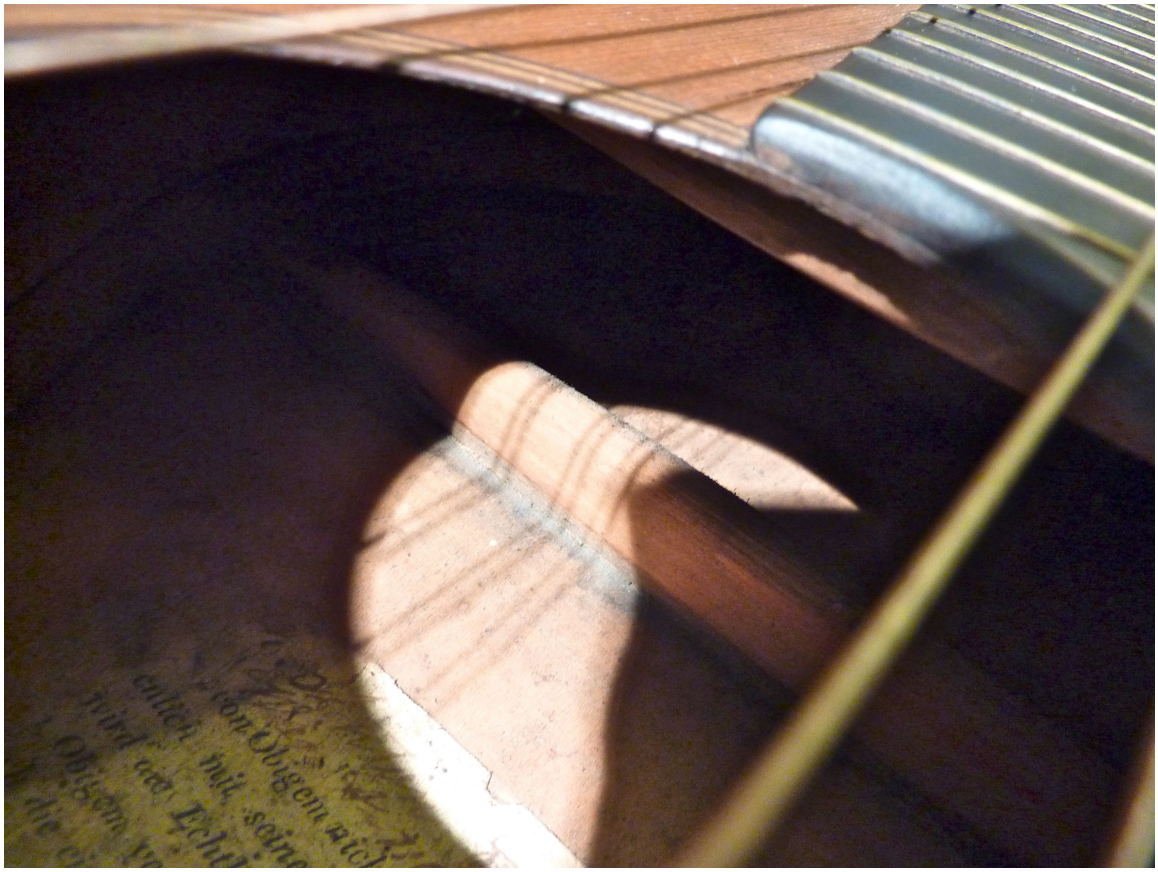
Label	Johann Anton Stauffer
Instrument	Guitar
Year	c1845
Location	Vienna
Cat. No.	SAM 485
Origin	Vienna
String Length	606
Width at Nut	43.2
Width at Heel to Body Joint	53.4
Upper Bout	234
Middle Bout	173
Lower Bout	295
Depth at Shoulders	61
Depth at Middle Bout	77
Depth at Lower Bout	78
Depth at Tail	76.5
Body Length	428
Bridge	Pear, stained and ebonised. 90 x 20 x 9.1 (10.8 with metal alloy saddle).
Neck	Sycamore, ebonised. V-joint to headstock (also of sycamore). Ice-cream cone heel.
Fingerboard	Pear, stained and ebonised.
Fingerboard Extension	
Frets	21. Metal alloy, slightly domed bar frets.
Soundboard	Spruce. Two-piece, book-matched. Average thickness 2.5.
Soundboard Bars	Spruce. Four transverse bars (two upper two lower bout) 7.5 x 7.5, lowest 10 x 7.5.
Back	Sycamore, flamed. One-piece. Solid, no internal lining.
Back Bars	Spruce. Three transverse bars. 21 x 7.5.
Ribs	Sycamore, flamed. One-piece, joined at tail, hidden by end graft. Solid, no internal linings.
Linings	Spruce. Continuous. 8 x 5.
Rosette	2 x 2 b/ 0.5 w/b/w/ 1.3 b/ 0.5 w/b/w/ 1.3 b. Walnut and sycamore.
Bindings Purflings	1.0 x b/ 0.5 x w/b/w/ 1.0 x b/ 0.5 x w/b/w/ 2 x 2 walnut bindings. Walnut and sycamore.
Headstock Width Top	84
Headstock Width Mid	58
Headstock Width Bottom	69
Headstock Length	161
Headstock Depth Top	9.5
Headstock Depth at Volute	12.5
Tuners	Pegs, ebony.
End Graft	Ebony. Ebony endpin.
Notes	Ebony nut.

484





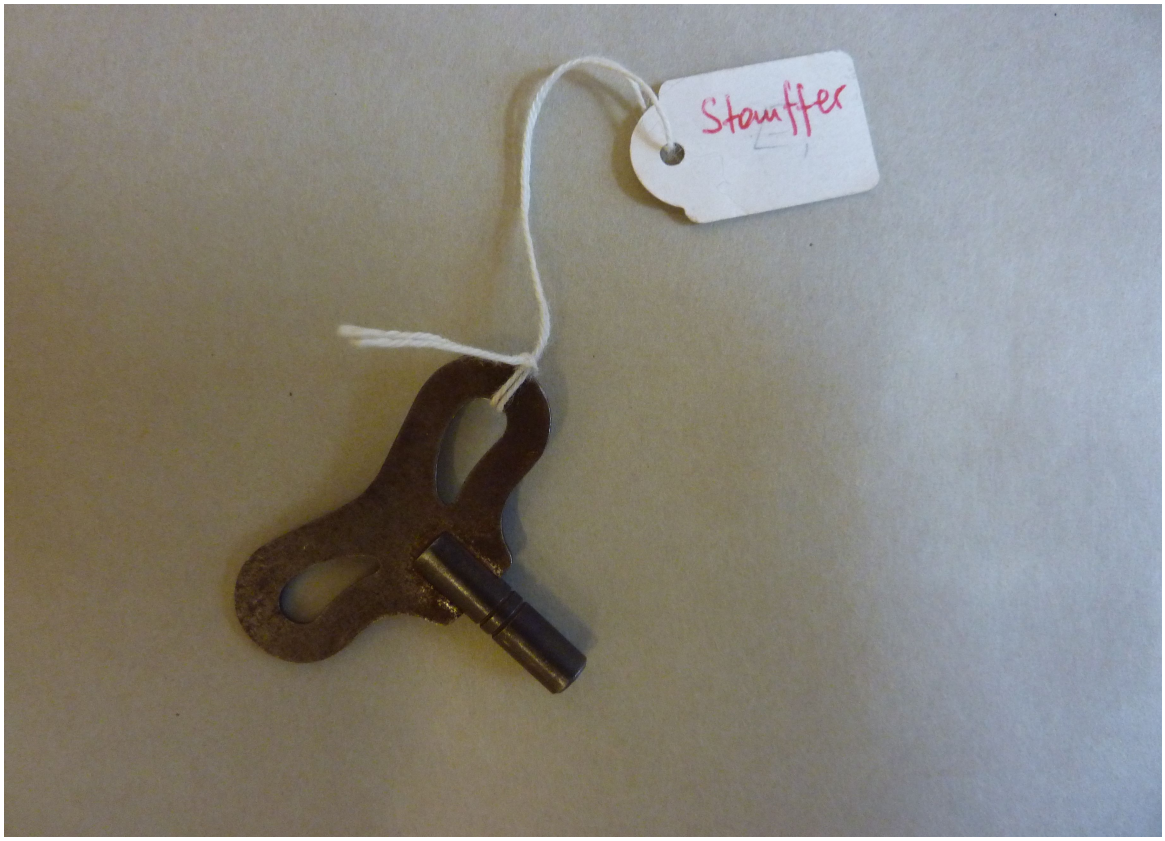

Staufer
von Obigem nicht verfertigte Instrumente
entlich mit seinem Namen bezeichnet sind,
wird die Echtheit dieses, so wie eines jeden
Obigem verfertigten Instrumentes bezeuget
ch die eigenhändige Unterschrift von
H. S. H.
Carl Geroid



Kontragitarre by Johann Anton Staufer. Vienna c1848. KHM. SAM 1059.

Label	Johann Anton Stauffer
Instrument	Kontragitarre 6+7
Year	c1848
Location	KHM, Vienna
Cat. No.	SAM 1059
Origin	Vienna
String Length	646.5
Width at Nut	44.5. 46.5 sub bass.
Width at Heel to Body Joint	53.5
Upper Bout	280
Middle Bout	212
Lower Bout	350
Depth at Shoulders	56.5
Depth at Middle Bout	82
Depth at Lower Bout	80
Depth at Tail	83
Body Length	465
Bridge	Sycamore, ebonised. 160 x 34.5. Total width including moustaches 258. Pins/string spacing average 11.5. Metal alloy saddle.
Neck	Sycamore, ebonised (both). 324 standard. Adjustable, both necks to ice cream cone heel. Clock key/ bolt. 18.5 at volute. 23 before heel.
Fingerboard	Ebony
Fingerboard Extension	Elevated
Frets	21. Metal alloy, bar frets, slightly domed. Fret wire 1.00 width. Pearl dot markers at 3, 5, 7, 10 frets.
Soundboard	Spruce. two-piece, book-matched. Grain runs off diagonally towards tail. Light amber varnish. Thin coat.
Soundboard Bars	Spruce. Four lateral transverse bars. 10 x 10.
Back	Sycamore, stained as rosewood. One-piece. Thinly varnished.
Back Bars	Spruce. Three lateral transverse bars. 21 x 8.
Ribs	Sycamore, stained as rosewood. Two-piece, book-matched. Thinly varnished.
Linings	Spruce, continuous. 8 x 5.
Rosette	2 x 2 b/ 0.5 w/b/w/ 1.0 ebony/ 0.5 w/b/w/ 1.0 x ebony. Otherwise Walnut and sycamore.
Bindings Purflings	2 x 2 b/ 0.5 w/b/w/ 1.0 ebony/ 0.5 w/b/w/ 3 x 3 walnut bindings. Otherwise Walnut and sycamore.
Headstock Width Top	38.5 standard.
Headstock Depth Top	13.2
Headstock Depth at Volute	15.2
Tuners	Mechanical. Covered on back of both headstocks by undecorated nickel silver plates. Ivory buttons.
End Graft	Ebony. Ebony endpin.
Notes	Sub bass headstock has individual ebony nuts fitted after tuner string posts. 5 (high) x 9 x 4. Tuner posts protrude 9.5. Headstocks made in two parts and joined. 9 mm diameter steel compression rod running between neck block and end block inside body. Label countersigned by Carl Gerold.

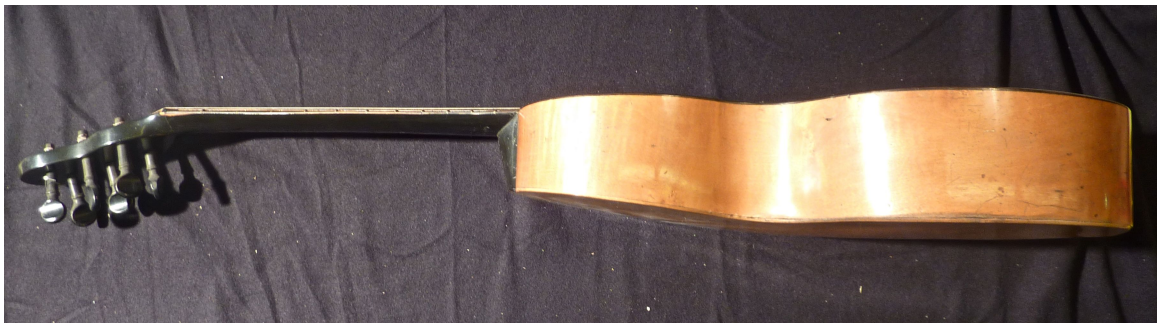
WIEN


Stauffer

Michà
WI
VII. Lerchenfel
Daviele von Obigem
fälschlich mit sein
so wird die Echthe
von Obigem verfer
durch die eigenhän
1923.
ertigte Instr
n bezeichne
so wie eine
trumentes b
rschrift von

Guitar by Nikolaus Georg Reiß. Vienna c1835. KHM. SAM 454.

Label	Nikolaus Georg Reiß
Instrument	Guitar
Year	c1835
Location	KHM, Vienna
Cat. No.	SAM 454
Origin	Vienna
String Length	
Width at Nut	
Width at Heel to Body Joint	
Upper Bout	252
Middle Bout	185
Lower Bout	312
Depth at Shoulders	62
Depth at Middle Bout	81
Depth at Lower Bout	81
Depth at Tail	79
Body Length	442
Bridge	Ebony. 90 x 24 x 8,8 (9.5 with saddle). Saddle, nickel silver. Elegantly carved moustaches. Ebony pins.
Neck	Sycamore, ebonised. 12th fret neck to body join. V-joint to headstock. Ice cream cone heel.
Fingerboard	Ebony.
Fingerboard Extension	Fixed to top, extending over sound hole, cut away on bass side. 135 from neck join to sound hole.
Frets	21. Brass or metal alloy.
Soundboard	Spruce. One-piece. Fine grain. Average thickness 4 to 4.5. Clear thin varnish.
Soundboard Bars	Spruce. Three lateral transverse bars, two in upper bout, and one in lower bout. 8 x 7. Domed profile.
Back	Sycamore lightly flamed. Light yellow to amber varnish
Back Bars	Spruce. Three lateral transverse bars. 15 x 10.
Ribs	Sycamore lightly flamed. Two-piece, book-matched. Light yellow to amber varnish.
Linings	Spruce. Continuous. 6 x 4.
Rosette	3.0 x b/1.0 x/w/b/w/b/w/b. Ebony and sycamore.
Bindings Purflings	1.0 x b/w/b/w/b/w/b/w/ 3 x 3 ebony bindings. Ebony and sycamore.
Headstock Width Top	70
Headstock Width Mid	50
Headstock Width Bottom	63
Headstock Length	160
Headstock Depth Top	10.5
Headstock Depth at Volute	16.5
Tuners	Pegs, ebony, pearl dot top only. 65 long.
End Graft	Ebony. Ebony endpin.
Notes	Arched back.



NICOLAUS RIES
Guitarmacher
IN W EN.

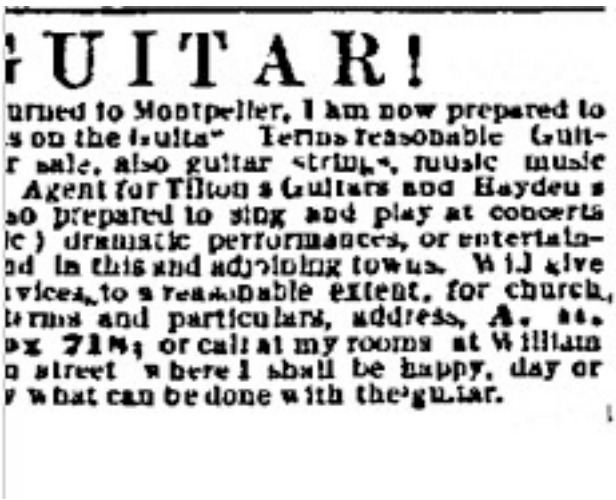
Appendix 2 Nineteenth-Century North American Newspaper Adverts

Albany Evening Journal, published as ALBANY JOURNAL, 1865

File Name:	Albany Evening Journal, published as ALBANY JOURNAL; Date: 12-19-1865; Page: 3; Location: Albany, New York
Copyright:	News Bank and/or the American Antiquarian Society. 2004.
Description:	Newspaper Classified Advert
Date:	1865 (12-19)
Date Inserted:	10-01-2011
Notes:	Musical Instrument Merchandise Retailer

PIANO-FORTES,
nequalled in Tone and Durability.
y Instrument Warranted for Five Years, and Com-
petition with other makers, and to
price and quality of tone,
CHALLENGED!
J. H. HIDLEY,
. 543 Broadway, Albany, N. Y
(Four doors below Delavan House,)
DLE AGENT FOR ALBANY AND VICINITY.
Wholesale Agent for
son & Hamlin's Cabinet Organs and
Melodeons.
Music Publisher,
Wholesale and Retail Dealers in
SHEET MUSIC AND BLANK BOOKS.
Martin's" and other reliable American and Import-
UITARS, VIOLINS, BANJOS, MUSICAL IN-
UMENTS OF ALL KINDS, VIOLIN, VIOLIN-
LO, DOUBLE BASS, GUITAR AND BANJO
INGS, and Musical Merchandize of every descrip-

File Name:	Argus and Patriot; Date: 06-27-1877; Volume: XXVII; Issue: 29; Page: [3]; Location: Montpelier, Vermont
Copyright:	News Bank and/or the American Antiquarian Society. 2004.
Description:	Newspaper Classified Advert
Date:	1877 (06-27)
Date Inserted:	10-01-2011
Notes:	Agent for Tilton guitars



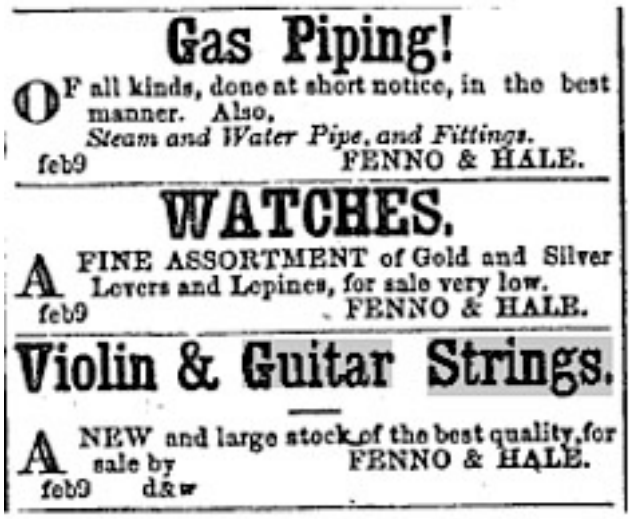
GUITAR!

urned to Montpelier, I am now prepared to
s on the Guitar" Terms reasonable Guit-
r sale, also guitar strings, music music
Agent for Tilton's Guitars and Hayden's
so prepared to sing and play at concerts
ic) dramatic performances, or entertain-
nd in this and adjoining towns. Will give
vices, to a reasonable extent, for church,
terms and particulars, address, A. M.
ox 718; or call at my rooms at William
n street where I shall be happy, day or
y what can be done with the guitar.

File Name:	Bangor Daily Whig & Courier, (Bangor, ME) Friday, January 14, 1859; Issue 167; col E
Copyright:	Gale, 2010.
Description:	Newspaper Classified Advert
Date:	1859 (01-14)
Date Inserted:	10-01-2011
Notes:	Daniel White, retailer of 'Fancy Goods' including guitar strings.

Fancy Shell Side Combs,
JUST RECEIVED.
Also, a General Stock of
Fancy Goods and Useful Articles,
For sale low for Cash.
All kinds of Jobbing and Repairing done at short notice.
Pianos, Melodeons, Accordeons, &c., tuned by an experienced tuner. Superior Violin and Guitar Strings, just received, at
Daniel White's,
jan12 2 Kenduskeag Bridge.

File Name:	Bangor Daily Whig & Courier, (Bangor, ME) Monday, February 11, 1856; Issue 190; col F
Copyright:	Gale, 2010.
Description:	Newspaper Classified Advert
Date:	1856 (02-11)
Date Inserted:	10-01-2011
Notes:	Fenno & Hale. Best quality violin & guitar strings.



Gas Piping!

OF all kinds, done at short notice, in the best manner. Also,
Steam and Water Pipe, and Fittings.
feb9 FENNO & HALE.

WATCHES.

A FINE ASSORTMENT of Gold and Silver Levers and Lepines, for sale very low.
feb9 FENNO & HALE.

Violin & Guitar Strings.

A NEW and large stock of the best quality, for sale by FENNO & HALE.
feb9 d&w

File Name:	Bangor Daily Whig & Courier, (Bangor, ME) Saturday, September 25, 1858; Issue 74; col B
Copyright:	Gale, 2010.
Description:	Newspaper Classified Advert
Date:	1858 (11-25)
Date Inserted:	10-01-2011
Notes:	D. White jnr, retailer of 'Fancy Goods' including guitar strings

$15 Sewing Machines!

A FEW MORE LEFT AND FOR SALE.—Violin and Guitar Strings, of superior quality, just received.

MELODEONS,

Guitars, Violins, Canes, Whips, Lashes, Gloves, &c, Jewelry, Fancy Goods, and Toys, for sale at the lowest prices.

NEEDLES—new article.

All kinds of Repairing done at short notice.

D. WHITE, Jr,
No. 2 Kenduskeag Bridge.

july9

ATTENTION!

File Name: Bangor Daily Whig & Courier, (Bangor, ME) Tuesday, April 18, 1893; Issue 91; col H

Copyright: Gale, 2010.

Description: Newspaper Classified Advert

Date: 1893 (04-18)

Date Inserted: 10-01-2011

Notes: Note on mandolin-guitar hybrid invention.

[Amusement and Musical Notes.

Less than one cent is the value of the raw material in a violin. This lending of so much worth to a little wood is priced by charms seldom equaled by romance or reality, for a violin made by a Stradivarius or an Amati and owned by some distinguished virtuoso has not infrequently been sold for $5,000, about twenty times its weight in gold.

It is said that the city of Pittsburg now stands on ground once given in exchange for a violin.

"That reed is tired," said one of the band men, as he laid aside the clarionet. "It is peculiar about them. After about so much work they seem to lose their responsiveness, no elasticity, no vibratory powers, simply so much dead metal. Then we call them tired. Another peculiar thing is if we take them off, lay them aside and give them a rest, when we take them up again they are as active and as musical and as vibrating as before."

Clyde Patterson, a Stanford University student, has been very successful in making mandolins and guitars which are pronounced as very superior in tone and finish. His work in this line led him to believe a combination of the mandolin and guitar in a single instrument was possible, and at the same time retain all the delicacy in tone of the mandolin and volume of the guitar. He has just completed an instrument containing these two features, for which a patent has been applied, and is called the mandolin guitar. There are eight strings on the finger board, six of them similar to a guitar's strings. By an arrangement of the finger board these strings can be thrown double and the instrument becomes a true mandolin, being tuned an octave lower than the latter instrument. In tone it is similar to the Italian harp, being sweeter and more mellow than the guitar and at the same time louder and more penetrating. Musicians who have seen the design pronounce it a success.

File Name:	Bangor Daily Whig & Courier, (Bangor, ME) Tuesday, December 06, 1853; Issue 134; col A
Copyright:	Gale, 2010.
Description:	Newspaper Classified Advert
Date:	1853 (12-06)
Date Inserted:	10-01-2011
Notes:	Goodhue selling strings amongst other general items

REMOVAL!

I. W. & G. H. GOODHUE,

ANNOUNCE to their friends, customers, and the public generally, that they have taken Store

No. 2 Bowman's new Block,

where they hope that by strict attention to business they will receive a liberal share of patronage. they will continue to keep their usual well selected stock of

Parasols,	Cutlery,
Whips,	Combs,
Musical Instruments,	Toys,
Sheet Music,	Porte Monnaies,
Jewelry,	&c., &c.,

—together with a superior article of—

Guitar & Violin Strings, Buck skin Gloves & Mittens, &c.

REPAIRING.—Musical Instruments, Umbrellas, Whips, Canes, Jewelry, &c., repaired in a thorough and workmanlike manner, at short notice.

I. W. GOODHUE,
G. H. GOODHUE.

nov 22

File Name: Boston Daily Advertiser, (Boston, MA) Friday, December 10, 1875; Issue 138; col D

Copyright: Gale, 2010.

Description: Newspaper Classified Advert

Date: 1875 (12-10)

Date Inserted: 10-01-2011

Notes: Heyer Bros. Importers.

HEYER BROTHERS,

IMPORTERS OF

FRENCH, GERMAN AND ENGLISH

FANCY GOODS, TOYS,

Musical Instruments, Druggists' Sundries, &c

Portmonnaies, Writing Desks, Work Boxes, German Cologne, Soaps and Perfumery, Hair and Teeth Brushes, Violin and Guitar Strings, Accordeons, &c.

42 & 44 Franklin st., cor. Hawley,

BOSTON.

File Name:	The News and Observer, (Raleigh, NC) Tuesday, February 16, 1886; Issue 81; col A
Copyright:	Gale, 2010.
Description:	Newspaper Classified Advert
Date:	1886 (02-16)
Date Inserted:	11-01-2011
Notes:	This ad also included the sale of baking soda

Violin, Banjo and Guitar Strings at 4c a knot; best worth 15c a knot. Eye-glasses in rubber frames at 8c; worth 25c. Great bargains in Laces of all kinds, Hamburg Edgings, insertions, Torchon, Oriental, Irish Trimming, Pillow Case Laces, Swiss Embroidery, Gold, Silver and nickel Watches, and Jewelry of all descriptions, for less than it costs to manufacture them. Great bargains in Cloaks and Clothing. In a word, we shall make our bargains make our business, with one price to all. Call and see us.

VOLNEY PURSELL & CO.

File Name:	Cherokee Advocate, (Tahlequah, OK) Friday, February 10, 1882; Issue 40; col B
Copyright:	Gale, 2010.
Description:	Newspaper Classified
Date:	1882 (02-10)
Date Inserted:	11-01-2011
Notes:	Music store selling instruments, including guitars and strings.

WM. P. OWEN,

DEALER IN

PIANOS!

AND THE NEW WESTERN COTTAGE ORGAN

Organettes, Violins, Accordions, Sheet Music, Strings, Guitars, Music Books, Watches, Clocks, Jewelry, Spectacles, Silverware, and Sewing Machines.

GOLD RINGS MADE TO ORDER

Watches, Clocks, Guns, and Sewing Machines Repaired Promptly.

All Goods warranted as Represented.

NEOSHO, MO.

would respectfully refer to Johnson Thompson, (Merchant) Hon. L. B. Bell, School Commissioner, W. P. Boudinot, Executive Secretary, E. C. Boudinot, Publisher of the ADVOCATE, Samuel Comtzer and others, to whom have sold instruments. For further particulars address as above. Write for Catalogue.

—GOING TO—

KANSAS,

Say to Fort Scott, or Parsons Oswego or Chetopa, Humbolt Chanute, Burlington Emporia or Junction City, try the

Missouri, Kansas & Texas R'y

File Name:	Columbus Daily Enquirer, published as Columbus Daily Enquirer-Sun; Date: 11-12-1881; Volume: XXIII; Issue: 271; Page: [2]; Location: Columbus, Georgia
Copyright:	News Bank and/or the American Antiquarian Society. 2004
Description:	Newspaper Classified
Date:	1881 (11-12)
Date Inserted:	11-01-2011
Notes:	General goods including guitar strings

File Name:	Constitution, published as The Constitution; Date: 01-01 -1873; Volume: XXXV; Issue: 1828; Page: [1]; Location: Middletown, Connecticut
Copyright:	News Bank and/or the American Antiquarian Society. 2004.
Description:	Newspaper Classified
Date:	1873 (01-01)
Date Inserted:	11-01-2011
Notes:	A. A. Cole. Tuner, repairer, dealer

File Name: Daily Arkansas Gazette, (Little Rock, AR) Friday, April 22, 1881; Issue 128; col F

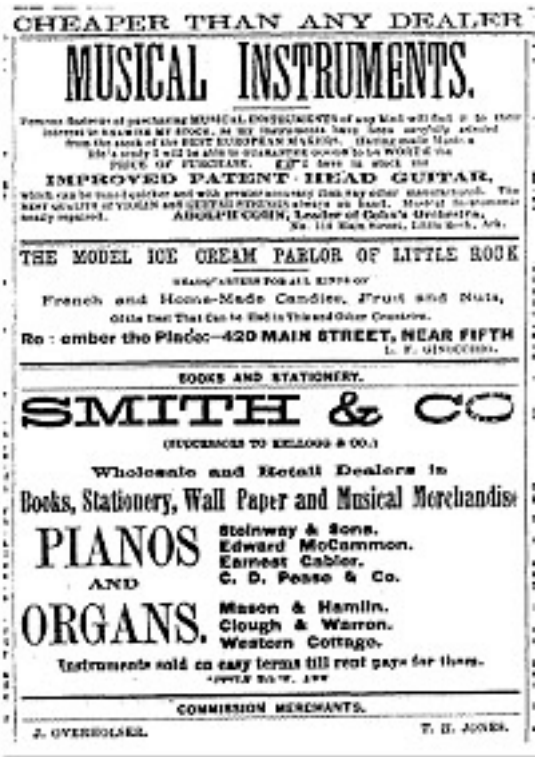
Copyright: Gale, 2010.

Description: Newspaper Classified

Date: 1881 (04-22)

Date Inserted: 11-01-2011

Notes: Strings



CHEAPER THAN ANY DEALER

MUSICAL INSTRUMENTS.

IMPROVED PATENT HEAD GUITAR,

ADOLPH COHN, Leader of Cohn's Orchestra,

THE MODEL ICE CREAM PARLOR OF LITTLE ROCK

French and Home-Made Candies, Fruit and Nuts,

Re : ember the Place—420 MAIN STREET, NEAR FIFTH

BOOKS AND STATIONERY.

SMITH & CO

(SUCCESSORS TO KELLOGG & CO.)

Wholesale and Retail Dealers in

Books, Stationery, Wall Paper and Musical Merchandise

PIANOS AND ORGANS.

Steinway & Sons.
Edward McCammon.
Earnest Cabler.
C. D. Pease & Co.
Mason & Hamlin.
Clough & Warren.
Western Cottage.

Instruments sold on easy terms till rent pays for them.

COMMISSION MERCHANTS.

J. OVERSTREET. T. H. JONES.

File Name: Ch Daily Chronicle & Sentinel, (Augusta, GA) Wednesday, June 17, 1857; Issue 145; col C

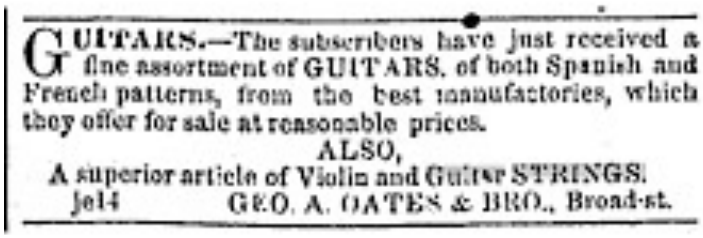
Copyright: Gale, 2010.

Description: Newspaper Classified

Date: 1857 (06-17)

Date Inserted: 11-01-2011

Notes: Guitar and guitar strings for sale. Geo. A. Oates.



GUITARS.—The subscribers have just received a fine assortment of GUITARS, of both Spanish and French patterns, from the best manufactories, which they offer for sale at reasonable prices.

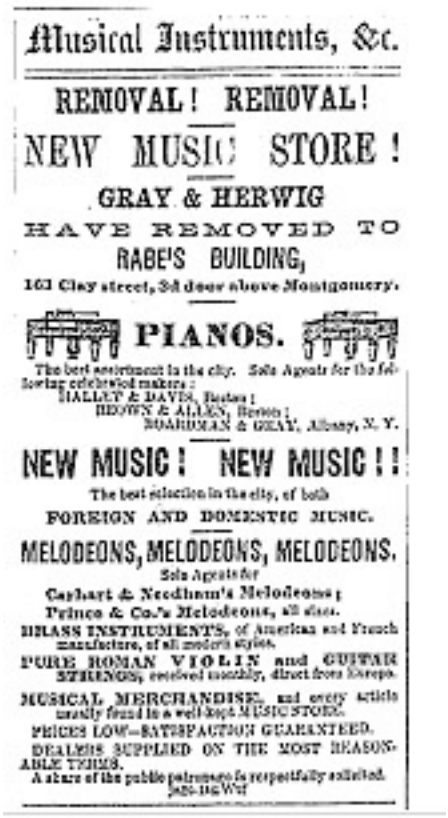
ALSO,

A superior article of Violin and Guitar STRINGS.

je14 GEO. A. OATES & BRO., Broad-st.

File Name:	Daily Evening Bulletin, (San Francisco, CA) Friday, August 17, 1883; pg. 3; Issue 112; col A
Copyright:	Gale, 2010.
Description:	Newspaper Classified
Date:	1883 (08-17)
Date Inserted:	11-01-2011
Notes:	Guitar strings shipping and bond notice.

File Name:	Daily Evening Bulletin, (San Francisco, CA) Friday, February 03, 1860; Issue 99; col A
Copyright:	Gale, 2010.
Description:	Newspaper Classified
Date:	1860 (03-02)
Date Inserted:	11-01-2011
Notes:	Importation of strings from Europe



Musical Instruments, &c.

REMOVAL! REMOVAL!

NEW MUSIC STORE!

GRAY & HERWIG

HAVE REMOVED TO

RABE'S BUILDING,

163 Clay street, 3d door above Montgomery.

PIANOS.

The best assortment in the city. Sole Agents for the following celebrated makers:

HALLET & DAVIS, Boston;
BROWN & ALLEN, Boston;
BOARDMAN & GRAY, Albany, N. Y.

NEW MUSIC! NEW MUSIC!!

The best selection in the city, of both

FOREIGN AND DOMESTIC MUSIC.

MELODEONS, MELODEONS, MELODEONS.

Sole Agents for

Cephart & Needham's Melodeons;
Prince & Co.'s Melodeons, all sizes.

BRASS INSTRUMENTS, of American and French manufacture, of all modern styles.

PURE ROMAN VIOLIN and GUITAR STRINGS, received monthly, direct from Europe.

MUSICAL MERCHANDISE, and every article usually found in a well-kept MUSIC STORE.

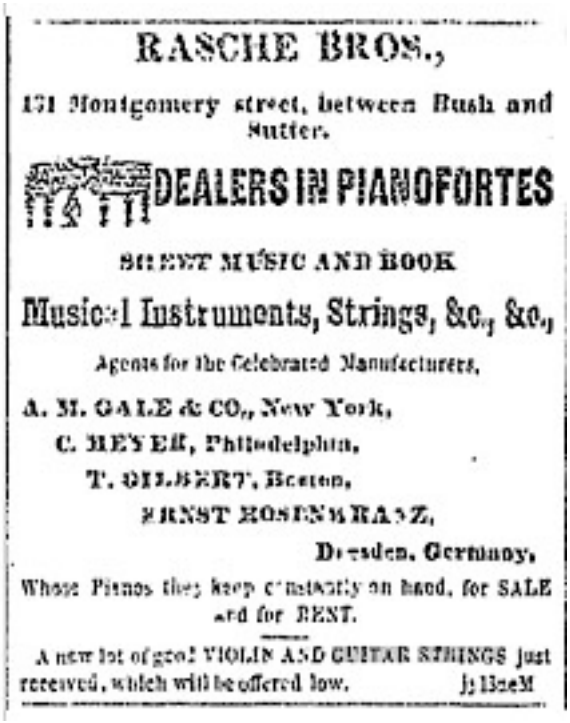
PRICES LOW—SATISFACTION GUARANTEED.

DEALERS SUPPLIED ON THE MOST REASONABLE TERMS.

A share of the public patronage is respectfully solicited.

3d29-1m Wtf

File Name:	Daily Evening Bulletin, (San Francisco, CA) Monday, July 13, 1863; Issue 82; col D
Copyright:	Gale, 2010.
Description:	Newspaper Classified
Date:	1863 (07-13)
Date Inserted:	11-01-2011
Notes:	Rasche Bros. selling guitar



RASCHE BROS.,

131 Montgomery street, between Bush and Sutter.

DEALERS IN PIANOFORTES

SHEET MUSIC AND BOOK

Musical Instruments, Strings, &c., &c.,

Agents for the Celebrated Manufacturers,

A. M. GALE & CO., New York,

C. MEYER, Philadelphia,

T. GILBERT, Boston,

ERNST ROSENKRANZ,

Dresden, Germany,

Whose Pianos they keep constantly on hand, for SALE and for RENT.

A new lot of good VIOLIN AND GUITAR STRINGS just received, which will be offered low. jy 13eM

File Name:	Daily Inter Ocean, published as The Inter Ocean; Date: 03-22-1876; Volume: IV; Issue: 309; Page: [1]; Location: Chicago, Illinois
Copyright:	News Bank and/or the American Antiquarian Society. 2004.
Description:	Newspaper Classified
Date:	1876 (03-22)
Date Inserted:	10-01-2011
Notes:	Root & Sons selling guitar strings

MUSICAL.

ROOT & SONS MUSIC CO.

OFFER SPECIAL INDUCEMENTS TO PURCHASERS—AT WHOLESALE AND RETAIL—OF FOREIGN AND DOMESTIC SHEET MUSIC AND MUSIC BOOKS, THEIR OWN IMPORTATION OF VIOLIN AND GUITAR STRINGS, ACCORDEONS, CONCERTINAS, FLUTES, GUITARS, VIOLINS, PICCOLOS CLARIONETS, HARMONICAS, DULCIMERS, ZITHERS, VIOLAS, VIOLONCELLOS, AND BRASS AND GERMAN SILVER BAND INSTRUMENTS; ALSO PIANOS AND ORGANS, OR ANY ARTICLE IN THE LINE OF MUSICAL MERCHANDISE. GENERAL NORTHWESTERN AGENTS FOR THE STECK PIANO AND STANDARD ORGAN. QUALITY GUARANTEED. CATALOGUES AND PRICE LISTS FURNISHED FREE. CORRESPONDENCE INVITED.

56 STATE ST.

CHICAGO.

File Name: Daily Morning News, (Savannah, GA) Friday, April 29, 1853; Issue 90; col A

Copyright: Gale, 2010.

Description: Newspaper Classified

Date: 1853 (04-29)

Date Inserted: 11-01-2011

Notes: Lee & Walker, violin, guitar and harp strings.

Lee & Walker,
(SUCCESSORS TO GEORGE WILLIG,)
No. 188 Chestnut-st., Philadelphia,
DEALERS IN
PIANO FORTES,
Musical Instruments, Sheet Music,
Violin, Guitar, Harp Strings, &c.
ALL of which will be sold at the very lowest rates. Catalogues sent to any part of the U. States by addressing as above, post paid.
LEE & WALKER'S stock being one of the largest in the U. States, are confident of giving satisfaction to all those who may favor them with their patronage.
ap 14 1y

File Name: Daily National Intelligencer, (Washington, DC) Monday, May 25, 1857; Issue 13,982; col E

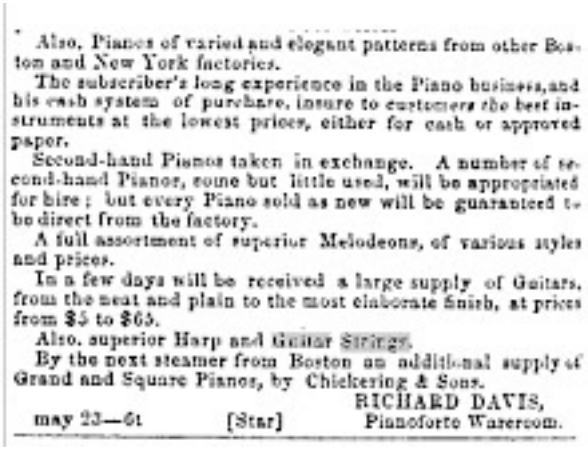
Copyright: Gale, 2010.

Description: Newspaper Classified

Date: 1857 (05-25)

Date Inserted: 11-01-2011

Notes: Richard Davis. Harp and guitar strings.



Also, Pianos of varied and elegant patterns from other Boston and New York factories.

The subscriber's long experience in the Piano business, and his cash system of purchase, insure to customers the best instruments at the lowest prices, either for cash or approved paper.

Second-hand Pianos taken in exchange. A number of second-hand Pianos, some but little used, will be appropriated for hire; but every Piano sold as new will be guaranteed to be direct from the factory.

A full assortment of superior Melodeons, of various styles and prices.

In a few days will be received a large supply of Guitars, from the neat and plain to the most elaborate finish, at prices from $5 to $65.

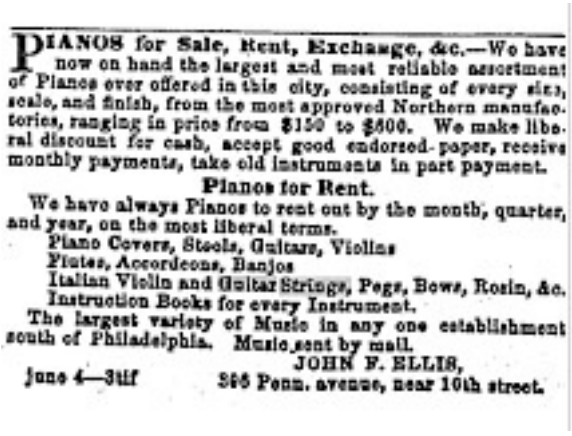
Also, superior Harp and Guitar Strings.

By the next steamer from Boston an additional supply of Grand and Square Pianos, by Chickering & Sons.

RICHARD DAVIS,
Pianoforte Warerooms.

may 23—6t [Star]

File Name:	Daily National Intelligencer, (Washington, DC) Saturday, June 07, 1856; Issue 13,683; col D
Copyright:	Gale, 2010.
Description:	Newspaper Classified
Date:	1856 (06-07)
Date Inserted:	11-01-2011
Notes:	John Ellis selling of guitar strings.



PIANOS for Sale, Rent, Exchange, &c.—We have now on hand the largest and most reliable assortment of Pianos ever offered in this city, consisting of every size, scale, and finish, from the most approved Northern manufactories, ranging in price from $150 to $600. We make liberal discount for cash, accept good endorsed paper, receive monthly payments, take old instruments in part payment.

Pianos for Rent.

We have always Pianos to rent out by the month, quarter, and year, on the most liberal terms.

Piano Covers, Stools, Guitars, Violins
Flutes, Accordeons, Banjos
Italian Violin and Guitar Strings, Pegs, Bows, Rosin, &c.
Instruction Books for every Instrument.

The largest variety of Music in any one establishment south of Philadelphia. Music sent by mail.

JOHN F. ELLIS,
June 4—3tif 386 Penn. avenue, near 10th street.

File Name:	Daily National Intelligencer, (Washington, DC) Tuesday, November 09, 1858; Issue 14,436; col E
Copyright:	Gale, 2010.
Description:	Newspaper Classified
Date:	1858 (11-09)
Date Inserted:	11-01-2011
Notes:	Richard Davis selling of guitar strings.

CHICKERING & SON'S PIANOS.—The subscriber is again in receipt of a further supply of these unrivalled Pianos. At the late Fair of the Maryland Institute this factory received the highest premium, a gold medal, in addition to thirty-four medals previously awarded them by different Institutes. These Pianos can be bought in this city only of the subscriber.

In his store will be found the largest and most elegant stock of Pianos in this city, embracing every variety of scale and style, by Chickering & Sons and other approved Boston and New York makers.

Pianos sold lower than the same quality can be bought for in the North.

Second-hand Pianos taken in exchange.

A good assortment of Melodeons, Martin's celebrated Guitars, Guitar Strings, &c.

nov 9—eo3t RICHARD DAVIS.

File Name:	Daily Nebraska Press, published as The Daily Nebraska Press; Date: 08-22-1873; Page: 2; Location: Nebraska City, Nebraska
Copyright:	News Bank and/or the American Antiquarian Society. 2004.
Description:	Newspaper Classified
Date:	1873 (08-22)
Date Inserted:	11-01-2011
Notes:	Dahl & Morrison

File Name:	Daily Rocky Mountain News, (Denver, CO) Saturday, January 11, 1873; col C
Copyright:	Gale. 2010
Description:	Newspaper Classified
Date:	1873 (01-11)
Date Inserted:	10-01-2011
Notes:	Greenleaf: General sales including guitar strings.

1873. Established 1860. 1873.

One Thousand and one Articles under One Roof.

L. N. GREENLEAF & CO.,

323 Larimer St., Denver, Colorado.

The Great Variety Stock of Colorado.

FANCY GOODS, TOYS & NOVELTIES.

BASKETS.

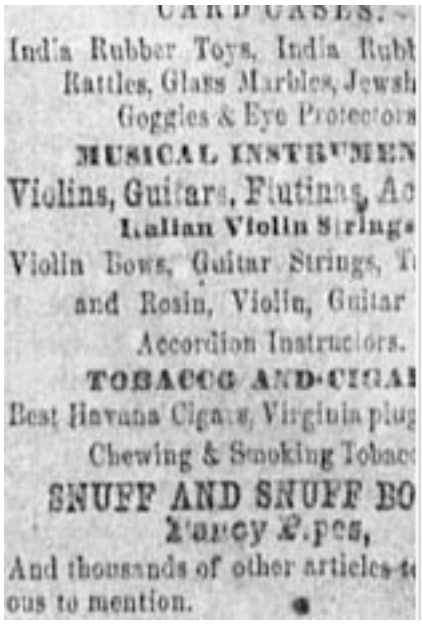
Lunch, Traveling, Work and Clothes Baskets in immense variety, Work Stands and Nursery Baskets, French Market Baskets, Etc., Etc.

LEATHER BAGS, POCKET BOOKS, POCKET KNIVES, GENTS' WALKING CANES, LARGE ASSORTMENT DRESSING CASES, WRITING DESKS, WORK AND JEWEL BOXES, Etc., Etc. MUSICAL INSTRUMENTS, VIOLIN AND GUITAR STRINGS.

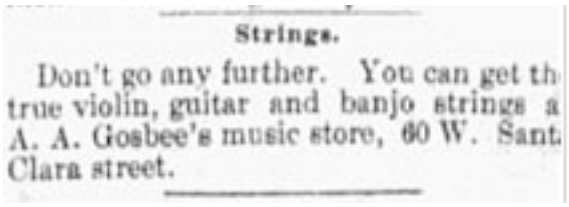
OUR STOCK OF

CIGARS, TOBACCOS, PIPES AND SMOKERS' ARTICLES,

File Name:	Dallas Weekly Herald, published as Dallas Herald; Date: 01-02-1861; Volume: 9; Issue: 13; Page: [2]; Location: Dallas, Texas
Copyright:	News Bank and/or the American Antiquarian Society. 2004.
Description:	Newspaper Classified
Date:	1861 (01-02)
Date Inserted:	11-01-2011
Notes:	General goods including guitar strings


CARD CASES.
India Rubber Toys, India Rubb
Rattles, Glass Marbles, Jewsh
Goggles & Eye Protectors
MUSICAL INSTRUMEN
Violins, Guitars, Flutinas, Ac
Italian Violin Strings
Violin Bows, Guitar Strings, T
and Rosin, Violin, Guitar
Accordion Instructors.
TOBACCO AND CIGA
Best Havana Cigars, Virginia plug
Chewing & Smoking Tobac
SNUFF AND SNUFF BO
Fancy Pipes,
And thousands of other articles
ous to mention.

File Name:	Evening News, published as The Evening News; Date: 05-31-1889; Volume: XIV; Issue: 125; Page: [3]; Location: San Jose, California
Copyright:	News Bank and/or the American Antiquarian Society. 2004.
Description:	Newspaper Classified
Date:	1889 (05-31)
Date Inserted:	11-01-2011
Notes:	Strings ad.



Strings.

Don't go any further. You can get th true violin, guitar and banjo strings a A. A. Gosbee's music store, 60 W. Sant Clara street.

File Name: Fayetteville Observer, (Fayetteville, NC) Monday, November 06, 1854; Issue 346; col E

Copyright: Gale. 2010.

Description: Newspaper Classified

Date: 1854 (11-06)

Date Inserted: 10-01-2011

Notes: Beasley & Houston. General goods, including guitar strings.

Beasley & Houston

HAVE on hand the very best STOCK OF GOODS usually kept in their line. Call and see for yourself.

Gold and Silver Watches,

Hunting and open face;

Chains, fob, vest and neck; Keys, Seals, and Buckles; Rings, Pins, Ear-Rings, Cuff Pins, Bracelets; Snaps, collar and sleeve Buttons; Gold and Silver Spectacles; Gold and Silver Thimbles; Gold and Silver Pens and Pencils; Silver and Pearl Portmonaies and Card Cases.

Large lot of Silver Ware:

English and American Spoons, table, tea, salt and mustard; Ladles; Mugs; Forks and Butter Knives. A large lot of PLATED GOODS, of the very best class, embracing all in common use. Fine lot of Table and Pocket CUTLERY; fine Scissors; some of the best RAZORS in this place; large and small Music Boxes; one fine Mandoline; Accordeons; some fine Violins; MILITARY GOODS; Surveyors' Compasses and Chains; large lot of GUNS, double and single barrel, large and small, long and short, fine and common, of English, German and American make; PISTOLS in any quantity and quality; Powder Flasks and Horns; Game Bags; Shot Belts; and a new idea of Blowing Horn; Walking Canes of 23 different kinds.

Clocks of 13 different kinds;

Portmonaies of eighteen different styles; Dog Collars and Calls; Violin and Guitar Strings, &c. &c.

BEASLEY & HOUSTON.

Nov. 4, 1854. 46-6t

File Name: Fayetteville Observer, (Fayetteville, NC) Thursday, September 01, 1853; Issue 224; col E

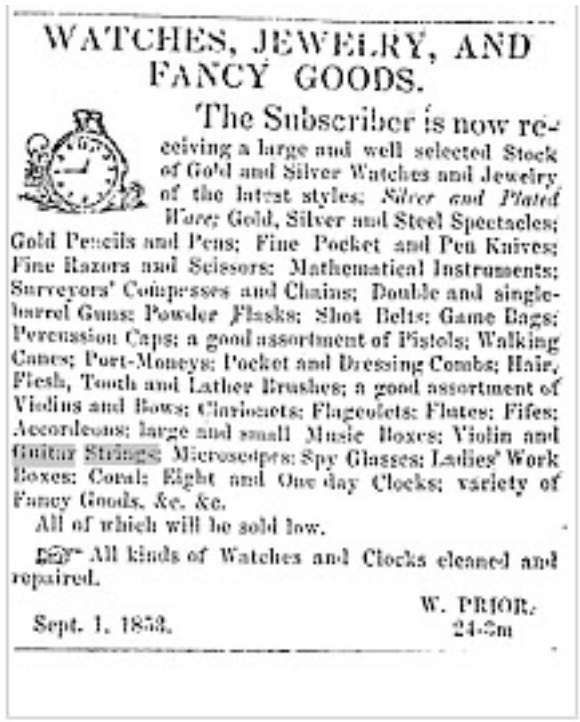
Copyright: Gale. 2010.

Description: Newspaper Classified

Date: 1853 (09-01)

Date Inserted: 10-01-2011

Notes: Prior: General goods including guitar strings



WATCHES, JEWELRY, AND FANCY GOODS.

The Subscriber is now receiving a large and well selected Stock of Gold and Silver Watches and Jewelry of the latest styles; *Silver and Plated Ware;* Gold, Silver and Steel Spectacles; Gold Pencils and Pens; Fine Pocket and Pen Knives; Fine Razors and Scissors; Mathematical Instruments; Surveyors' Compasses and Chains; Double and single-barrel Guns; Powder Flasks; Shot Belts; Game Bags; Percussion Caps; a good assortment of Pistols; Walking Canes; Port-Moneys; Pocket and Dressing Combs; Hair, Flesh, Tooth and Lather Brushes; a good assortment of Violins and Bows; Clarionets; Flageolets; Flutes; Fifes; Accordeons; large and small Music Boxes; Violin and Guitar Strings; Microscopes; Spy Glasses; Ladies' Work Boxes; Coral; Eight and One day Clocks; variety of Fancy Goods, &c. &c.

All of which will be sold low.

☞ All kinds of Watches and Clocks cleaned and repaired.

W. PRIOR.

Sept. 1, 1853. 24-3m

File Name: Frank Leslie's Illustrated Newspaper, (New York, NY) Saturday, March 02, 1872; pg. 400; Issue 857; col A

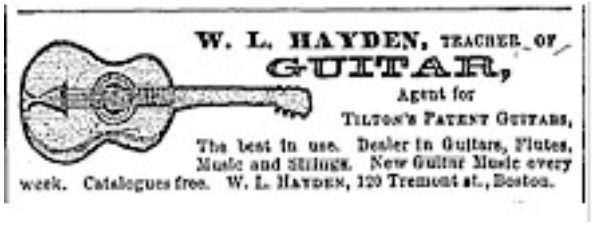
Copyright: Gale. 2010.

Description: Newspaper Classified

Date: 1872 (03-02)

Date Inserted: 11-01-2011

Notes: Hayden guitar advert, featuring a Tilton.



File Name: Freedom's Champion, (Atchison, KS) Saturday, July 23, 1859; Issue 21; col D

Copyright: Gale. 2010.

Description: Newspaper Classified

Date: 1859 (07-23)

Date Inserted: 11-01-2011

Notes: Guitar strings being sold amongst general goods sold by watchmakers.

Fob Chains,

Sleeve Buttons and Shirt Studs. Fine Gold Pens and Pencils. Sivler Pen Holders, Gold Pen Holders.

Gents Gold Pins and Finger Rings of all Kinds.

Silver Tea and Table Spoons.

Plated Tea and Table Spoons. Plated Forks. Silver Spectacles, and Plated Silver Thimbles, Gold Keys, Gold Scale, Gold Slides and Buckels.

MUSICAL INSTRUMENTS.

Sheet and Book music, Violin and Guitar Strings. Bridges, Keys and Bows. Tuning Forks, Silk Cords, Ribbons, and Leather Guards, and a great many other articles not mentioned here, kept constantly on hand and for sale by

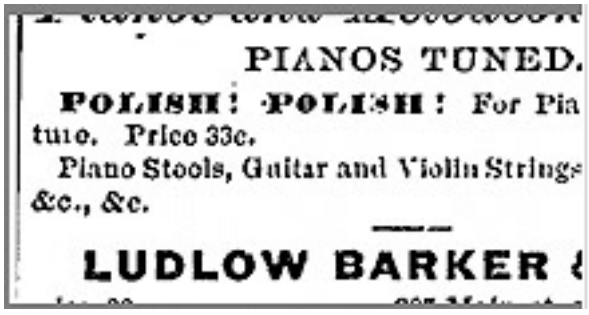
CHAS. C. ANDREWS,

Who will also repair Clocks and Watches, and Jewelry on short notice, and do all other repairing usually done by Watchmakers generally, at his old Stand on Commercial Street, Atchison City. CHAS. C. ANDREWS.

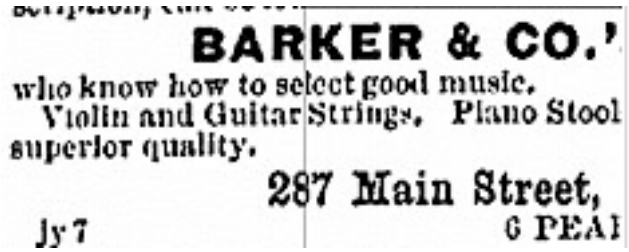
no-7-tf.

File Name:	Hartford Daily Courant; Date: 01-11-1866; Page: 3; Location: Hartford, Connecticut
Copyright:	News Bank and/or the American Antiquarian Society. 2004.
Description:	Newspaper Classified
Date:	1866 (01-11)
Date Inserted:	11-01-2011
Notes:	String ad amongst melodeons for sale.

File Name:	Hartford Daily Courant; Date: 01-24-1866; Page: 3; Location: Hartford, Connecticut
Copyright:	News Bank and/or the American Antiquarian Society. 2004
Description:	Newspaper Classified
Date:	1866 (01-24)
Date Inserted:	11-01-2011
Notes:	String ad from Ludlow Barker & Co., music.


PIANOS TUNED.
POLISH! POLISH! For Pia
tuio. Price 33c.
Piano Stools, Guitar and Violin Strings
&c., &c.
LUDLOW BARKER

File Name:	Hartford Daily Courant; Date: 07-18-1865; Page: 3; Location: Hartford, Connecticut
Copyright:	News Bank and/or the American Antiquarian Society. 2004.
Description:	Newspaper Classified
Date:	1865 (07-18)
Date Inserted:	11-01-2011
Notes:	String ad from Ludlow Barker & Co., music stores.


BARKER & CO.'
who know how to select good music.
Violin and Guitar Strings, Piano Stool
superior quality.
287 Main Street,
jy 7 6 PEAI

File Name:	Independent Statesman, (Concord, NH) Thursday, August 14, 1873; pg. 363; Issue 46; col B
Copyright:	Gale, 2010.
Description:	Newspaper Classified
Date:	1873 (08-14)
Date Inserted:	11-01-2011
Notes:	J. C. Haynes advert, ‘A band in every village’.

A Band in Every Village

is, or is soon to be, and the mellow noise of him who practices the Cornet is heard all over the land. So be in haste, in the fashion, and in season, and purchase the best sounding

Cornets, Altos, Basses,

or any other Band instruments, which with

Violins, Guitars, Flutes,

all Orchestral; in fact ALL instruments in common use, Violin and Guitar Strings, and all Musical Merchandise, will be found in plenty, variety, and at reasonable prices, at the store of

[Opp. Court House]. J. C. HAYNES & CO., 33 COURT ST., Boston,

July 31, 1873. tf

File Name: Los Angeles Daily Times, (Los Angeles, CA) Tuesday, March 06, 1883; Issue 79; col D

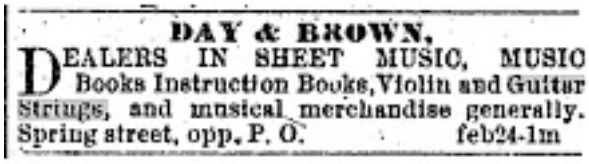
Copyright: Gale, 2010.

Description: Newspaper Classified

Date: 1883 (03-06)

Date Inserted: 11-01-2011

Notes: Day & Brown selling guitar strings.


DAY & BROWN,
DEALERS IN SHEET MUSIC, MUSIC Books Instruction Books, Violin and Guitar Strings, and musical merchandise generally. Spring street, opp. P. O. feb24-1m

File Name: Lowell Daily Citizen and News, (Lowell, MA) Wednesday, June 02, 1858; Issue 644; col C

Copyright: Gale, 2010.

Description: Newspaper Classified

Date: 1858 (06-02)

Date Inserted: 11-01-2011

Notes: Lowell Umbrella manufactory and Music store.

New Advertisements.

LOWELL

Umbrella Manufactory and Music Store,

Established in 1837.

RUGG & GRIFFITH,

Successors to B. B. SHEPARD,

No. 27 MERRIMACK ST., LOWELL.

Only manufacturers of Umbrellas, Parasols and Canes in this city, for which they received the highest award

Presented by the Lowell Mechanic's Fair of 1857,

Have constantly on hand and for sale, WHOLESALE AND RETAIL, an extensive assortment of Umbrellas, Parasols and Walking-Sticks of every variety and description from the very highest price to the lowest.

We have Parasols worth from 50 cents to $10 each. Umbrellas from 87½ cts to $8, and Canes from 12½ cts upwards, including the most superb gold mounted, varying in price from $10 to $40.

We are prepared to sell all the above articles at a less price than they can be purchased elsewhere, and have every facility for so doing.

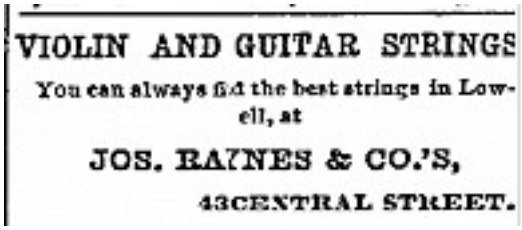
R. & G. are also dealers in Sheet Music, and Musical merchandise of every description, consisting in part of Piano-Fortes, Melodeons, Violins, Flutes, Accordeons, Brass Instruments, Drums, Tamborines, Banjos, &c. &c. Also, Violin, Violoncello, Double Bass and Guitar Strings of every variety, together with all other articles to be found in a music store, all of which will be sold at the lowest cash prices.

Instruments of all kinds to let, and repairing of every description done at short notice. j 3d1y

File Name:	Lowell Daily Citizen and News, published as Lowell Daily Citizen; Date: 07-16-1879; Volume: XXIX; Issue: 7196; Page: [2]; Location: Lowell, Massachusetts
Copyright:	News Bank and/or the American Antiquarian Society. 2004.
Description:	Newspaper Classified
Date:	1879 (07-16)
Date Inserted:	11-01-2011
Notes:	String ad from jewellers.

File Name:	Lowell Daily Citizen and News; Date: 02-10-1871; Volume: XXI; Issue: 4534; Page: [3]; Location: Lowell, Massachusetts
Copyright:	News Bank and/or the American Antiquarian Society. 2004.
Description:	Newspaper Classified
Date:	1871 (02-10)
Date Inserted:	11-01-2011
Notes:	String ad from Jos Raynes.

.



File Name: Lowell Daily Citizen and News; Date: 02-14-1873; Volume: XXIII; Issue: 5235; Page: [4]; Location: Lowell, Massachusetts

Copyright: News Bank and/or the American Antiquarian Society. 2004.

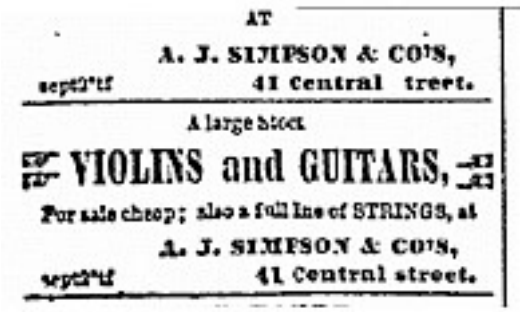
Description: Newspaper Classified

Date: 1873 (02-14)

Date Inserted: 11-01-2011

Notes: String ad from Simpson & Co.

.



File Name: Lowell Daily Citizen and News, published as Lowell Daily Citizen And News; Date: 01-01-1866; Volume: XVI; Issue: 2964; Page: [4]; Location: Lowell, Massachusetts

Copyright: News Bank and/or the American Antiquarian Society. 2004.

Description: Newspaper Classified

Date: 1866 (01-01)

Date Inserted: 11-01-2011

Notes: Rugg & Griffith, umbrella & music store

.

Lowell Umbrella Manufactory
—AND—
MUSIC STORE.
Established in 1837.
RUGG & GRIFFITH,
Successors to B. H. Shepard,
No. 77 MERRIMACK ST., LOWELL,
Only manufacturers of Umbrellas, Parasols and Canes, in this city, for which they received the HIGHEST AWARD
Presented by the Lowell Mechanic's Fair of 1857,
Have constantly on hand and for sale, WHOLESALE AND RETAIL, an extensive assortment of Umbrellas, Parasols and Walking Sticks of every variety and description, from the very highest price to the lowest.
We have Parasols worth from 50 cents to $10 each. Umbrellas from 37½ cents to $8, and Canes 12½ cents upwards, including the most superb gold mounted, varying in price from $10 to $40.
We are prepared to sell all the above articles at a less price than they can be purchased elsewhere, and have every facility for so doing.
R. & G. are also dealers in Sheet Music, and Musical Merchandise of every description, consisting in part of Piano Fortes, Melodeons, Violins, Flutes, Accordeons, Brass Instruments, Drums, Tambourines, Banjos, &c., &c. Also, Violin, Violoncello, Double Bass and Guitar Strings of every variety, together with all other articles to be found in a Music Store, all of which will be sold at the lowest cash prices.
Instruments of all kinds to let, and repairing of every description done at short notice. jeddly

File Name: Macon Telegraph, published as The Macon Daily Telegraph; Date: 01-16-1866; Issue: 212; Page: [4]; Location: Macon, Georgia

Copyright: News Bank and/or the American Antiquarian Society. 2004.

Description: Newspaper Classified

Date: 1866 (01-16)

Date Inserted: 11-01-2011

Notes: E. J. Johnston, watches, jewellery and strings

.

E. J. JOHNSTON & CC.,

Have re-established their old and well known JEWELRY STORE and WATCH REPAIRING BUSINESS at

No. 6 Cotton Avenue,

under the Masonic Hall.

They have just received a select stock of all classes and qualities of goods kept in their line, including Watches, Jewelry, Spectacles, Gold Pens, Choice Cutlery, Port Monaies, Meerschaums, Combs, Brushes, Violins, Guitar and Violin Strings, Double Barrel Sporting Guns and Tackle, Percussion Caps, Marbles, Tops, China Dolls, Playing Cards, Dominos, Backgammon and Chess Men, Lubin's genuine Extracts, Toilet and Shaving Soaps.

nov24-d2m

File Name: Milwaukee Daily Sentinel, (Milwaukee, WI) Monday, January 10, 1853; col F

Copyright: Gale, 2010.

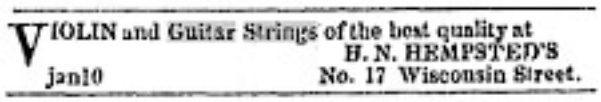
Description: Newspaper Classified

Date: 1853 (01-10)

Date Inserted: 11-01-2011

Notes: Hempstead selling violin and guitar strings.

.


VIOLIN and Guitar Strings of the best quality at
H. N. HEMPSTED'S
jan10 No. 17 Wisconsin Street.

File Name: Milwaukee Daily Sentinel, (Milwaukee, WI) Thursday, March 02, 1854; col B

Copyright: Gale, 2010.

Description: Newspaper Classified

Date: 1854 (03-02)

Date Inserted: 11-01-2011

Notes: New music store selling guitar strings.

.

NEW MUSIC STORE
AT
165 *EAST WATER STREET.*

THE UNDERSIGNED have opened a MUSIC STORE at No. 165 East Water Street, opposite the Bank, where they now have and will keep on hand superior

PIANOS, MELODEONS, GUITARS &c.

All the latest and most popular Music, Violin and Guitar Strings, and everything else in their line. The patronage of the public is respectfully solicited.

J. BALATKA,
J. BIEDERMAN.

MILWAUKEE, Nov. 22. nov23 dlf

File Name: Mississippian and State Gazette, (Jackson, MS) Friday, March 10, 1854; Issue 10; col A

Copyright: Gale, 2010.

Description: Newspaper Classified

Date: 1854 (03-10)

Date Inserted: 11-01-2011

Notes: Music and Musical Ware.

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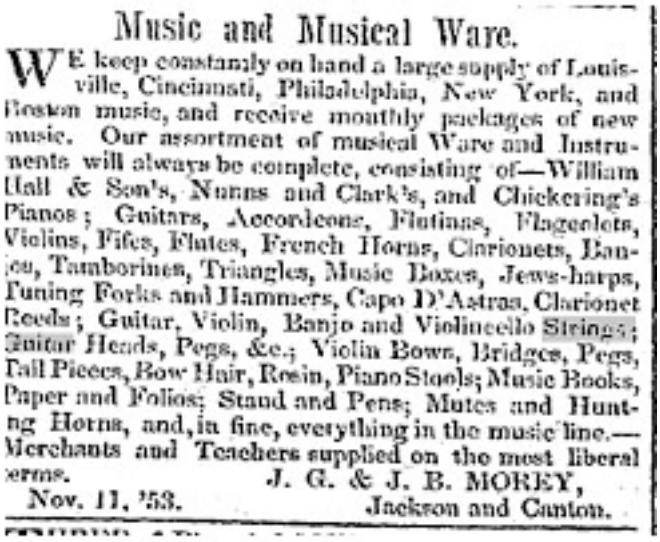

Music and Musical Ware.

WE keep constanly on hand a large supply of Louisville, Cincinnati, Philadelphia, New York, and Boston music, and receive monthly packages of new music. Our assortment of musical Ware and Instruments will always be complete, consisting of—William Hall & Son's, Nunns and Clark's, and Chickering's Pianos; Guitars, Accordeons, Flutinas, Flageolets, Violins, Fifes, Flutes, French Horns, Clarionets, Banjos, Tamborines, Triangles, Music Boxes, Jews-harps, Tuning Forks and Hammers, Capo D'Astras, Clarionet Reeds; Guitar, Violin, Banjo and Violincello Strings; Guitar Heads, Pegs, &c.; Violin Bows, Bridges, Pegs, Tail Pieces, Bow Hair, Rosin, Piano Stools; Music Books, Paper and Folios; Stand and Pens; Mutes and Hunting Horns, and, in fine, everything in the music line.—Merchants and Teachers supplied on the most liberal terms.

J. G. & J. B. MOREY,

Nov. 11, '53. Jackson and Canton.

File Name: Mississippian and State Gazette, (Jackson, MS) Friday, November 11, 1853; Issue 44; col B

Copyright: Gale, 2010.

Description: Newspaper Classified

Date: 1853 (11-11)

Date Inserted: 11-01-2011

Notes: Music and Musical Ware.

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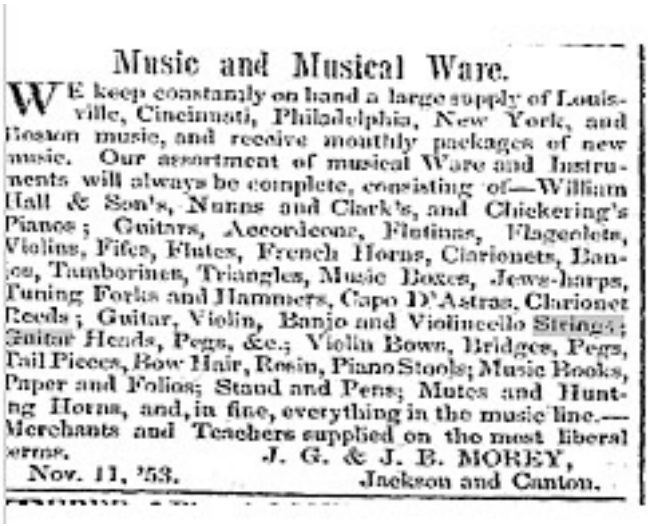

Music and Musical Ware.

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J. G. & J. B. MOREY,
Nov. 11, '53. Jackson and Canton.

File Name: Mississippian and State Gazette, (Jackson, MS) Wednesday, February 16, 1859; Issue 8; col E

Copyright: Gale, 2010.

Description: Newspaper Classified

Date: 1859 (02-16)

Date Inserted: 11-01-2011

Notes: Blackmar music store. Martin guitars.

.

MUSIC AND STATIONERY.

A. E. & H. C. BLACKMAR,

JACKSON, MISS.

HAVING decided to continue our business in Jackson, we hereby call the attention of the public to the following catalogue of our goods, at the same time thanking our friends for their past favors, and soliciting a continuance of their custom:

Peters, Cragg & Co.'s Pianos.

We keep constantly on hand a full assortment of the Full Iron framed Pianos, manufactured by Peters, Cragg & Co., in Louisville, Ky., and warrant them to be equal in every respect to any Piano now made.

Melodeons.

These Instruments are rapidly becoming great favorites with all Music Loving people. They are cheap, durable, compact, and do not easily get out of tune. Prices from $50 to $350.

Guitars.

Martin's Guitars are universally acknowledged to be the best Instruments of the kind now in use. We keep on hand a number of these Instruments, as well as the Guitars of Schmidt & Maul and Wm. Hall & Son.

Our stock of Violins, Flutes, Flutinas, Accordeons, Banjos, &c., will at all times be as large as our market will permit.

Our Violin and Guitar Strings are the best that can be bought.

We keep everything in the way of TRIMMINGS for Violins, Guitars, Banjos, &c., &c.

Sheet Music.

We think ourselves perfectly safe in saying that our stock of Sheet Music is as complete and as well selected as can be found in any Music Store in the Southwest.

We keep constantly on hand, Instruction Books for all Instruments, Glee and Church Books, Works on Composition and Thorough Bass, Blank Music Books, and Music Paper.

Stationery.

We have everything in the way of Note, Letter and Bill Paper; Envelopes, Visiting Cards, Drawing, Crayon and Perforated Paper; Inkstands and Ink, Steel Pens, Mathematical Instruments, Lead Pencils, Water Colors, Rubber, Chess men, boards and books; Back-gammon Boards, Dominoes, Dice, &c., &c.

A. E. & H. C. BLACKMAR.

feb 8—'59

File Name: Natchez Daily Courier, (Natchez, MS) Saturday, April 14, 1866; Issue 141; col A

Copyright: Gale, 2010.

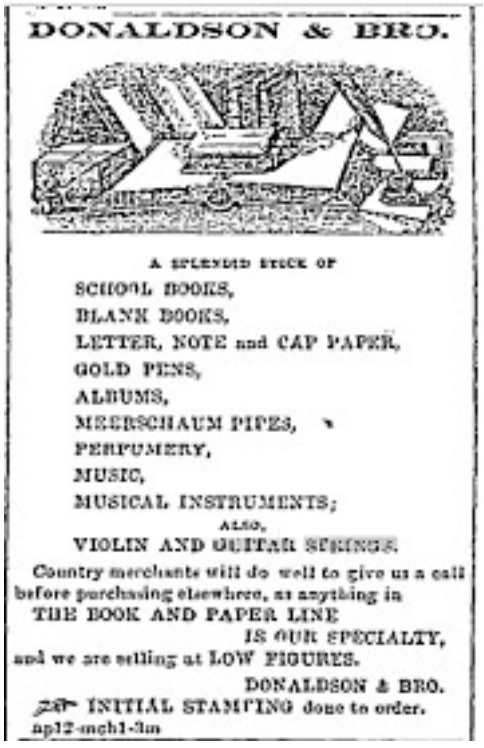
Description: Newspaper Classified

Date: 1866 (04-14)

Date Inserted: 11-01-2011

Notes: Donaldson & sons, general goods including guitar strings

.



DONALDSON & BRO.

A SPLENDID STOCK OF
SCHOOL BOOKS,
BLANK BOOKS,
LETTER, NOTE and CAP PAPER,
GOLD PENS,
ALBUMS,
MEERSCHAUM PIPES,
PERFUMERY,
MUSIC,
MUSICAL INSTRUMENTS;
ALSO,
VIOLIN AND GUITAR STRINGS.

Country merchants will do well to give us a call before purchasing elsewhere, as anything in
THE BOOK AND PAPER LINE
IS OUR SPECIALTY,
and we are selling at LOW FIGURES.
DONALDSON & BRO.
☞ INITIAL STAMPING done to order.
ap12-mch1-3m

File Name: New Hampshire Statesman, Saturday, March 12, 1853; Issue 1659; col B

Copyright: Gale, 2010.

Description: Newspaper Classified

Date: 1853 (03-12)

Date Inserted: 11-01-2011

Notes: Charles Clapp & co.

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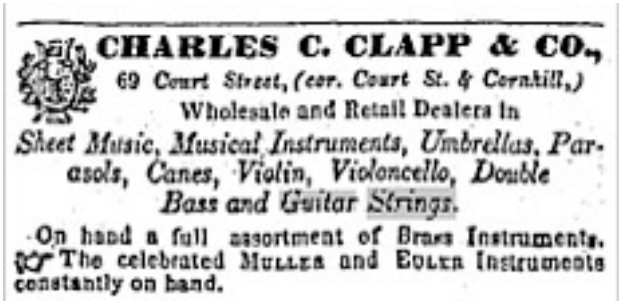


File Name: New Haven Daily Palladium, (New Haven, CT) Tuesday, July 28, 1863; Issue 179; col A

Copyright: Gale, 2010.

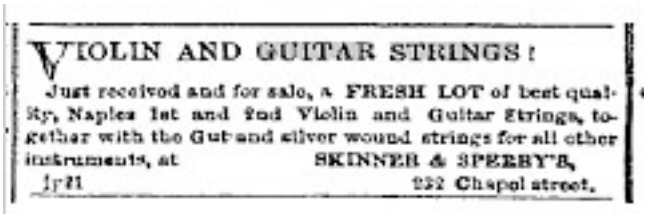
Description: Newspaper Classified

Date: 1863 (07-28)

Date Inserted: 11-01-2011

Notes: Skinner and Sperby selling strings.

.



VIOLIN AND GUITAR STRINGS!

Just received and for sale, a FRESH LOT of best quality, Naples 1st and 2nd Violin and Guitar Strings, together with the Gut and silver wound strings for all other instruments, at SKINNER & SPERBY'S,

jy21 232 Chapel street.

File Name: New Haven Register, published as The New Haven Evening Register; Date: 10-01-1895; Volume: LII; Issue: 234; Page: 3; Location: New Haven, Connecticut

Copyright: News Bank and/or the American Antiquarian Society. 2004.

Description: Newspaper Classified

Date: 1895 (10-01)

Date Inserted: 11-01-2011

Notes: Loomis, piano dealer.

.

File Name:	New Orleans Times, published as The New-Orleans Times; Date: 10-18-1866; Volume: VI; Issue: 1102; Page: [1]; Location: New Orleans, Louisiana
Copyright:	News Bank and/or the American Antiquarian Society. 2004.
Description:	Newspaper Classified
Date:	1866 (10-18)
Date Inserted:	11-01-2011
Notes:	Louis Grunewald, piano dealer. Also selling violin and guitar strings.

Louis Grunewald.

Piano-forte, Melodeon and Music Warerooms

VIOLIN, GUITAR AND HARP STRINGS,

120.....Canal Street.....120

NEW ORLEANS.

A Large assortment of

PIANOS,

From the Celebrated factories of PLEYEL, & CO. The superiority of these Pianos is acknowledged by every artist.

Steinway & Son's Pianos.

Chickering & Son's Pianos.

Being SOLE AGENT for these Pianos for the State of Louisiana, I can sell them at the manufacturers' prices.

I advise all who are in want of a Piano to buy one of a maker whose reputation is established, and whose name is a guarantee for the Excellence and Durability of the instruments. An attempt to save a few dollars may cost you ultimately three times what a good Piano would have cost at first. Besides the instruments of the above manufacturers, I keep constantly on hand a large assortment of other makers, which I can sell at reduced prices.

Pianos sold on liberal terms.

Persons ordering Pianos from me by letter will receive equal attention as if present, and every care will be bestowed on the selection.

LOUIS GRUNEWALD,

oct6 1m 1stp 120 Canal street, New Orleans.

.

File Name:	New Orleans Times, published as The New-Orleans Times; Date: 08-31-1875; Volume: XII; Issue: 6659; Page: 6; Location: New Orleans, Louisiana
Copyright:	News Bank and/or the American Antiquarian Society. 2004.
Description:	Newspaper Classified
Date:	1875 (08-31)
Date Inserted:	11-01-2011
Notes:	Mason & Hamlin selling strings.

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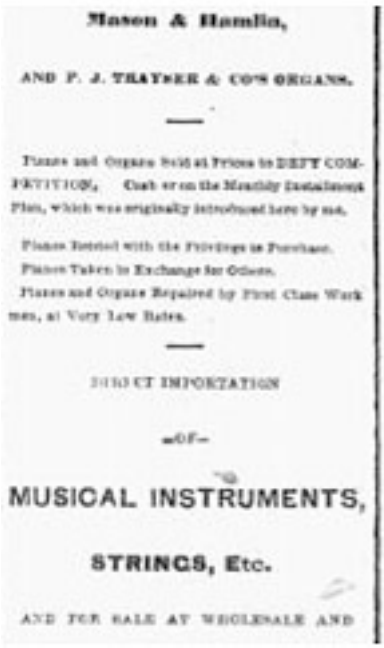


Mason & Hamlin,

AND P. J. THAYER & CO'S ORGANS.

—

Pianos and Organs Sold at Prices to SUIT COMPETITION, Cash or on the Monthly Installment Plan, which was originally introduced here by us.

Pianos Rented with the Privilege to Purchase.
Pianos Taken in Exchange for Others.
Pianos and Organs Repaired by First Class Workmen, at Very Low Rates.

—

DIRECT IMPORTATION

—OF—

MUSICAL INSTRUMENTS,

STRINGS, Etc.

AND FOR SALE AT WHOLESALE AND

File Name: New York Herald-Tribune, published as New York Daily Tribune; Date: 07-15-1865; Volume: XXV; Issue: 7573; Page: Copy of 2; Location: New York, New York

Copyright: News Bank and/or the American Antiquarian Society. 2004.

Description: Newspaper Classified

Date: 1865 (07-15)

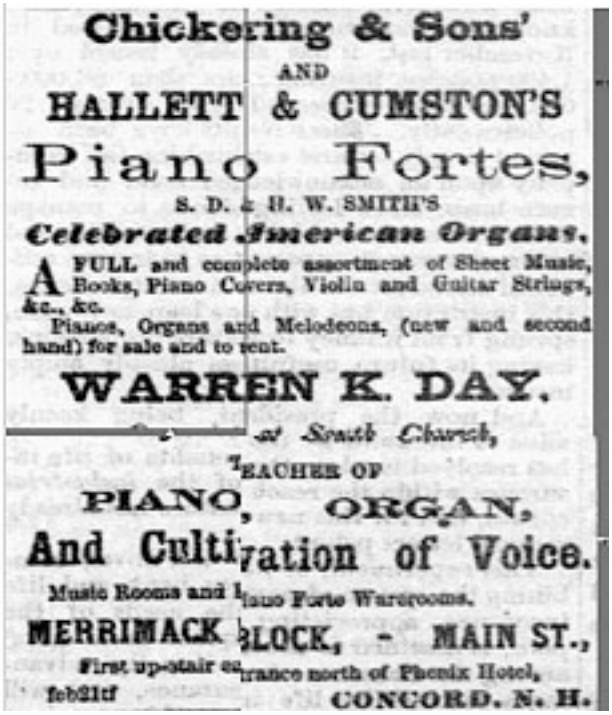
Date Inserted: 11-01-2011

Notes: Blume: Hot weather strings.

HOT WEATHER STRINGS for VIOLIN
GUITAR and BANJO—25 cents and 25 cents, manufactured
MUSICAL INSTRUMENTS
both prices. Sent by express to all parts of the Union.
PHILIP BLUME, No. 291 Bowery.

.

File Name:	New-Hampshire Patriot, published as The New Hampshire Patriot; Date: 04-13-1870; Issue: 3195; Page: [1]; Location: Concord, New Hampshire
Copyright:	News Bank and/or the American Antiquarian Society. 2004.
Description:	Newspaper Classified
Date:	1870 (04-13)
Date Inserted:	11-01-2011
Notes:	Warren K. Day: Music store selling strings



Chickering & Sons'

AND

HALLETT & CUMSTON'S

Piano Fortes,

S. D. & H. W. SMITH'S

Celebrated American Organs.

A FULL and complete assortment of Sheet Music, Books, Piano Covers, Violin and Guitar Strings, &c., &c.

Pianos, Organs and Melodeons, (new and second hand) for sale and to rent.

WARREN K. DAY,

at South Church,

TEACHER OF

PIANO, ORGAN,

And Cultivation of Voice.

Music Rooms and Piano Forte Warerooms,

MERRIMACK BLOCK, - MAIN ST.,

First up-stair entrance north of Phenix Hotel,

feb21tf CONCORD, N. H.

File Name:	Newark Advocate, (Newark, OH) Friday, May 03, 1867; Issue 17; col A
Copyright:	Gale. 2010.
Description:	Newspaper Classified
Date:	1865 (07-03)
Date Inserted:	11-01-2011
Notes:	J. M. Lyon. Variety store. Strings.

VARIETY STORE!

J. M. LYON & BROTHER,

DEALERS IN

FOREIGN AND AMERICAN

FANCY GOODS,

MUSICAL INSTRUMENTS,
VIOLIN, GUITAR & BANGO STRINGS,
WILLOW WARE, CABS,
TOYS, CONFECTIONERIES,
PIPES, CIGARS, BEADS, &c.

No. 2 Shield's Block, South Side the Square
April 6-14tf.] Newark, Ohio..

File Name: Newark Advocate, (Newark, OH) Friday, May 03, 1867; Issue 17; col A

Copyright: Gale. 2010.

Description: Newspaper Classified

Date: 1865 (07-03)

Date Inserted: 11-01-2011

Notes: J. M. Lyon. Variety store. Strings.

VARIETY STORE!

J. M. LYON & BROTHER,

DEALERS IN

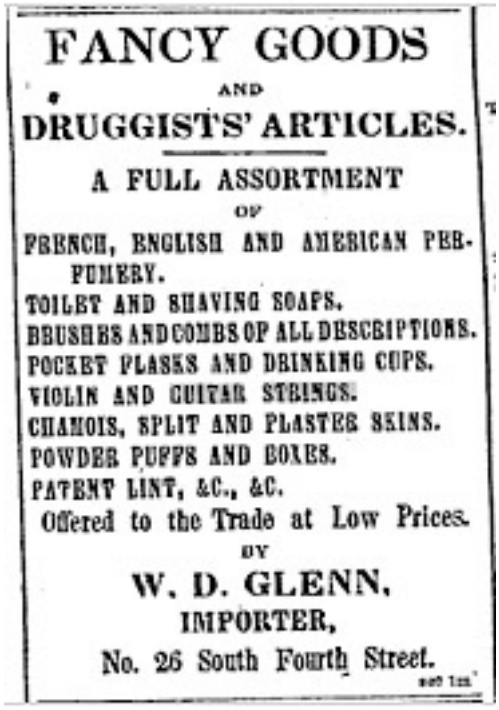
FOREIGN AND AMERICAN

FANCY GOODS,

MUSICAL INSTRUMENTS,
VIOLIN, GUITAR & BANGO STRINGS,
WILLOW WARE, CABS,
TOYS, CONFECTIONERIES,
PIPES, CIGARS, BEADS, &c.

No. 2 Shield's Block, South Side the Square
April 6-14tf.] Newark, Ohio..

File Name:	North American and United States Gazette, (Philadelphia, PA) Saturday, October 05, 1861; Issue 25,879; col F
Copyright:	Gale. 2010.
Description:	Newspaper Classified
Date:	1861 (10-05)
Date Inserted:	11-01-2011
Notes:	W. D. Glenn: Importer selling a mixture of goods including guitar strings.



FANCY GOODS

AND

DRUGGISTS' ARTICLES.

A FULL ASSORTMENT

OF

FRENCH, ENGLISH AND AMERICAN PERFUMERY.
TOILET AND SHAVING SOAPS.
BRUSHES AND COMBS OF ALL DESCRIPTIONS.
POCKET FLASKS AND DRINKING CUPS.
VIOLIN AND GUITAR STRINGS.
CHAMOIS, SPLIT AND PLASTER SKINS.
POWDER PUFFS AND BOXES.
PATENT LINT, &C., &C.

Offered to the Trade at Low Prices.

BY

W. D. GLENN,
IMPORTER,
No. 26 South Fourth Street.

File Name:	Owyhee Avalanche, published as The Owyhee Avalanche; Date: 08-24-1872; Volume: 7; Issue: 47; Page: [5]; Location: Silver City, Idaho
Copyright:	News Bank and/or the American Antiquarian Society. 2004.
Description:	Newspaper Classified
Date:	1872 (08-24)
Date Inserted:	11-01-2011
Notes:	S. Lebretcht selling strings alongside 'stationery'.

Manufacturing Co.
Silver City, I. T., July 13, 1871. n42tf

Books, Stationery, &c.

S. LEBRECHT,

(Washington Street, Silver City, I. T.)

DEALER IN

Stationery of Every Description.

PHOTOGRAPHIC ALBUMS VIOLIN and GUITAR STRINGS, DERRINGERS, REVOLVERS & BOWIE KNIVES,

File Name: Daily Evening Bulletin, (San Francisco, CA) Wednesday, February 04, 1857; Issue 101; col A

Copyright: Gale, 2010.

Description: Newspaper Classified

Date: 1857 (02-04)

Date Inserted: 11-01-2011

Notes: Loewy Bros. & Birgham: Mostly stationary, but also selling strings.

LOEWY BROS. & BIRGHAM,

125 Sacramento street,

OFFER FOR SALE:

10,000 LBS. BINDER'S BOARDS—assorted;
5000 Straw Boards, assorted;
50 reams Green Glazed Medium Paper;
25 reams assorted colors Glazed Medium Paper;
400 gross Black Ink, in Stands;
100 dozen Diaries, assorted sizes, for 1857;
1000 reams Letter Paper, of the best Mills;
1000 reams Cap, Medium and Bill Paper;
150,000 quires Russia, full and half bound Blank Books, assorted sizes;
100 gross French and American Playing Cards.

Together with a very large and well selected stock of general Stationery, Musical Instruments, Roman Violin and Guitar Strings, Musical Fixtures, Cash and Deed Boxes, Twines, Writing Fluids, Sleeper's, Faber's and other Pencils, Slates, Mucilage, Cribbage Boards, Chessmen and Backgammon Boards, Fancy Forte Monnaies, and an endless variety of—

SCHOOL, STANDARD, MISCELLANEOUS BOOKS; CHEAP PUBLICATIONS, &c., &c.

All of which will be sold at unprecedented low prices for CASH.

ja7-1m

File Name: Daily Evening Bulletin, (San Francisco, CA) Friday, August 17, 1883; pg. 3; Issue 112; col A

Copyright: Gale, 2010.

Description: Newspaper Classified

Date: 1883 (08-17)

Date Inserted: 11-01-2011

Notes: Musical instruments in bond.

Musical Instruments in Bond.

4 cases Richter Harmonicas, single and double keys.
5 cases Genuine Wm. Thie's Harmonicas.
4 cases Genuine Langhammer Harmonicas.
3 cases Harmonicas, patent rubber mouth-piece.
2 cases Genuine Bruckbauer's Harmonicas.
3 cases Assorted Concert Harmonicas.
6 cases Assorted Harmonicas, cheap styles.
4 cases Flute Harmonicas.
26 cases Accordeons—all styles.
10 cases Blow Accordeons.
1 case Genuine Busson French Harmonicas, Accordeons and Flutinas.
14 cases German Guitars.
6 cases German Violins.
1 case German Boys' Violins.
2 cases Violin and Guitar Strings—assorted.
2 cases Small Musical Ware.
11 cases Swiss Musical Boxes, 4 to 12 airs, elegant assortment.
3 cases Linen Music Boxes, 1 to 4 airs, small.
1 case Flutes and Fifes.
3 cases Irish Jewsharps.
2 cases German Iron and Brass Jewsharps.
2 cases German Zithers, best make.
1 case Violin Bows.

File Name:	Richmond Daily Whig, (Richmond, VA) Monday, October 30, 1854; Issue 103; col A
Copyright:	Gale, 2010.
Description:	Newspaper Classified
Date:	1854 (10-30)
Date Inserted:	11-01-2011
Notes:	Strings being sold from Philadelphia.

PHILADELPHIA ADVERTISEMENTS.

NEW FANCY GOODS, &c.

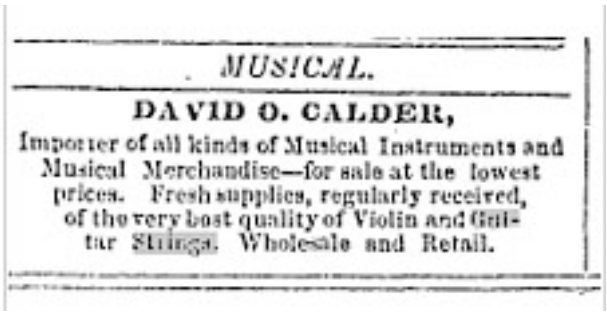
W. D. GLENN, No. 20 South Fourth Street, Philadelphia, offers to Western and Southern Merchants and Dealers generally, a very complete assortment of goods in his line, *selected by himself in the principal European cities* during the past summer, and embracing many novelties and styles of goods never before brought to this market, which are offered at very moderate prices.

Among the stock will be found:

Hair, Tooth, Nail, Shaving and Cloth Brushes.
Buffalo, Shell, Horn and Ivory Combs.
Portemonnais, Pocket Books & Purses.
Card Cases, and Cigar Cases.
Ivory Tablets, Chessmen and Dominoes.
Cornelian Rings, Charms and Coat Links.
Fancy China, Parian and Bisque Ware.
Backgammon and Chess Boards.
Papier Mache goods in great variety.
Ladies' Cabas and Reticules.
French Gelatine, Red & White.
Inkstands, Paperweights and Penholders.
Bronze Fancy Articles.
French, English, and American Perfumery.
Fancy and Shaving Soaps of all descriptions.
French Paintings and Engravings.
Pink and Blue Saucers
Rosewood, Mahogany and Leather Portable Desks
Ladies' and Gentlemen's Dressing Cases.
Steel Tweesers and Key Rings.
Violin and Guitar Strings.
Opera Glasses.
Fancy Match Boxes and Wax Matches.
Travelling Flasks of all kinds, &c., &c.

Orders by mail or otherwise, respectfully solicited and promptly attended to. oc30—3m—[M]

File Name:	Salt Lake Daily Telegraph, (Salt Lake City, UT) Saturday, January 13, 1866; Issue 165; col A
Copyright:	Gale, 2010.
Description:	Newspaper Classified
Date:	1866 (01-13)
Date Inserted:	11-01-2011
Notes:	David O. Calder selling strings retail and wholesale.



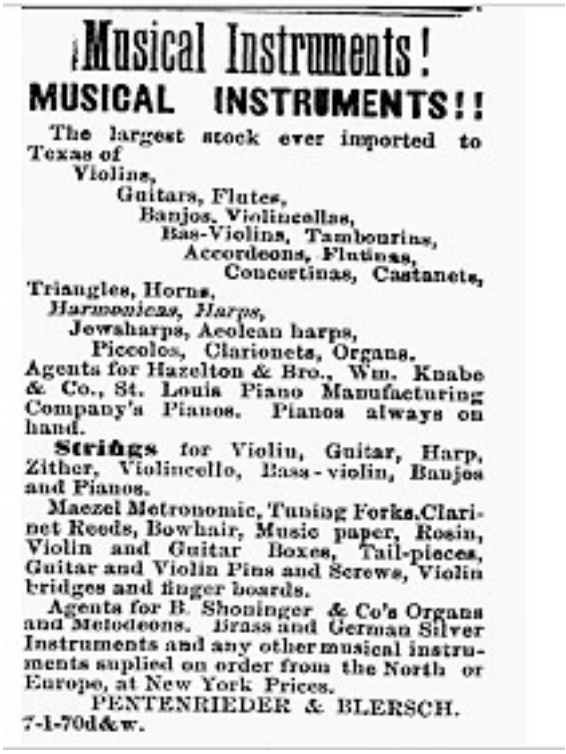
MUSICAL.

DAVID O. CALDER,

Importer of all kinds of Musical Instruments and Musical Merchandise—for sale at the lowest prices. Fresh supplies, regularly received, of the very best quality of Violin and Guitar Strings. Wholesale and Retail.

File Name:	Salt Lake Daily Telegraph; Date: 11-27-1867; Volume: IV; Issue: 126; Page: [1]; Location: Salt Lake City, Utah
Copyright:	News Bank and/or the American Antiquarian Society. 2004
Description:	Newspaper Classified
Date:	1867 (11-27)
Date Inserted:	11-01-2011
Notes:	Advert for violin strings.

File Name:	San Antonio Express, published as Daily Express; Date: 07-13-1870; Volume: IV; Issue: 165; Page: [1]; Location: San Antonio, Texas
Copyright:	News Bank and/or the American Antiquarian Society. 2004
Description:	Newspaper Classified
Date:	1870 (07-13)
Date Inserted:	11-01-2011
Notes:	Petenreider & Blersch music store selling strings.



Musical Instruments!

MUSICAL INSTRUMENTS!!

The largest stock ever imported to Texas of
Violins,
Guitars, Flutes,
Banjos, Violincellas,
Bas-Violins, Tambourins,
Accordeons, Flutinas,
Concertinas, Castanets,
Triangles, Horns,
Harmonicas, Harps,
Jewsharps, Aeolean harps,
Piccolos, Clarionets, Organs.
Agents for Hazelton & Bro., Wm. Knabe & Co., St. Louis Piano Manufacturing Company's Pianos. Pianos always on hand.

Strings for Violin, Guitar, Harp, Zither, Violincello, Bass-violin, Banjos and Pianos.

Maezel Metronomic, Tuning Forks, Clarinet Reeds, Bowhair, Music paper, Rosin, Violin and Guitar Boxes, Tail-pieces, Guitar and Violin Pins and Screws, Violin bridges and finger boards.

Agents for B. Shoninger & Co's Organs and Melodeons. Brass and German Silver Instruments and any other musical instruments suplied on order from the North or Europe, at New York Prices.

PENTENRIEDER & BLERSCH.

7-1-70d&w.

File Name: Semi-weekly Mississippian, Friday, July 07, 1854; Issue 2; col A

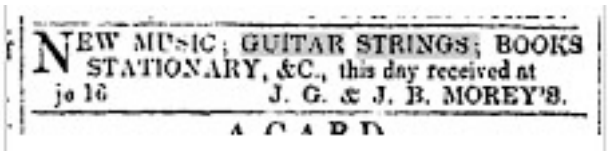
Copyright: Gale, 2010.

Description: Newspaper Classified

Date: 1854 (07-07)

Date Inserted: 11-01-2011

Notes: Morey's stationary and strings.



File Name:	Springfield Republican; Date: 02-12-1889; Page: 1; Location: Springfield, Massachusetts
Copyright:	News Bank and/or the American Antiquarian Society. 2004.
Description:	Newspaper Classified
Date:	1889 (02-12)
Date Inserted:	11-01-2011
Notes:	Taylor's music store selling strings. & C. N. Stimpson & Co. selling Washburn gtrs

GUITAR PLAYERS.—Head-qu
Guitar Music, Strings, etc., at
TAYLOR'S Mus

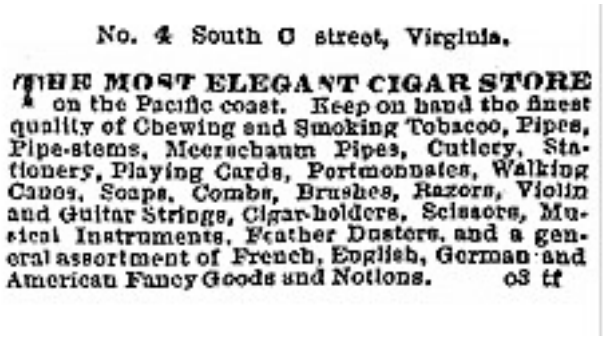
File Name:	St. Louis Globe-Democrat, (St. Louis, MO) Sunday, January 23, 1876; pg. 8; Issue 249; col F
Copyright:	Gale. 2010
Description:	Newspaper Classified
Date:	1876 (01-23)
Date Inserted:	10-01-2011
Notes:	Small ad from J. J. Voellmecke selling violin and guitar strings.

MUSICAL—Music Folios, spring backs, 75 cts., $1, $1 25, $1 50 and $2. Violin strings, per set (best), 75 cts. Guitar strings, per set (best), $1, at J. J. Voellmecke's, 1019 Olive street.

File Name:	St. Paul Daily News (St. Paul, MN), (St. Paul, MN) Wednesday, December 04, 1889; pg. 4; Issue 289; col F
Copyright:	Gale. 2010
Description:	Newspaper Classified
Date:	1889 (12-04)
Date Inserted:	10-01-2011
Notes:	Whitney's music store selling strings as well as Bay State guitars.

GUITARS—Bay State, Benary, Tilton and Martin guitars; fine guitar strings, cases, etc. WHITNEY'S Music Store.

File Name:	Territorial Enterprise; Date: 10-22-1874; Page: 3; Location: Virginia City, Nevada
Copyright:	News Bank and/or the American Antiquarian Society. 2004.
Description:	Newspaper Classified
Date:	1874 (10-22)
Date Inserted:	10-01-2011
Notes:	Strings being sold from a cigar store.



No. 4 South C street, Virginia.

THE MOST ELEGANT CIGAR STORE on the Pacific coast. Keep on hand the finest quality of Chewing and Smoking Tobacco, Pipes, Pipe-stems, Meerschaum Pipes, Cutlery, Stationery, Playing Cards, Portmonnaies, Walking Canes, Soaps, Combs, Brushes, Razors, Violin and Guitar Strings, Cigar-holders, Scissors, Musical Instruments, Feather Dusters, and a general assortment of French, English, German and American Fancy Goods and Notions. o3 tf

File Name: The Breckenridge news. (Cloverport, Ky.) 1876-1955, December 15, 1880, Image 4

Copyright: University of Kentucky, Lexington, KY. 2010.

Description: Newspaper Classified

Date: 1880 (12-15)

Date Inserted: 11-01-2011

Notes: D. P. Faulds, music store selling strings.

D. P. FAULDS,

165 Fourth Ave. - - - - - Louisville, Ky.

PIANOS	from	$200 00 to	$1000 00
ORGANS	from	45 00 to	300 00
PIANOS (second hand)	from	40 00 to	250 00
ORGANS (second hand)	from	25 00 to	150 00
Violins	from	1 50 to	12 00
Guitars	from	3 50 to	20 00
Banjos	from	2 00 to	12 00
Accordeons	from	1 25 to	9 00
Flutes	from	1 25 to	25 00
Cornets	from	7 50 to	50 00
French Harps	from	10 to	4 50
Piano and Organ Stools	from	2 50 to	15 00
Piano Covers	from	3 50 to	20 00
Violin Strings, per set,	from	50 to	1 00
Guitar Strings " "	from	60 to	1 50

Special Card.

The above prices will be found Lower than elsewhere in this country, considering that Every Article is STRICTLY FIRST-CLASS, and every instrument goes fully warranted. I have a Special department for filling country orders, and the same careful attention will be given to the order for the smallest piece of music as to the most costly Chickering Piano, and my immense stock embraces EVERY thing pertaining to music.

D. P. FAULDS.

File Name: The Charleston Courier, Tri-Weekly, (Charleston, SC) Thursday, September 29, 1859; col B

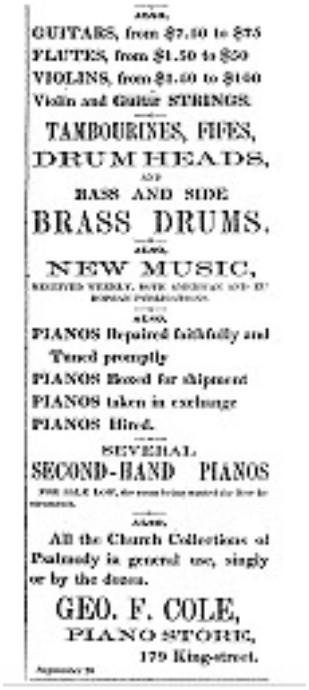
Copyright: Gale. 2010.

Description: Newspaper Classified

Date: 1859 (11-29)

Date Inserted: 11-01-2011

Notes: Geo F. Cole, piano store selling guitar and strings.



ALSO,

GUITARS, from $7.00 to $75
FLUTES, from $1.50 to $50
VIOLINS, from $1.00 to $100
Violin and Guitar STRINGS.

TAMBOURINES, FIFES,
DRUM HEADS,
AND
BASS AND SIDE
BRASS DRUMS.

ALSO,

NEW MUSIC,

RECEIVED WEEKLY, BOTH AMERICAN AND EUROPEAN PUBLICATIONS.

ALSO,

PIANOS Repaired faithfully and Tuned promptly
PIANOS Boxed for shipment
PIANOS taken in exchange
PIANOS Hired.

SEVERAL
SECOND-HAND PIANOS
FOR SALE LOW, the room being wanted for new instruments.

ALSO,

All the Church Collections of Psalmody in general use, singly or by the dozen.

GEO. F. COLE,
PIANO STORE,
179 King-street.

September 29

File Name: The Charleston Mercury, (Charleston, SC) Monday, October 10, 1859; col B

Copyright: Gale. 2010.

Description: Newspaper Classified

Date: 1859 (11-29)

Date Inserted: 11-01-2011

Notes: F. von Santen selling general goods including guitar strings.

Perfumery,

FOREIGN AND DOMESTIC; THE ENTIRE FRESH stock is now in port, and a specification of the same will appear now and then in the daily papers of the city.

Combs and Brushes,

JET GOODS, ACCORDEONS, HARMONICAS, VIOLINS, Violin and Guitar Strings, Beads, Necklaces, Lead Pencils, Sewing Birds, &c., &c.

An elegant assortment of

Meerschaum Pipes and Cigar Tubes.

GAMES, OF A VERY LARGE COLLECTION, SUCH as Ball Drafts, Solitaire, Tivoli, Dr. Busk, Mansion of Happiness, Dominoes, Lotto, Directions, &c., &c.

Toys of Every Description.

INDIA RUBBER, MECHANICAL, BELLOW AND BOX Toys, Dolls, Marbles, Guns, Swords, &c., &c., by the single piece, by the dozens, or in original cases, containing 6, 12, 20, 50 or 50 dozens, costing from $3.00 to 50.00 per case, and

Fire Works,

AS PER PRINTED LISTS, FURNISHED ON APPLICATION.

Merchants or retail buyers will be promptly served, and their orders, by mail or otherwise, faithfully executed.

Terms—Cash, or sixty days, city acceptance.

F. von SANTEN,

288 KING STREET, Corner Society.

October 10 2

File Name: The Daily Cleveland Herald, (Cleveland, OH) Monday, November 14, 1859; Issue 269; col A

Copyright: Gale. 2010.

Description: Newspaper Classified

Date: 1859 (11-14)

Date Inserted: 11-01-2011

Notes: Brainard & Co. selling a mixture of goods including musical instruments and strings.

NEW STEREOSCOPIC VIEWS.

WE HAVE JUST RECEIVED a large assortment of Stereoscopic Views of every description, which we offer at the lowest prices. Among them will be found—

Views of Niagara Falls.
Views of Switzerland.
Views of London.
Views of Paris.
Statuary, Groups, &c.
Stereoscopes worth from $2 to $10.

nv11 S. BRAINARD & CO., 203 Superior st.

VIOLIN AND GUITAR STRINGS—We have the largest and best stock of Violin Strings to be found west of New York City, to which the attention of dealers is invited. Orders promptly attended to.

nv11 S. BRAINARD & CO.

ALL KINDS OF MUSICAL INSTRUMENTS repaired by experienced workmen, on the shortest notice, at BRAINARD'S Music Store.

GOLDEN WREATH—A large supply of this popular book. Price 35c.

nv11 S. BRAINARD & CO.

File Name: The Daily Cleveland Herald, (Cleveland, OH) Thursday, December 18, 1862; Issue 297; col C

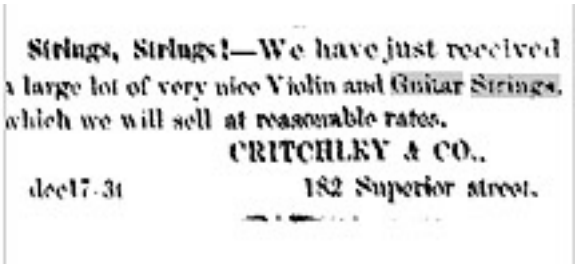
Copyright: Gale. 2010.

Description: Newspaper Classified

Date: 1862 (12-18)

Date Inserted: 11-01-2011

Notes: Critchley & Co. selling strings.



Strings, Strings!—We have just received a large lot of very nice Violin and Guitar Strings, which we will sell at reasonable rates.

CRITCHLEY & CO.,

dec17-3t 182 Superior street.

File Name: The Daily Cleveland Herald, (Cleveland, OH) Tuesday, June 02, 1868; Issue 132; col A

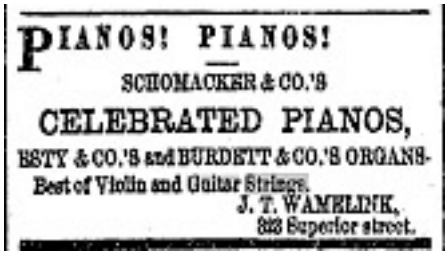
Copyright: Gale. 2010.

Description: Newspaper Classified

Date: 1868 (06-2)

Date Inserted: 11-01-2011

Notes: Shomaker & Co. selling strings as well as pianos.



File Name: The Daily Inter Ocean, (Chicago, IL) Sunday, March 15, 1896; pg. 18; Issue 357; col A

Copyright: Gale. 2010.

Description: Newspaper Classified

Date: 1896 (03-15)

Date Inserted: 11-01-2011

Notes: Bankrupt sale of stock. Musical merchandise including guitar strings @ 10 cts per set.

BANKRUPT SALE OF MUSICAL MERCHANdise will wind up this week; note prices:

Fine tone mandolins.....$1.60
Isabell Italian mandolins..... 4.75
Rosewood mandolins..... 5.80
Fine tone guitars..... 2.80
J. H. Schall banjo..... 7.50
Canvas case..... .80
Leather cases..... 2.75
Mandolin and guitar strings, per set..... .10

Washburn, Bohmann, Rieen, and Bruno guitars and mandolins, 50 cents on the dollar. We have some of the finest goods in the market at astonishing low prices. Teachers and jobbers, don't miss this opportunity. Attend this great bankrupt sale.

86 West Madison st.

File Name: The Daily Mississippian, (Jackson, MS) Thursday, November 10, 1859; Issue 56; col C

Copyright: Gale. 2010.

Description: Newspaper Classified

Date: 1859 (11-10))

Date Inserted: 11-01-2011

Notes: Patton & Barfield selling pianos, guitars and strings

PIANOS. MELODEONS. VIOLINS.

PIANOS. GUITARS. FLUTES.

THE subscriber invite the attention of purchasers to their EXTENSIVE STOCK OF

SUPERIOR PIANOS.

FROM THE FACTORY OF PETERS, CRAGG & Co.,

These Pianos are celebrated for durability and all other requisites, throughout the Union. And particular attention is called to the late improved or large Scale, Grand Action, Superior Instruments in all respects.

ALSO, a large stock of MELODEONS, from four to six octaves.

GENUINE MARTIN GUITARS!

Also guitars from Hall & Sons, Schmidt & Maul, Tilton and other favorite makers in great variety and of every price.

We have now the largest and most complete stock of sheet music, musical instruments and musical merchandize in the South.

Our stock of music for piano, guitar, melodeon, violin, flute, harp, &c., we believe to be the best selected in the South. It embraces all the standard pieces and all the popular music of the day and is constantly increased by additions of new music from every publisher in the United States.

Instruction books for all instruments.

Music and instruction books sent by mail postage free on receipt of the marked price.

Also Guitars, from $7,50 to $75; Flutes, from $1,50 to $50; Violins, from $1,50 to $100. Violin and Guitar Strings. PATTON & BARFIELD.

Nov 1 '59—tf.

File Name:	The Daily News and Herald, (Savannah, GA) Monday, April 02, 1866; Issue 71; col B
Copyright:	Gale. 2010.
Description:	Newspaper Classified
Date:	1866 (04-02)
Date Inserted:	11-01-2011
Notes:	John C. Schriener & sons: Selling mixture of goods, but with an emphasis on music ware, including guitar strings.

NEW GOODS

Just received at

JOHN C. SCHREINER & SONS',

HART'S BAZIQUE CARDS
RULERS, Round and Square, assorted
INDIA RUBBER PIANO COVERS; a splendid article.
PIANO STOOLS, a beautiful assortment.
Violins, Banjos, Flutes, Guitars, Tamborines, Violin and Guitar Strings, in largue quantities.
mS0-3

File Name: The Daily Phoenix (Columbia, S.C.) 1865-1878, August 04, 1867.

Copyright: University of South Carolina, Columbia, SC.

Description: Newspaper Classified

Date: 1867 (08-04)

Date Inserted: 11-01-2011

Notes: Advert for violin & guitar strings.

Violin and Guitar
STRINGS!

File Name: The Daily Picayune, (New Orleans, LA) Sunday, March 14, 1897; pg. 20; Issue 49; col A

Copyright: Gale, 2010.

Description: Newspaper Classified

Date: 1897 (03-14)

Date Inserted: 11-01-2011

Notes: Article on the harp guitar.

guitar. For one thing, a new attached attachment has been invented and is considered by those having examined it to be a great improvement on the time-honored guitar. It is called the harp-guitar, and is a combination instrument, which, when played, sounds like two, the one carrying the air, the other the accompaniment. The result produced reminds one of the mandolin and guitar or the concert orchestra. The harp-guitar has the appearance of pictures of "ye olden time," the body being pear-shaped and with a flat top and slightly rounded back. It has ten strings, six of these being fingered with and toned as those on the guitar, and permitting each of that known guitar strength to a sound or treble string, each treble being tuned an exact octave above the companion string. The method of producing chords is identically the same as upon the guitar, but the manner of playing instrumental selections is different, the air being picked on the double strings with the thumb while the accompaniment (the simple guitar chords) is picked on all the other available strings. The effect of playing the air on double strings tuned an octave apart is appreciated as soon as heard, and the key be modified so that the air will sound either in a clear treble or bass. The player is not obliged to run up and down the fingerboard as upon the guitar, but retains the left hand in all three in one position—that for playing ordinary guitar chords.

For this reason the playing is so simple that amateurs are enabled to execute with ease any of the popular airs, and at the same time carry a full accompaniment. As is well known, the guitar is an instrument upon which but few can play instruments selections other than those written expressly for the instrument. Mr. Chas. Brewer, a musician of Columbus, Ohio, conceived the guitar to be deficient, and especially so for the use of amateurs; to play popular airs, one must run from one end of the fingerboard to the other, as is usual, and consequently one must be familiar with many difficult chords and be an expert at fingering; so, to simplify the matter, the inventor decided to employ a larger number of treble strings, and to such a manner that, when playing, one can at all times utilize the ordinary guitar chords in connection with the air. A series of experiments accomplished even better results than anticipated. Within three months after the inventor was able to play over a hundred popular melodies in various keys, carrying a regular guitar accompaniment. By an ingenious arrangement the extra treble may be thrown out of action, instantly converting the instrument into an ordinary guitar. Patents have been secured, and two companies have already undertaken the manufacture of harp-guitars, and the instruments will appear in the market in the near future.

File Name: The Daily Register (Raleigh, NC) Wednesday, March 16, 1853; Issue 23; col A

Copyright: Gale, 2010.

Description: Newspaper Classified

Date: 1853 (03-16)

Date Inserted: 11-01-2011

Notes: Books, Stationary, piano-fortes, fancy goods, guitar strings.

NASH & WOODHOUSE,

RICHMOND, VIRGINIA,

WHOLESALE & RETAIL DEALERS IN

BOOKS, PIANO-FORTES, STATIONERY, MUSIC, AND FANCY ARTICLES

HAVE constantly for sale upon reasonable terms, all the various *School Books*, in use; together with an extensive stock of

LAW, MEDICAL, THEOLOGICAL AND MISCELLANEOUS BOOKS.

Blank Books of every description.
Foolscap, Letter, Note and Wrapping Paper.
The best Ink, of all kinds in use.
Surveyors' Compasses and Chains.
Globes, Drawing Materials, Books on Drawing and Painting.
Mathematical Instruments.
Guitars of superior tone and finish.
Violins, Accordeons, Flutes, and other Musical Instruments.
Violin, and Guitar Strings.

SUPERIOR PIANO-FORTES.

In addition to their *Book and Stationery* business, the Subscribers deal extensively in PIANO-FORTES; they are Agents for three of the most distinguished makers in America, viz: J. Chickering, Boston, Jonas Stebbins, and J. B. Dunham, New York, and an experience of Eighteen years in this business warrants them in saying, that for Rich and Beautiful tone, Durability of Workmanship, and Elegance of Finish, the Instruments of the above makers are unsurpassed.

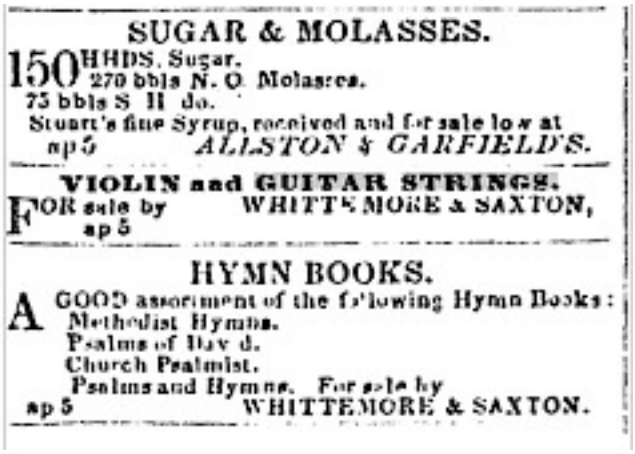
They have generally on hand, an assortment as extensive as can be met with, North or South, and are enabled to offer them as low as in any City of the Union.

To those not disposed to make special trips for the purpose, the Subscribers pramise their best judgment in selecting, finding themselves to give satisfaction, and charging them as low as if they were present.

Address NASH & WOODHOUSE,
159 Main Street,
Richmond, Virginia.

Feb. 25, '53. 3t 18

File Name:	The Daily Scioto Gazette, (Chillicothe, OH) Tuesday, April 05, 1853; Issue 107; col D
Copyright:	Gale, 2010.
Description:	Newspaper Classified
Date:	1853 (04-05)
Date Inserted:	11-01-2011
Notes:	Whittemore & Saxton selling guitar strings alongside hymnbooks; Ad in section including those for sugar etc.



SUGAR & MOLASSES.

150 HHDS. Sugar.
270 bbls N. O. Molasses.
75 bbls S H do.
Stuart's fine Syrup, received and for sale low at
ap 5 ALLSTON & GARFIELD'S.

VIOLIN and GUITAR STRINGS.
FOR sale by WHITTEMORE & SAXTON,
ap 5

HYMN BOOKS.

A GOOD assortment of the following Hymn Books:
Methodist Hymns.
Psalms of David.
Church Psalmist.
Psalms and Hymns. For sale by
ap 5 WHITTEMORE & SAXTON.

File Name: The Daily Scioto Gazette, (Chillicothe, OH) Tuesday, January 06, 1852; Issue 29; col A

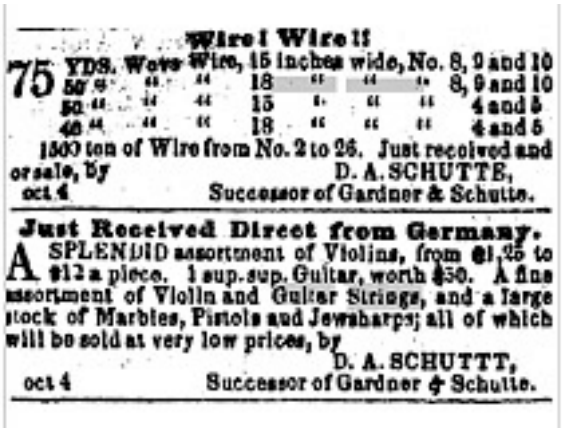
Copyright: Gale, 2010.

Description: Newspaper Classified

Date: 1852 (01-06)

Date Inserted: 11-01-2011

Notes: D. A. Schutte selling imported German strings and also selling different gauges of wire.



Wire I Wire II

75 YDS. Wove Wire, 15 inches wide, No. 8, 9 and 10
50 " " " 18 " " " 8, 9 and 10
50 " " " 15 " " " 4 and 5
40 " " " 18 " " " 4 and 5

1500 ton of Wire from No. 2 to 26. Just received and or sale, by
D. A. SCHUTTE,
oct 4 Successor of Gardner & Schutte.

Just Received Direct from Germany.

A SPLENDID assortment of Violins, from $1.25 to $12 a piece. 1 sup. sup. Guitar, worth $50. A fine assortment of Violin and Guitar Strings, and a large stock of Marbles, Pistols and Jewsharps; all of which will be sold at very low prices, by
D. A. SCHUTTT,
oct 4 Successor of Gardner & Schutte.

File Name: The Daily South Carolinian, (Columbia, SC) Friday, June 02, 1854; Issue 227; col A

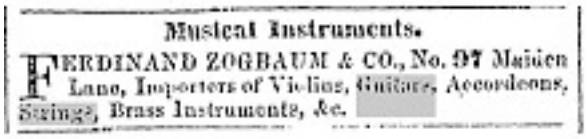
Copyright: Gale, 2010.

Description: Newspaper Classified

Date: 1854 (06-02)

Date Inserted: 11-01-2011

Notes: F. Zogbaum, importing musical instruments and strings. [Zogbaum who took over Tilton's patents.]



File Name: The Daily South Carolinian, (Columbia, SC) Saturday, October 15, 1864; Issue 248; col A

Copyright: Gale, 2010.

Description: Newspaper Classified

Date: 1864 (10-15)

Date Inserted: 11-01-2011

Notes: Desirable Stationary, including guitar strings.

DESIRABLE
STATIONERY, &C.
PRINTING PAPER.
300 REELS WALL PAPERING.
BLANK BOOKS.
PRINTING CARDS,
ARTISTS' MATERIALS,
VIOLIN AND GUITAR STRINGS.
STEEL PENS,
INKS.
INK-STANDS.
PENCILS.
Quills, Sealing Wax, Wafers, Pen Holders,

File Name: The Denver Evening Post, (Denver, CO) Sunday, July 31, 1898; pg. 19; col A

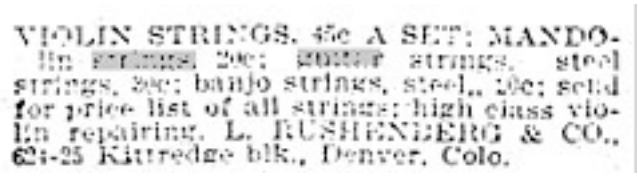
Copyright: Gale, 2010.

Description: Newspaper Classified

Date: 1898 (07-31)

Date Inserted: 11-01-2011

Notes: L. Ruschenberg & co. selling steel strings.


VIOLIN STRINGS, 45c A SET; MANDOlin strings, 20c; guitar strings, steel strings, 25c; banjo strings, steel,, 20c; send for price list of all strings; high class violin repairing. L. RUSHENBERG & CO., 624-25 Kittredge blk., Denver, Colo.

File Name:	The Galveston Daily News, (Houston, TX) Sunday, November 15, 1874; Issue 269; col E
Copyright:	Gale, 2010.
Description:	Newspaper Classified
Date:	1874 (11-15)
Date Inserted:	11-01-2011
Notes:	Thos. Groggon & Bros. selling strings.

VIOLIN AND GUITAR

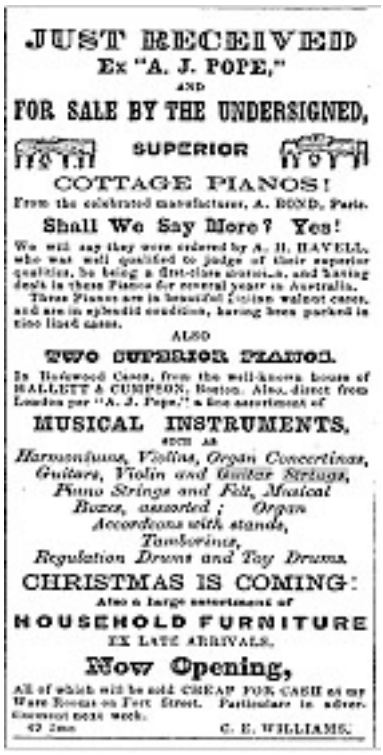
STRINGS.

Have just received a large stock per steamer "San Jacinto," and offer to the country trade at reduced rates.

THOS. GOGGAN & BRO.,

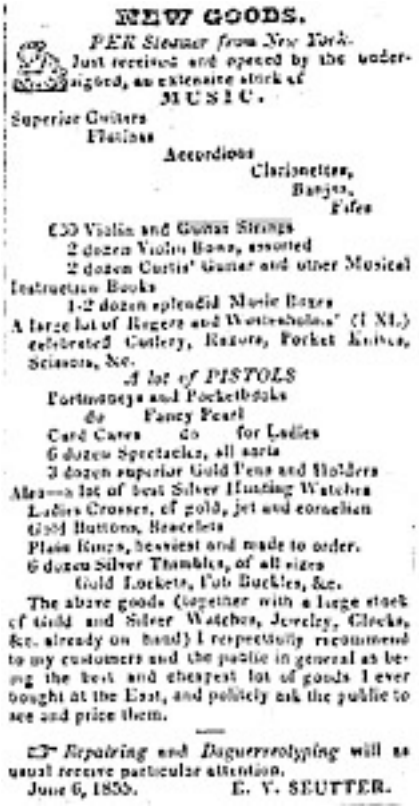
no15 1t Piano and Music Dealers, Tremont st.

File Name:	The Hawaiian Gazette, (Honolulu, HI) Wednesday, December 28, 1870; Issue 50; col E
Copyright:	Gale, 2010.
Description:	Newspaper Classified
Date:	1870 (12-28)
Date Inserted:	11-01-2011
Notes:	C.E. Williams' Music store selling guitar strings.



JUST RECEIVED
Ex "A. J. POPE,"
AND
FOR SALE BY THE UNDERSIGNED,
SUPERIOR
COTTAGE PIANOS!
From the celebrated manufacturer, A. BOND, Paris.
Shall We Say More? Yes!
We will say they were ordered by A. H. HAVELL, who was well qualified to judge of their superior qualities, he being a first-class pianist, and having dealt in these Pianos for several years in Australia.
These Pianos are in beautiful Italian walnut cases, and are in splendid condition, having been packed in zinc lined cases.
ALSO
TWO SUPERIOR PIANOS.
In Rosewood Cases, from the well-known house of HALLETT & CUMPSON, Boston. Also, direct from London per "A. J. Pope," a fine assortment of
MUSICAL INSTRUMENTS,
such as
Harmoniums, Violins, Organ Concertinas, Guitars, Violin and Guitar Strings, Piano Strings and Felt, Musical Boxes, assorted; Organ Accordeons with stands, Tamborines, Regulation Drums and Toy Drums.
CHRISTMAS IS COMING:
Also a large assortment of
HOUSEHOLD FURNITURE
EX LATE ARRIVALS.
Now Opening,
All of which will be sold CHEAP FOR CASH at our Ware Rooms on Fort Street. Particulars in advertisement next week.
C. E. WILLIAMS.

File Name:	The Hinds County Gazette, (Raymond, MS) Wednesday, June 13, 1855; Issue 1; col A
Copyright:	Gale, 2010.
Description:	Newspaper Classified
Date:	1855 (06-13)
Date Inserted:	11-01-2011
Notes:	E. V. Seutter selling guitar strings alongside other goods such as pistols.



NEW GOODS.

PER Steamer from New York.

Just received and opened by the undersigned, an extensive stock of

MUSIC.

Superior Guitars
Violins
Accordions
Clarionettes,
Banjos,
Fifes

£50 Violin and Guitar Strings
2 dozen Violin Bows, assorted
2 dozen Curtis' Guitar and other Musical Instruction Books
1-2 dozen splendid Music Boxes
A large lot of Rogers and Wostenholms' (I XL.) celebrated Cutlery, Razors, Pocket Knives, Scissors, &c.
A lot of PISTOLS
Portmoneys and Pocketbooks
do Fancy Pearl
Card Cases do for Ladies
6 dozen Spectacles, all sorts
3 dozen superior Gold Pens and Holders
Also—a lot of best Silver Hunting Watches
Ladies Crosses, of gold, jet and cornelian
Gilt Buttons, Bracelets
Plain Rings, heaviest and made to order.
6 dozen Silver Thimbles, of all sizes
Gold Lockets, Pub Buckles, &c.

The above goods (together with a large stock of Gold and Silver Watches, Jewelry, Clocks, &c. already on hand) I respectfully recommend to my customers and the public in general as being the best and cheapest lot of goods I ever bought at the East, and politely ask the public to see and price them.

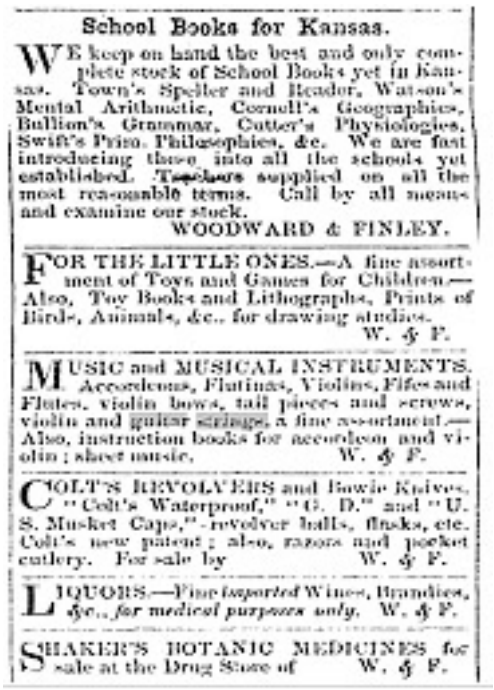
☞ *Repairing* and *Daguerreotyping* will as usual receive particular attention.

June 6, 1855. E. V. SEUTTER.

File Name:	The Hinds County Gazette, (Raymond, MS) Wednesday, March 06, 1872; Issue 24; col D
Copyright:	Gale, 2010.
Description:	Newspaper Classified
Date:	1872 (03-06)
Date Inserted:	11-01-2011
Notes:	Chas. H. Fry selling guitar strings alongside, spectacles and clocks.

LOOK TO YOUR INTEREST, AND GO TO
CHAS. H. FRY, CRYSTAL SPRINGS,
French and American Clocks--eight and one day.
SPECTACLES AND EYE GLASSES,

File Name:	The Kansas Herald of Freedom, (Wakarusa, KS) Saturday, December 06, 1856; Issue 20; col E
Copyright:	Gale, 2010.
Description:	Newspaper Classified
Date:	1856 (12-06)
Date Inserted:	11-01-2011
Notes:	Woodward & Finley selling all sorts of goods with different sections for each. Music ware includes guitar strings.



School Books for Kansas.

WE keep on hand the best and only complete stock of School Books yet in Kansas. Town's Speller and Reader, Watson's Mental Arithmetic, Cornell's Geographies, Bullion's Grammar, Cutter's Physiologies, Swift's Prim. Philosophies, &c. We are fast introducing these into all the schools yet established. Teachers supplied on all the most reasonable terms. Call by all means and examine our stock.

WOODWARD & FINLEY.

FOR THE LITTLE ONES.—A fine assortment of Toys and Games for Children.—Also, Toy Books and Lithographs, Prints of Birds, Animals, &c., for drawing studies.

W. & F.

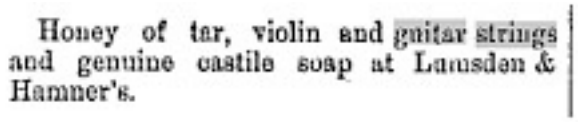
MUSIC and MUSICAL INSTRUMENTS. Accordeons, Flutinas, Violins, Fifes and Flutes, violin bows, tail pieces and screws, violin and guitar strings, a fine assortment.—Also, instruction books for accordeon and violin; sheet music. W. & F.

COLT'S REVOLVERS and Bowie Knives, "Colt's Waterproof," "G. D." and "U. S. Musket Caps,"-revolver balls, flasks, etc. Colt's new patent; also, razors and pocket cutlery. For sale by W. & F.

LIQUORS.—Fine *imported* Wines, Brandies, *&c., for medical purposes only.* W. & F.

SHAKER'S BOTANIC MEDICINES for sale at the Drug Store of W. & F.

File Name:	The Lynchburg Virginian, Monday, October 04, 1880; Issue 25; col A
Copyright:	Gale, 2010.
Description:	Newspaper Classified
Date:	1880 (10-04)
Date Inserted:	11-01-2011
Notes:	Honey of tar, castille soap and violin and guitar strings.


Honey of tar, violin and guitar strings and genuine castile soap at Lumsden & Hamner's.

File Name:	The Mississippi Free Trader, and Natchez Gazette, (Natchez, MS) Tuesday, May 15, 1855; Issue 16; col C
Copyright:	Gale, 2010.
Description:	Newspaper Classified
Date:	1855 (05-15)
Date Inserted:	11-01-2011
Notes:	W. Nash selling music, instruments and guitar strings.

Just received,

New, Beautiful and Easy Music.

SONGS—Dearest Mansion I've Waited for the Spring Time, Be Good, Queen of the Greenwood Tree, Nobody Knows, Is it Anybody's Business? "The Child's Faith in God," written by Rev. F. L. Hawks, D. D.

PIECES—Rocket Schottisch, Amelia Mazurka, Carrie Polka, Sevastopol Quick Step, Emperor's March, Italian Polka, Few Days Schottish, Morning Dew Polka, and many others.

Fresh Violin and Guitar Strings, Violins, Guitars, Tamborines, Banjos, Fifes, Flutes, Clarionetts, and every thing found in Music Stores.

Pianos for sale and to hire.

Second hand Pianos taken in exchange for new. Pianos put in first-rate tune and repaired.

Music Books in great variety.

my4 W. NASH, Main-st.

File Name: The Mississippian, Friday, August 13, 1858; Issue 14; col A

Copyright: Gale, 2010.

Description: Newspaper Classified

Date: 1858 (08-13)

Date Inserted: 11-01-2011

Notes: A. E. & H. C. Blackmar selling sheet music and guitar strings.

NEW MUSIC! NEW MUSIC!!

JUST received at Blackmar's Music Store, on this the 25th June, a large lot of sheet Music, among which are the following popular ballads: Gentle Annie, 25c; Bonny Eloise, 25c; Twenty Years Ago, 25c; Old Play Ground, 25c; Star of the Evening, 25c; Hark! I Hear an Angel Sing, 25c; Evangeline, 25c; Moss-Grown Dell, 25c; Listen to the Mocking Bird, 25c.

Also, just received this day, a full assortment of miscellaneous musical goods, including a large supply of *fresh Violin and Guitar strings.*

☞ Music and strings sent by mail free of postage.

june 25,' 58. A. E. & H. C. BLACKM&R.

File Name:	The Owyhee Avalanche, (Ruby City, ID) Saturday, December 16, 1871; Issue 11; col C
Copyright:	Gale, 2010.
Description:	Newspaper Classified
Date:	1871 (12-16)
Date Inserted:	11-01-2011
Notes:	S. Lebretch selling stationary, gloves, handkerchiefs, pistols and guitar strings.

S. LEBRECHT

(Washington street, Silver City, I. T.)

HAS JUST RECEIVED FROM SAN FRANCISCO an Extensive stock of

STATIONERY

and other goods, among which may be mentioned

CIGARS, Tobacco, Meerschaum Pipes

And Everything else adapted to the wants of Smokers.

An Elegant Variety of

PHOTOGRHIC ALBUMS,

Some of which contain splendid Movie Boxes.

A Complete Assortment of

GLOVES, SOCKS, HANDKERCHIEFS

And other kindred articles.

Derringers, Revolvers and Cartridges

Of all Sizes and Descriptions.

A Splendid Stock of Cutlery, including

BOWIE KNIVES, Dirks, DAGGERS, &c.

VIOLINS, and

Violin and Guitar Strings

Of the Best Qualities.

PICTURE FRAMES, Lamps, Jewelry, Gold Pens, Blank Books, New Novels, Candles, Nuts, and other Notions and Fancy Goods too numerous to mention—All of which will sold cheaper than ever.

Fresh Fruit received daily, and 100 boxes of winter apples for sale cheap.

☞ Satisfy yourselves by examining my goods and prices. S. LEBRECHT.

Oct. 20, 1871. n3tf

File Name:	The Ripley Bee, (Ripley, OH) Thursday, February 02, 1865; Issue 26; col D
Copyright:	Gale, 2010.
Description:	Newspaper Classified
Date:	1865 (02-02)
Date Inserted:	11-01-2011
Notes:	H. Daller selling, 'in short, everything you would expect to find in a jewelry store': clocks, accordeons, violin and guitar strings.

NEW and FASHIONABLE JEWELRY!

Mr. Herman Daller has just replenished his old and valuable stock of fine watches and ladie's Jewelry of all kinds, with many of the most fashionable articles—together with

Clocks, Accordeons, Violin and Guitar Strings,

and in short every article usually found in a retail Jewelry Store.

He has competent workmen in his shop to repair work in his line on the shortest notice

Call and see his newly fitted up room and examine his stock.

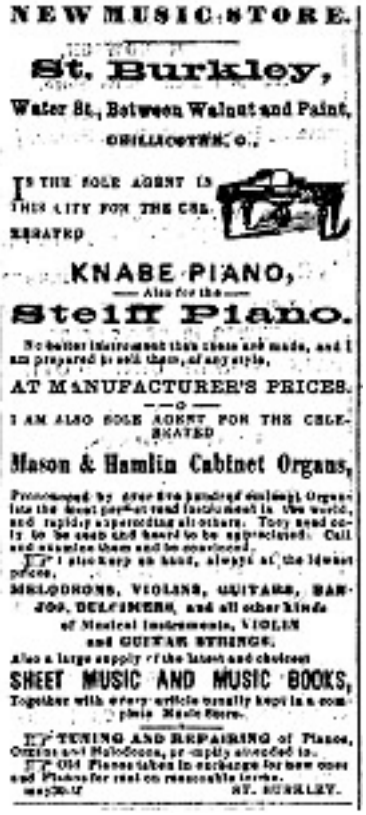
Thankful for past favors and patronage.

Respectfully

H. DALLER

Sept. 15, tf.

File Name:	The Scioto Gazette, (Chillicothe, OH) Tuesday, June 13, 1865; Issue 17; col C
Copyright:	Gale, 2010.
Description:	Newspaper Classified
Date:	1865 (06-13)
Date Inserted:	11-01-2011
Notes:	St. Burkley, piano seller offering guitar strings.



NEW MUSIC STORE.

St. Burkley,

Water St., Between Walnut and Paint,

CHILLICOTHE, O.,

IS THE SOLE AGENT IN THIS CITY FOR THE CELEBRATED

KNABE PIANO,

— Also for the —

Steiff Piano.

No better instrument than these are made, and I am prepared to sell them, of any style,

AT MANUFACTURER'S PRICES.

I AM ALSO SOLE AGENT FOR THE CELEBRATED

Mason & Hamlin Cabinet Organs,

Pronounced by over five hundred eminent Organists the most perfect reed instrument in the world, and rapidly superceding all others. They need only to be seen and heard to be appreciated. Call and examine them and be convinced.

☞ I also keep on hand, always at the lowest prices,

MELODEONS, VIOLINS, GUITARS, BANJOS, DULCIMERS, and all other kinds of Musical Instruments, VIOLIN and GUITAR STRINGS.

Also a large supply of the latest and choicest

SHEET MUSIC AND MUSIC BOOKS,

Together with every article usually kept in a complete Music Store.

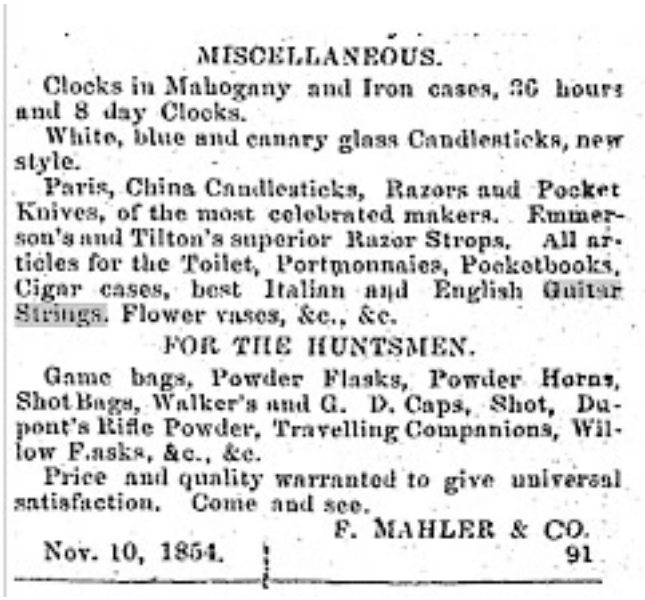
☞ TUNING AND REPAIRING of Pianos, Organs and Melodeons, promptly attended to.

☞ Old Pianos taken in exchange for new ones and Pianos for rent on reasonable terms.

may30-tf ST. BURKLEY.

File Name:	The Weekly Arizona Miner, (Prescott, AZ) Friday, July 19, 1878; Issue 31; col C
Copyright:	Gale, 2010.
Description:	Newspaper Classified
Date:	1878 (07-19)
Date Inserted:	11-01-2011
Notes:	Kelly & Stephens offering guitar strings alongside, stationery, fancy goods, t etc.

File Name:	The Weekly Raleigh Register, (Raleigh, NC) Wednesday, November 15, 1854; Issue 4; col F
Copyright:	Gale, 2010.
Description:	Newspaper Classified
Date:	1854 (11-15)
Date Inserted:	11-01-2011
Notes:	F. Mahler & Co. selling guitar strings amongst miscellaneous goods.



MISCELLANEOUS.

Clocks in Mahogany and Iron cases, 30 hours and 8 day Clocks.

White, blue and canary glass Candlesticks, new style.

Paris, China Candlesticks, Razors and Pocket Knives, of the most celebrated makers. Rummerson's and Tilton's superior Razor Strops. All articles for the Toilet, Portmonnaies, Pocketbooks, Cigar cases, best Italian and English Guitar Strings. Flower vases, &c., &c.

FOR THE HUNTSMEN.

Game bags, Powder Flasks, Powder Horns, Shot Bags, Walker's and G. D. Caps, Shot, Dupont's Rifle Powder, Travelling Companions, Willow Flasks, &c., &c.

Price and quality warranted to give universal satisfaction. Come and see.

F. MAHLER & CO.

Nov. 10, 1854. 91

File Name:	The Wisconsin State Register, (Portage, WI) Saturday, April 16, 1870; Issue 6; col D
Copyright:	Gale, 2010.
Description:	Newspaper Classified
Date:	1870 (04-16)
Date Inserted:	11-01-2011
Notes:	Brewer & Bard selling guitar strings amongst miscellaneous goods.

☞ The most Beautiful Silver Goods, put up in morocco cases, for Wedding Presents: Silver Spoons, Forks, Butter Knives, Ladles, also Plated Goods of all kinds cheaper than ever, at the new store of Brewer & Bard, corner of Cook and Wisconsin streets. All goods sold by us will be marked free of charge.

☞ Gold and Silver, Steel and Plated Spectacles, Nose Glasses of all sizes and colors to suit the unfortunate. We have an optimeter, so it is but little trouble to give a fit. Be sure and call on Brewer & Bard before purchasing elsewhere.

☞ To get the best assortment of Organs, Melodeons, Violins, Guitars, Flutes, Fifes, Accordeons, Banjos, Dulcimers, Clarionets, Picalos, Violin strings, Guitar strings, Pegs, Rosin, Bridges, &c. &c., call on Brewer & Bard.

☞ Fine Watches, Clocks and Jewelry neatly repaired and warranted to give satisfaction in every case, and done promptly, by Brewer & Bard.

File Name:	The Wisconsin State Register, (Portage, WI) Saturday, February 17, 1877; Issue 51; col G
Copyright:	Gale, 2010.
Description:	Newspaper Classified
Date:	1877 (02-17)
Date Inserted:	11-01-2011
Notes:	Graham selling guitar strings amongst miscellaneous goods.

Violin and Guitar Strings.

We have the finest and best strings we can purchase.

GRAHAM.

MOLDINGS AND PICTURE FRAMES.

We buy from manufacturers and do sell as low as any house. In stock all kinds of frames and a select stock of pictures and chromos. Call and see for yourselves.

GRAHAM.

Reward & Sunday School Cards

Mottoes, book marks, &c. No finer or more complete stock in the market. AT GRAHAM'S.

Writing Materials.

Bargains in all kinds of writing materials. Have just bought a job lot of Fancy Paper in boxes. Papers that are usually sold at 75 cents now sell for 50 cents; the 50 cent for 25 cents, and the cheaper at 20 cents. New style of Visiting Cards, gold or silver edge, and in all other goods a complete line.

GRAHAM.

File Name:	The Wisconsin State Register, (Portage, WI) Saturday, January 20, 1866; Issue 45; col B
Copyright:	Gale, 2010.
Description:	Newspaper Classified
Date:	1866 (01-20)
Date Inserted:	11-01-2011
Notes:	D. A. Hillayer selling assorted goods including guitar strings.

Automatic & American Organs

Musical Instruments,

PHOTOGRPHIC ALBUMS

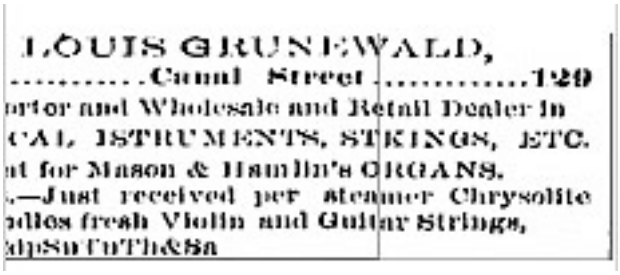
File Name:	Times Picayune, published as The Daily Picayune: Date: 08 -11-1878; Page: 4; Location: New Orleans, Louisiana.
Copyright:	News Bank and/or the American Antiquarian Society. 2004.
Description:	Newspaper Classified
Date:	1878 (08-11)
Date Inserted:	11-01-2011
Notes:	Philip Werlein selling guitar strings.

Musical Instruments.

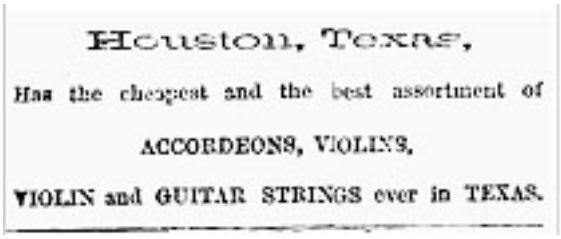
Just landing ex steamer Fire Queen an invoice of MUSICAL INSTRUMENTS; Also, Fresh VIOLIN and GUITAR STRINGS, HAND ORGANS, MUSIC BOXES, etc.

PHILIP WERLEIN.

File Name:	Times Picayune, published as The Daily Picayune: Date: 10 -07-1869; Page: 4; Location: New Orleans, Louisiana.
Copyright:	News Bank and/or the American Antiquarian Society. 2004.
Description:	Newspaper Classified
Date:	1869 (10-07)
Date Inserted:	11-01-2011
Notes:	Louis Grunewald's music store selling guitar strings.


LOUIS GRUNEWALD,
.....Canal Street.....120
ort or and Wholesale and Retail Dealer in
CAL ISTRUMENTS, STRINGS, ETC.
nt for Mason & Hamlin's ORGANS.
.—Just received per steamer Chrysolite
ndles fresh Violin and Guitar Strings,
ajSu fuTh&Sa

File Name:	Union, published as The Houston Daily Union; Date: 02-13 -1871; Volume: III; Issue: 135; Page: [1]; Location: Houston, Texas
Copyright:	News Bank and/or the American Antiquarian Society. 2004.
Description:	Newspaper Classified
Date:	1871 (02-13)
Date Inserted:	11-01-2011
Notes:	Violin and guitar strings.



File Name: Vermont Chronicle, (Bellows Falls, VT) Saturday, November 05, 1870; pg. 3; Issue 45; col C

Copyright: Gale, 2010.

Description: Newspaper Classified

Date: 1870 (11-05)

Date Inserted: 11-01-2011

Notes: A. G. & A. E. Amsden selling general goods as well as violin and guitar strings.

BILLIARD HALL.

A. G. & E. G. AMSDEN have removed to their New Hall in

CONSTITUTION BLOCK,

WINDSOR, VERMONT.

TABLES AND EVERYTHING ALL NEW.

SEWING MACHINES.

WILCOX & GIBBS and SINGER Sewing Machines, Needles and Machine Oil, for sale at AMSDEN'S BILLIARD HALL.

Carpenter's Basters and Guiding Attachment, always on hand. Send for circular. The Baster is sent free on receipt of three dollars. Agents wanted in Rutland, Chittenden, Franklin and Windsor Counties, Vermont, and in Sullivan County, N. H.

A. G. AMSDEN, Agent.

— ALSO —

Target and Sporting Rifles, Shot Guns, Powder and Shot, Caps, Metallic Cartridges, Gun Cones, Smith & Wesson's Revolvers, Magic Copying Ink, copies instantaneously, without press or water, French Copy-Books, Violins, Bows, Pegs, Bridges, Tail-Pieces, Strings, Rosin, Guitar Strings, Violin Books, Accordeons, Tuning Forks, &c.,

AND ALWAYS ON HAND FOR A SWAP ON VIOLINS.

A. G. & E. G. AMSDEN.

j51-50

File Name:	Vermont Patriot & State Gazette, (Montpelier, VT) Thursday, March 17, 1853; Issue 13/377; col C
Copyright:	Gale, 2010.
Description:	Newspaper Classified
Date:	1853 (03-17)
Date Inserted:	11-01-2011
Notes:	Charles C. Clapp & Co. selling music ware alongside parasols.

Charles C. Clapp & Co.

69 Court Street, (cor. Court st., & Cornhill,)
Wholesale and Retail Dealers in

Sheet Music, Musical Instruments, Umbrellas, Parasols' Canes, Violin, Violoncello, Double Bass and Guitar Strings.

On hand a full assortment of Brass Instruments.
☞ The celebrated MULLER and EULER Instruments constantly on hand.

File Name:	Vermont Watchman and State Journal, Friday, January 27, 1854; Issue 10; col D
Copyright:	Gale, 2010.
Description:	Newspaper Classified
Date:	1854 (01-27)
Date Inserted:	11-01-2011
Notes:	Kramer selling toys and fancy goods alongside guitar strings.

TOYS AND FANCY GOODS.

KRAMER & HEYER,

Importers of

Fancy Goods, Toys, Musical Instruments, Baskets,

POCKET CUTLERY, VIOLIN, GUITAR & CELLO STRINGS, of the very best qualities.

File Name:	Weekly Journal Miner, published as Arizona Miner; Date: 04-20-1867; Volume: IV; Issue: 8; Page: [3]; Location: Prescott, Arizona
Copyright:	News Bank and/or the American Antiquarian Society. 2004.
Description:	Newspaper Classified
Date:	1867 (04-20)
Date Inserted:	11-01-2011
Notes:	Katz & Sumb selling general goods including guitar strings.

BOOKS AND STATIONERY,
Standard bound Books—Family Bibles, in
egant bindings—new School Books—
Slates—Copy Books—New Novels,
by the best authors, at publishers'
prices—Paper—Envelopes—Le-
gal Blanks—Steel Pens—Pen-
cils—Ink—Writing Fluid, &c. &c.

NEWSPAPERS AND MAGAZINES,
At reduced rates, for which we will rece
subscriptions on the most liberal terms.

FRENCH PERFUMERY AND TOILE
ARTICLES—a great variety.

Every description of SMALL HARDWAR
Household Goods—Wood and Willow
Ware, Brushes, Mops, and Dusters,
Window Sashes, Doors, Window
Blinds, Music and musical Instru-
ments—Genuine Roman Guitar
and Violin Strings—Paintings
and Engravings—Looking
Glasses and Toys—French and Bohemia
—GLASSWARE—
Fancy Goods—YANKEE NOTIONS, &c

☞All Cash orders promptly attended
Goods received by every Steamer.
MARCUS KATZ,
FERNANDO C. SUHR.
Ma. 9-5tf.

File Name:	Wisconsin Daily Patriot, published as The Wisconsin Daily Patriot; Date: 06-21-1862; Volume: 8; Issue: 43; Page: [1]; Location: Madison, Wisconsin
Copyright:	News Bank and/or the American Antiquarian Society. 2004.
Description:	Newspaper Classified
Date:	1862 (06-21)
Date Inserted:	11-01-2011
Notes:	Firth, Pond & Hall selling musical ware including guitar strings.

MUSICAL INSTRUMENTS
SHEET MUSIC,
547 Broadway, New York.
Great Inducements Offered to Purchasers.

File Name:	Worcester Daily Spy; Date: 05-19-1889; Volume: I; Issue: 44; Page: 4; Location: Worcester, Massachusetts.
Copyright:	News Bank and/or the American Antiquarian Society. 2004.
Description:	Newspaper Classified
Date:	1889 (05-19)
Date Inserted:	11-01-2011
Notes:	Leland & son selling imported violin strings.

Fresh Importation
JUST RECEIVED FROM
GERMANY.
SUPERIOR VIOLINS.
VIOLONCELLOS.
VIOLIN BOWS.
VIOLIN STRINGS.
VIOLIN RESIN,
CHIN RESTS,
BOW HAIR,
CLARINETS,
PICCOLOS,
S. R. LELAND & SON
446 MAIN ST., 446.