# Charpentier, Munchs & Louis: The Guitare-multicorde A Harp Guitar 190 Years Ahead of Its Time

By Gregg Miner May 2022



Dedicated Harpguitars.net readers should recognize this instrument as it's been on the site since inception. My 2016 BLOG details my visit with the key surviving specimen in the Brussels Museum with Benoît Meulle-Stef, when we first had the chance to explore this unique "seeming-one-off."

What none of us knew until now was anything about the precise date, location, inventors, tuning, purpose, and builder(s). All of which can now be answered – except for that last one (we still don't know!).

We knew that it was marked *Munchs et Charpentier 1832* but couldn't track down those "luthiers" (hint: it turned out they weren't the actual builders).

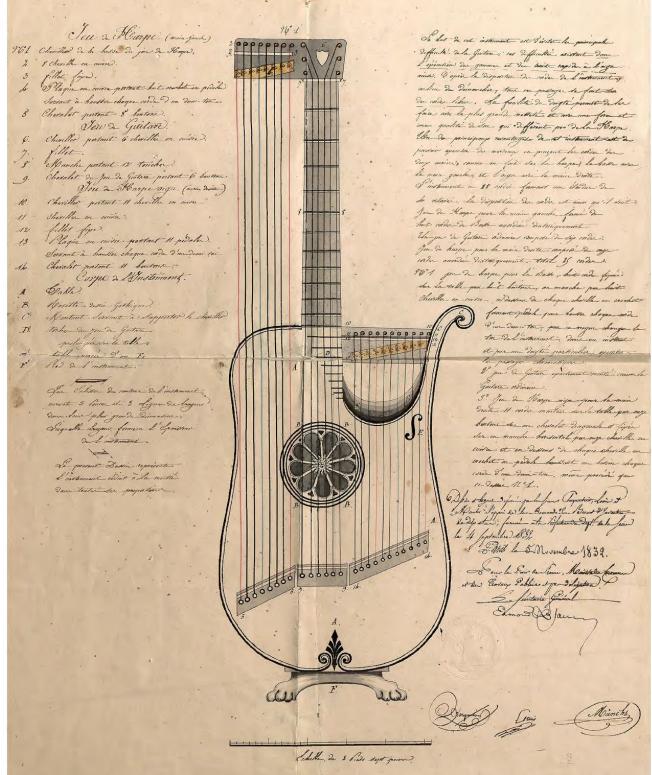
Then last year, colleague Robert Coldwell (who readers are getting to know quite well with his frequent help with my research), sent me some newly discovered entries on *Charpentier*, *Münchs* (or Munchs) & *Louis* (and another, *Milliet*), which yielded more information about the instrument.

I next had Erik Hofmann, another name familiar to my readers, do a full translation on all this and more (a huge thanks to Erik Hofmann for his translations, and his clarifying comments contained in []).

I volunteered to keep this all under wraps until <u>Erik's new book came out</u>...as he said it would contain a surprise. Indeed, it did...the patent for this very instrument!

And here it is, in all its full harp-string-colored-glory, courtesy of the Paris patent office (with kind permission) and Erik Hofmann (his cleaned-up image):

Guilare multicorde),
immin la Michiel Chargentin a l'accommendaga de Marique .



We now know that the instrument was, in fact, not a one-off – there are two similar specimens in museums – but that it began with a very detailed patent and was intended as a serious new instrument (but then, aren't they *all?*). The serious intent is deduced not from the patent – many such "white elephants" never see the light of day – but by the fact that it was treated seriously in at least one journal and methods and music were written for it.

So, what exactly **was** the Guitare-multicorde?

The November 5, 1832 patent records it as the invention of one "Charpentier, member of the Royal Academy of Music, and Mssrs Louis and Münchs." Beyond Charpentier's association with the Royal Academy, nothing further can be gleaned of him, nor of Louis. As for Münchs, he's listed in a few publications; Hofmann discovered him to be "also a composer and established as a musical instrument seller, maker and publisher between at least 1845 and 1850." A fourth, and possibly key person involved, was a guitarist named Milliet.

The intent of the instrument is described in the patent thusly (English translations by Hofmann):

"The purpose this instrument serves is to work around the main challenges inherent to the guitar, such as performing scales and fast passages in the treble area; thanks to this instrument's disposition of strings, instead of requiring left-hand shifts, all such passages can be executed on open strings. The fluency of fingerings allows to do so with greatest accuracy and to achieve a strength and volume of tone which comes very close to that of the harp. One of the main advantages of this new guitar is that it allows to play pieces solely by plucking strings with both



hands, just as it is done with the harp, the bass side with the left hand and the treble side with the right.

"The instrument with 25 strings offers a tessitura of four octaves, which are displayed as follows: a harp register for the left hand which is composed of eight diatonically tuned strings, a standard guitar register composed of six strings, and a harp register for the right hand composed of eleven diatonically tuned strings; for a total of 25 strings."

As Erik thought the above playing description unlikely, or at best, unwieldy, I'll point out one of the first tests I performed with it, demonstrated at left.

As you can see, the instrument could indeed have been played either using the guitar neck or the two banks of harp strings alone. It's not unwieldly at all; essentially, I'm utilizing traditional Ukrainian bandura position for playing open basses and trebles, as seen on that instrument here (flickr.com):

The other note-worthy claim in the patent is the instrument's full four octave range, and we can clearly see - by the illustration's hand-colored red C and blue F harp strings - exactly where the compass lies. Due to the shortness of the sub-bass strings, barely longer than the guitar neck, we can easily deduce that this lowest string, C, is that four steps below the neck's E string. The high floating bass is C, so the sub-basses have become re-entrant,



having crossed the neck's two lowest strings. An octave up and we are at middle c' on the guitar neck's second (B) string. Another octave brings us to c'', equivalent to the high string's  $8^{th}$  fret. The four octaves thus end at a final red harp-string, c''' – or the note at the neck's  $20^{th}$  fret.

That looked too good to be true, so I next asked my friend, harp-guitar/harp builder Benoît Meulle-Stef, to help me with some calculations for a reality check. If the patent drawing's guitar neck scale was similar to the Brussel's specimen of 628mm (just under 24-¾"), the shortest harp string would hit about 10" for vibrating string length. Even if the instrument was tuned lower at 415 Hz, a gut harp c''' string would be at or past its breaking point!

Now, we know that many patent drawings never actually get built, but we know that this one was...and that it was played using its original 4-octave range. This invaluable bit of evidence comes from an article in *Le Ménestrel*,  $n^{\circ}187$ , July  $2^{nd}$ , 1837, some five years after the instrument's invention. Not only is the instrument still viable, but it has been "perfected by Mr. Milliet, who knows all of its secrets." One of those "secrets" comes straight from the patent, repeated here: "The strings include five Cs, consequently covering a tessitura of four octaves." Yes, with the original patent harp guitar, Milliet "has played us a couple of airs he composed as well as pieces by Messrs. Sor and Carcassi, which he arranged for the 25-string guitar."

Clearly what happened was that a prototype instrument was commissioned, and, if the mystery luthier adhered to the patent drawing's design and the required harp string tuning, he and the inventors quickly realized that they'd need shorter harp strings. At some point, they must have further collaborated with one or more builders, along with the guitar player Milliet, all of whom undoubtedly succeeded in creating a satisfactory instrument for Milliet. Indeed, he obviously took the instrument seriously, convincing the *Le Ménestrel* editor of its merit. The latter wrote, "We were astonished by the variety of resources this new device offers and the skills with which Mr. Milliet knows how to take advantage of it. We can therefore only recommend this instrument to those amateurs who already play the guitar, and to all the artists who thus far ignored it because of its sterility." And no, this would not be the last time a harp guitar inventor or player pointed out the 6-string guitar's "shortcomings"!

Milliet "claims that every amateur who is already familiar with the neck of the guitar, after only three or four months of practice, shall be able to play the new instrument in a satisfying way." Milliet's footnote states: "Mr. Milliet, a former student of Mr. Carcassi, presents and teaches playing the 25-string guitar at the address Galerie Colbert, staircase A. One may also find at the professor's address a complete method written for the instrument as well as a varied repertoire comprising airs, rondos, waltzes, marches, etc. etc."

Not only did Milliet write a complete method in the mid-1830s, but in this catalog, allegedly published in 1850 (according to Google Books; this date seems doubtful), we find three more entries for the Guitare Multicorde:



The catalog lists an astonishing collection for the instrument by Carulli (1st collection of progressively difficult pieces) along with methods from the three original inventors: Charpentier (Phased instruction following up on the methodical approach) and Louis (&) Munchs (Methodical approach of playing the multi-string guitar, the new instrument invented and improved by Mr. Charpentier, member of the Royal Academy of Music).

In this new light, I am imagining a scenario for the Guitare-multicorde somewhat like that of the Harpolyre, a seemingly bizarre invention intended for outside-the-box-thinking guitarists that was taken seriously by a few, including none other than Fernando Sor.

Despite the many references to its "harp strings" (their patent even included colored harp strings!), the Guitare-multicorde's inventors chose not to call it a "harp-guitar" or similar. Perhaps they (shrewdly) chose to avoid confusion with Edward Light's recent "Harp-Guitar" of the harp-lute family, and more to the point, differentiate it from the more recent and noteworthy Harpolyre.

Ah, the Harpolyre. Let's take another look at it, as the appearance of two such similar instruments within three-to-five years in Paris surely cannot be a coincidence?





While the two inventions look almost nothing alike, their purpose and stringing are surprisingly similar. As the Harpolyre came first (allegedly invented in 1827 and patented in 1829), it must be considered an "original" and not a derivative. The center neck of both instruments is the same: a standard scale and tuning 6-string guitar.

Each instrument then adds a bank of open bass strings on the left side and open treble strings on the right. An obvious key difference of the Harpolyre is that all three necks are *fretted*. Why?

The short answer is that it was 99% for aesthetic reasons. As for the bass side, the only possible use would be for stops for a capotasto, which would raise the entire bank of six strings to a new key. There would be virtually no need to ever use the left-hand fingers to stop any of the strings at a particular fret, as the tuning is chromatic ( $A_1$  through  $D /\!\!P$ ); i.e.: there are no additional potential stopped notes not available elsewhere. Conversely, the Guitare-multicorde basses are diatonic in the key of C, with each string having a "sharping lever" to change keys as desired (the Brussels specimen omitted this option; I suspect Milliet did not).

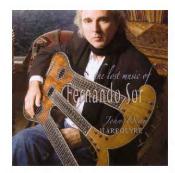
Finally, regarding our bass section comparison, the Harpolyre's bass range descends three half steps below the Guitare-multicorde's, while both may be considered "hands-free versatile," depending on one's musical goals.

The treble side string bank is what is most intriguing on the Harpolyre. The pitch of this diatonic C scale ranges from c to c', or exactly what lies already on the guitar's neck along the  $2^{nd}$  to  $5^{th}$  strings. This is a full *two octaves* lower than the treble harp strings on the Guitare-multicorde. Again, *why?* 

The obvious conclusion is that this was a necessity dictated by the specific and deliberate design of the symmetrical instrument. With a treble neck even longer than the center guitar neck, what other options could there be? This mid-range tuning nevertheless allowed similar harp effects –

a C glissando, or open chords, etc. Indeed, the strings were often put to fascinating musical use by Sor, as demonstrated in John Doan's remarkable recording accomplishment, his *The Lost Music of Fernando Sor.* 

Again, this treble neck is fully fretted. And, as outlined in my Harpolyre article, Professor Doan once again deciphered it long ago, when he studied the scores for the instrument. It occurred that, very rarely, the frets under the furthest highest string of the third neck are



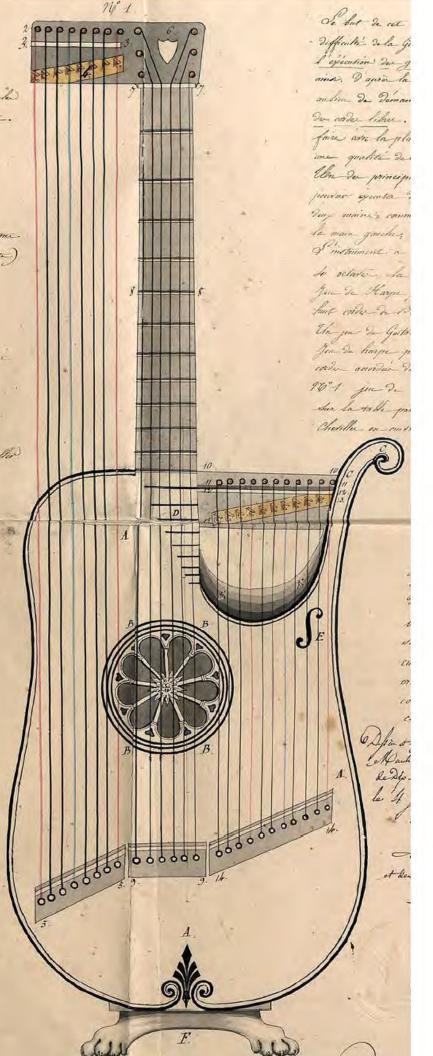
called into play - ascending the scale or used for a "pull-off" grace note into a harp figure. Except for these rare single string effects, there is absolutely no need for a full range of frets on the outer necks. The fret "overkill" is simply an aesthetic design choice, while the frets on the bass neck are there purely for decorative symmetry – as stated by the inventor Salomon himself.

Here, the Guitare-multicorde seems to eclipse the Harpolyre, as its treble harp strings, greater in number, increase the instrument's range significantly. Another advantage is that its three string banks are much closer together for playing transitions with the right hand. The Harpolyre's banks require long wider jumps. Again, it seems to me entirely too coincidental that the 1832 Guitare-multicorde appeared without any knowledge of, or influence by, the Harpolyre.

Another comparison must be aesthetics, and here the Harpolyre truly shines. It is a beautifully realized and constructed instrument, with all the hallmarks of a fine Parisian instrument. The three design versions of the Guitare-multicorde, by comparison, range from "interesting" to "well, rather ungainly." Not only that, but there is none of the fine workmanship of a good guitar or harp maker. While it would make sense that these would have also been built in Paris, there do not seem to be any features to indicate that. Instead, both Benoît and I have always thought that the two surviving specimens appear English-made and cruder yet than the mass-produced harp-lutes of Edward Light and others.

Finally, the mark of relative success can be gleaned from the survival rate of instruments. There are just the *two* Guitare-multicorde we know of, while many (Tens? Dozens?) Harpolyres can be found in museum and private collections.

Now, before moving to our examination of the two extant specimens, let's study the provided patent details, referring to the illustration's reference numbers:



## Left hand harp register

#### No.

- 1. Head of the bass side harp register
- 2. Eight copper pegs
- 3. Stationary nut
- 4. Copper plate fitted with eight levers or pedals to individually raise the pitch of each string by a semi-tone
- 5. Bridge equipped with eight pins

## Guitar register

- 6. Head with six copper pegs
- 7. Nut
- 8. Neck with 12 intervals
- 9. Bridge of the guitar register equipped with six pins

## Right hand or treble side harp register

- 10. Head with 11 copper pegs
- 11. Copper peghead
- 12. Stationary nut
- 13. Copper plate equipped with eleven levers to individually raise the pitch of each string by a semi-tone
- 14. Bridge with 11 pins

#### The instrument's body

- A. Soundboard
- B. Gothic design rosette
- C. Arm in support of the peghead
- D. Guitar register frets on the soundboard
- E. 'f'-shaped soundboard opening
- F. The instrument's stand

The instrument's sides should be 3 inches [1 inch = 2,71 cm] and 3 ens [1 en = 2,26 mm] large at their widest point. This equates to the instrument's thickness.

The opposite drawing represents the instrument in half size and with correct proportions

The remainder of the patent text describes the three main registers, and signatures:

No.

- 1. Bass side harp register, eight strings attached to the soundboard by means of eight pins and to the neck by means of eight copper pegs. Beneath each peg is located a lever which works just like a pedal to tune the string up by a semi-tone, and by that means alter the instrument's tuning in an instant; a special fingering then allows to execute the chromatic passages.
- 2. Guitar register tuned exactly like a standard guitar.
- 3. Treble side register for the right hand. Eleven strings attached to the soundboard by means of eleven pins on a diagonal bridge and attached to the neck in a horizontal fashion by means of eleven copper pegs; beneath each peg is located a lever which works just like a pedal to tune the string up by a semi-tone, to the same effect as described under no.1.

Sketch and captions submitted by Mrs. Charpentier, Louis and Münchs in support of their demand of an invention patent for ten years, submitted to the prefecture of the Seine department [the "département de la Seine" is an administrative region which existed from 1790 to 1968; it included Paris] on 4 September 1832.

For the Peer of France, minister of commerce and public works, by delegation the general secretary,

#### **Edmond Blanc**



With all the above information in hand, it was time now to send Benoît Meulle-Stef (below) back to the Brussels Musical Instrument Museum (at left). After explaining our project to the new curator, Joris De Valk, he was granted a visit, with his full complement of measurement devices in hand!



The following photographs are from May 2022, all by Ben.



My main concern now was to get measurements of each string bank and information on the remaining strings, some of which *may* be original.

# Benoît's findings:

Brussels #2490 Guitare-multicorde "Munchs et Charpentier 1832"						
Vibrating length	mm	inches		String	Gauge (mm)	Material
Bass 1 (low)	720	28.35		Bass 2	1.4	red silk core
Bass 6 (high)	650	25.60		Bass 3	1.35	purple silk core
				Bass 6	0.75	
Neck	628	24.72		Guitar D	0.9	silk core
				Guitar G	0.95	gut
Treble 1 (low)	345	13.58		Treble 1	1.2	gut blue
Treble 9 (high)	238	9.37		Treble 2	1	gut
				Treble 4	0.8	gut red
				Treble 5	0.8	gut
				Treble 6	0.7	gut
				Treble 7	0.55	gut
				Treble 8	0.5	gut
				Treble 9	0.5	gut

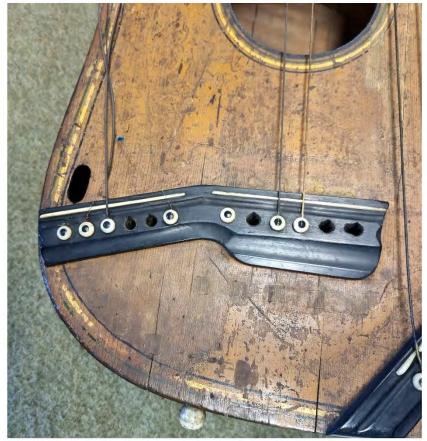




The first thing we are now better informed of concerns the number of treble strings, which has been reduced to nine from the patent's intended eleven. Which two are missing? Almost certainly the two problematic high notes, which would put the top note here at a'', which according to Ben's calculations of scale length and string gauge would be perfectly achievable.

It's also interesting to note that the fourth treble is strung properly with a red C harp string, as the patent illustrates...although the blue F strings are not correct, so perhaps this is just a sign of random "whatever was on hand" string changing.





Many other differences from the highly detailed patent drawing are apparent, but let's look at those along with our final specimen, an unlabeled instrument in the Nice Museum in France:



Try as I might, I can't come up with a timeline for these three iterations. The Nice specimen is very similar to the Brussels in the manner of its simplistic "English harp-lute vibe" construction. Are its several differences a sign of different luthiers, experimentation of patent features, or both? It appears to have had the sharping mechanism array in both bass and treble sections, now missing. Its extended ("theorboed") headstock looks like it took the patent's design and embellished it into something a bit nicer — while the Brussels instrument builder opted for a

decent harp guitar design. Note the *ten* treble strings of the Nice specimen. Again, a seeming response to the high string breaking; yet if overlaid over the Brussels, this high string is actually longer still than the Brussels' 238 mm.

The harp strings are given a bit more of an angle toward the low notes in different ways, and both treble bridges were completely moved away from the guitar bridge, in an effort for a steeper harp-like harmonic curve; they were expecting to string it with available harp strings, after all!

Other observations? The Brussels is clearly the more elegant, though the body not as much so as the patent drawing. It includes the decorative "S" hole in the treble "arm" and a funny extra little bass "escape hole." Both instruments likely had similar style inset rosettes, and both probably rested on feet or a base. The Brussels omitted completely the option of sharping devices for any harp strings.

# Popularity and Legacy

It's interesting also to ponder how the patent and the two surviving instruments may relate to Milliet's involvement, so let's return to him briefly.

Le Ménéstrel first included a write-up on the invention in their no. 19 issue of April  $6^{th}$ , 1834 - a year and a half after the patent was issued. They enthusiastically (if embarrassingly) write:

"Almost every musical instrument still in use in the modern arts has been modified, perfected and gone through some substantial changes. Only the guitar has stayed exactly the same for fifty years, if it weren't just for one single string. It is certainly the instrument's limited resources which explain why even the best trained artist produces such little effect on it. Just like the harp and all other instruments where the fingers replace the bow, the guitar is deprived of the faculty to sustain notes, and contrary to the harp, it doesn't have the multitude of strings and brilliance of chords to compensate. One should therefore not be surprised that the guitar holds a secondary position in the arts, and that despite of their remarkable talents, Sagrini, Huerta, Saur [sic], Legnani and others have never known greater fame in the musical world. But here is one invention that might put the status quo to a test. Mr. Charpentier from the Royal Academy of Music, with the help of Messrs. Louis and Munchs, has elaborated a new type of instrument with 25 strings, which combines both the possibilities of the harp and the guitar. It is composed of a standard guitar register with 6 strings and 19 additional strings dispatched left and right of it, so to speak, tuned diatonically. The way these strings are displayed makes for a range of four full octaves. This display allows switching from one register to the other, or playing the guitar and harp register at the same time with great ease. The ingenious combination of both produces the richest and most harmonic effects, barely without any change to the volume [i.e. body size?] of a normal guitar. Mr. Milliet, a pupil of Mr. Carcassi, who is versed in the secrets of the new instrument, will soon present its marvellous resources to us. The musical world shall thus experience new pleasures, and the arts will have made great progress."

As we saw from the July 1837 article above, Milliet had just then finally made it into the *Le Ménéstrel* offices to demonstrate his own perfected 25-string 4-octave instrument. The editor/author(s) were impressed, not only repeating but doubling down on their 6-string guitar doomsaying, writing:

"Throughout the musical world, there is one instrument our predecessors worshipped above all; an instrument which still holds a special position in Spain today, despite the fact that it has no particular merits which would justify such devotion. Over these past fifty years, it remained virtually unchanged, seeming to bother neither about our epoch's requirements, nor progress in the arts; this is how in France, in fair return, it has been abandoned even by its most ardent partisans. The musical world has treated the disgraceful instrument with disdain, and today, said instrument, which — to finally call the thing by its name — is the guitar, has found itself stowed away among the outcasts of the realm of harmony. How sad for her! She who is so plain, so neglected that even past lovers like Sor, Legnani, Carcassi, Sagrini or Huerta, have now forsaken her or enjoy her charms without giving her any consideration. But here is an instrument of a totally new kind. It is presented with the laudable intention to rehabilitate the guitar or, at least, help assure its survival. On an earlier occasion, the Ménéstrel has already told its readers about the 25-string guitar - an instrument which by means of a simple, yet ingenious mechanism, adds to the capacities of the standard guitar the brilliant effects of the harp."

They then go into the instrument specifics and Milliet's demonstrative success with it as stated above.

Whatever the two surviving instruments represent – and from what stage in the development – neither is Milliet's own instrument; we must presume he had someone build him a perfected instrument with proper strings and harmonic curve. Sadly, we can only imagine it in our minds.

Despite the attempts by Milliet and *Le Ménéstrel* to publicize its merits, the Guitare-multicorde seems to have disappeared after 1837, its life span only a short five years or so.

Yet here we are, approaching two centuries later, and instruments very much like the short-lived Guitare-multicorde have become hugely popular! How did this happen?

It is part of the "Renaissance of the harp guitar" that has been accelerating since the 1980s. Indeed, all manner of forgotten harp guitar designs are being re-discovered and studied, along with new inventions created out of thin air. Significantly, this particular form – i.e.: one with both open bass and treble string banks – was even famously re-invented!

Coincidentally, its inventor was the same John Doan that would eventually see the Harpolyre taken to its historically valid conclusion (its music played and preserved on an authentic instrument). Interestingly, his own invention (he considers it more of a re-imagining) was based not on the very similar Guitare-multicorde, but on an American harp guitar created by Norwegian Chris Knutsen in the late 1800s: yet another iteration of adding both bass and treble strings to a standard guitar.





Top: Chris Knutsen and family c. 1898 with two of his 18-string harp guitars.

Left: John Doan's 1986 20-string harp guitar built by John Sullivan with Jeff Elliott consulting.

Right: John Doan in Frets magazine, 1988, demonstrating various harp guitar techniques.



What John Doan envisioned was a modern take on Knutsen's 18-string instrument, increasing the strings to 20, and having two of Portland's best guitar designers/builders collaborate on it. The "Sullivan-Elliott 20-string Concert Harp Guitar," as it would become known is still being widely copied today, and variants as imaginative as – and beyond – that of 1832 or 1986, continue to pop up all over the world.

And musicians are *playing* them...just as the Guitare-multicorde's inventors may have envisioned, with hands gliding back and forth effortlessly across the guitar's neck and trebles and basses, in every possible combination of fingers and strings!

Charpentier, Munchs & Louis – to say nothing of the dedicated Mr. Milliet – undoubtedly would have been proud.

**Thanks to** Robert Coldwell, Erik Hofmann, Steve Gallizia from the INPI patent office, Joris De Valk, Benoît Meulle-Stef, John Doan, and all the builders and players of the instruments below.

Next page: Just a sample of some of the many modern variants of this concept.



William Eaton Arizona



Mike Doolin Oregon



Alan Perlman California



Fred Carlson California



Brunner Guitars Switzerland



BMS Guitars Belgium



Rich Mermer Florida



Jim Worland California



Tonedevil Idaho



Woodley White Hawaii



Mitsuhiro Uchida Japan



Takahiro Shimo Japan



Emerald Guitars Ireland



Utopia Guitars Italy



Seraph England



Cedric Verglas France



Keith Medley Tennessee



Stephen Sedgwick Germany



Michel Pellerin Canada



Michael Dunn Canada



Tony Karol Canada