

Louis David Pons, Paris 1827 : guitar with adjustable neck.

This nice guitar, anonym, in bad conditions, was bought by a Italian collector who brought it to us to be restored.

The coat of arms on the headstock as well as the label are missing, but the authenticity is evident: Pons, Paris, circa 1825. The model, the bracings, and the material used are those preferred by the Pons brothers; the design of the bridge is by Louis David Pons.

The neck was separated from the body. It had been (several times?) glued again, pieces seem to have been added, the gluing did not resist. 2 small brass splices are coming out of the block, the 12th case in spruce is broken and drowned in glue, and a large part is missing.

. long cracks on the ribs and some parts of the satinwood missing at the joint neck/body (box) indicate that after a shock the neck was separated from the box and that a sloppy gluing was done.

. in an envelope we found a long screw ending with a nice lathed ivory & mother of pearl button, a small piece cut out in brass, other smaller pieces, as well as the butterfly pegs and the small broken piece in ebony of the heel. Heads of the butterfly pegs are according to the usual model and size but are in ivory, and the screw has been "blued".



When cleaning the numerous important layers of glue, to be able to fit the neck back in its place, we observed :

- . an unusual mortise, somehow too important for Louis David Pons and for the period,
- . the neck has 2 brass stops at the top extremity (soundboard side) and holes more or less well tapped by glue in the centre, the extremity of the heel is broken,
- . the block holes correspond to the splices of the neck and do not seem to have been touched,
- . the inlaid pieces in the block and the neck's heel seem apocrypha,
- . the filleted rod corresponds to the length of the block and holes allow to position it and traverse it,
- . the main brass piece corresponds in width to the tapping of the block and can be screwed on the filleted rod.

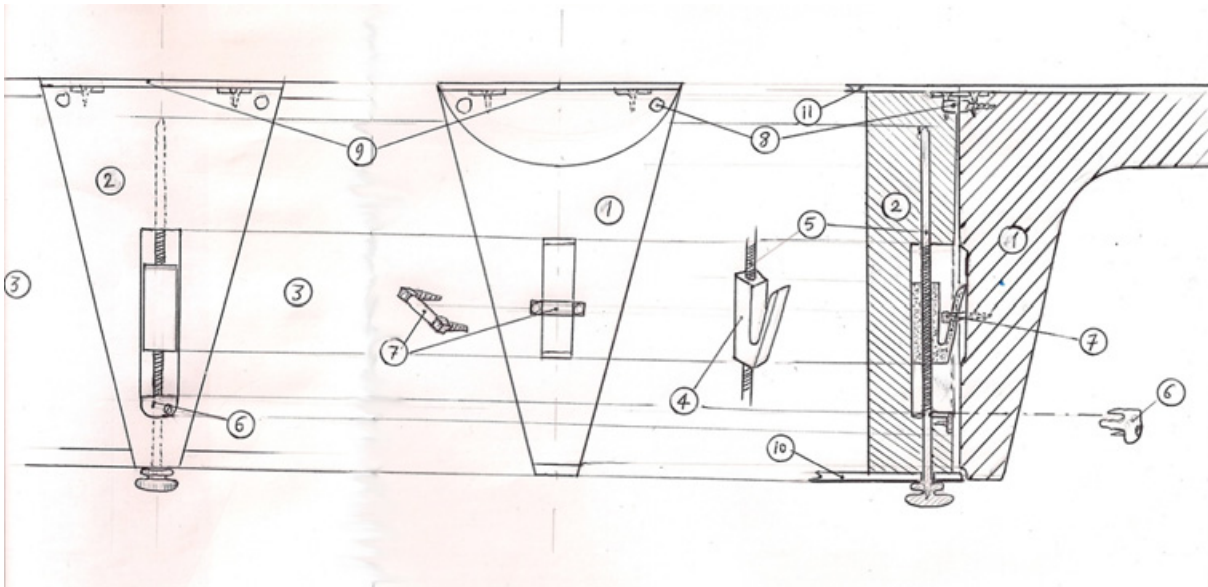
We decided to remove the piece off the upper block. We found 3 mortises, 2 small on each side of the main piece in the centre. We noticed that a piece had been added to the ebony heel of the neck and we removed it too. No special marks on these mortises. We then realized that we were restoring the famous guitar for which 'a Mr. Pons' obtained a distinction in 1827 for a mechanical system allowing to adjust the action of the strings, that is to move the strings away or bring them closer to the playing surface.



This system is not similar at all to the very complicated one applied on a Lacôte as described by James Westbrook in his book “Guitar through the Ages”. It is simpler and lighter, for a guitar which fingerboard is still short or not yet modified, based on the mechanical principle of a lever and resting point. It was integrated to the guitar at the time of fitting the neck to the body.

After a light cleanup, restoration can start; no major difficulties: we glue the bracings back, fix the cracks on the ribs, add a few cleats on the top, splices, small pieces of lemon tree at the top of the ribs, 63 small dots in mother of pearl that were missing, composed purfling missing, 1 brake peg head in ivory missing, the head graft badly glued, the neck veneer in ebony, the small neck heel, the upper bout that was badly damaged.

Once the body was restored, we tried to set the neck with its system:



1. tasseau du haut / *upper block*
2. éclisses / *ribs*
3. curseur / *cursor*
4. tige filetée bleuie / *blued screw*
5. clé / *wrench*
6. agrafe / *staple*
7. plots / *pins*
8. touche / *fingerboard*
9. fond / *back*
10. table / *soundboard*

The neck mortise is deep but once cleaned the neck graft fits perfectly, the marks (glue, varnish) correspond. The screw goes through the block and the metallic cursor fits perfectly in the heel and block mortises. Another metallic part, a key, is there to block the filleted rod and maintain it in its lodging. The neck splices fit in the block holes. A kind of brass staple is substituted in the existing holes on both sides of the heel mortise holding the cursor. The neck, mounted in this way, is held perfectly. The playing surface and the frets are correct. The 12th case, damaged and partially missing,

was glued on the joint of two parts (body/fingerboard). We think that it was too solicited by the various tensions - it did not resist and broke (maybe during the shock). It is the 'key' point that allows the adjustment of the strings along the neck and must be changed.



Once set up with all its original pieces (except the staple which is a replica) the neck is not held enough, even with the new spruce piece at the 12th case (maybe the loss of humidity is responsible for that, it moves a little in its lodging). We then decided to add two small brass pieces to reinforce the set up... It is a decision dictated by prudence, without those two pieces, the set up might not hold and the guitar would be out of service again.

With this small modification, the system works perfectly well. In turning the button placed on the back of the guitar, the cursor, after being hooked to the staple fixed on the heel, moves forward or backward in its 2 mortises, moving up or moving down the heel in solid ebony and the action is thus modified. The neck is positioned by the two splices, and the 12th case and the two small pieces that we added act as point of rest and lock.

However, even though it worked well, this system remained too sophisticated, that is why it was not made more often and that no French luthier ever used this interesting idea for himself. The system developed and used by Stauffer in the same years is much superior, even if less aesthetic: an apparent screw in the neck's heel and the adjustment always accessible for a guitar with a 'floating' fingerboard.

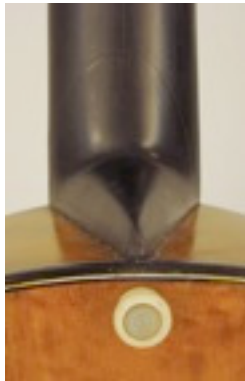
This historic guitar had disappeared, because its attribution was missing. It remained anonymous, damaged but relatively safe in its case, in an attic, for several decennials.

We ignored until now to which of the brothers Pons we could attribute this guitar, that had disappeared, but in Malou Haine's publication of April 2008 (irpmf.cnrs) "Tableaux des expositions de 1798 à 1900" (List of exhibitions from 1798 to 1900), we could read that a Pons – with no first name – obtained a distinction in 1827, the address given being rue St-Honoré: the address of Louis David called "Pons jeune", the one appearing on his labels.. We know that two of César Pons' nine children were luthiers, another one was a watchmaker and jeweller. Probably it is him who conceived or constructed (or both) the sumptuous metallic flowers inlaid with precious stones on the rosettes of guitar-liras as well as the butterfly mechanics, and naturally we think that this jeweller-watchmaker was also at the origin of this ingenious adjustment mechanism.

The filleted rod, going through the system, as well as the mechanics have been tinted in blue. This action, also used by bowmaker Pajeot during the same period for the screws on his bows, was intended to prevent the metal from rusting, thus saving the wooden (or ivory, for the mechanical pegs) parts that, with time, burst under the action of rust.



We can note that with this exceptional guitar, exhibited in 1827, Louis David Pons not only tried a sophisticated adjustment system of the neck but tried to improve the butterfly pegs as well.



Sinier de Ridder
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