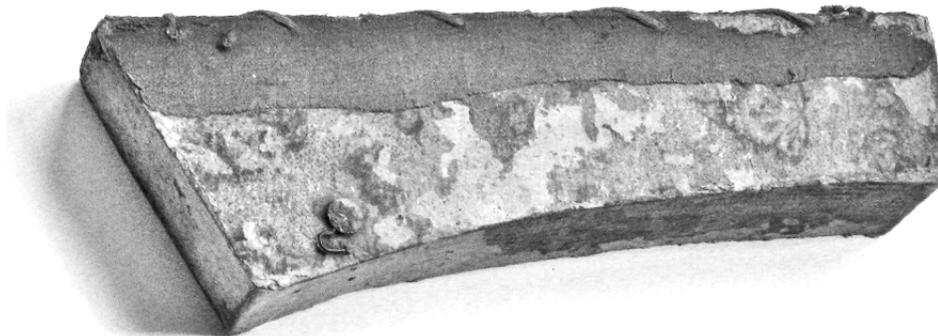


A triangular spinet of unknown Italian maker

This old instrument was found by chance inside the space under the hinged top of an apparently normal table presumably built in the 19th century.

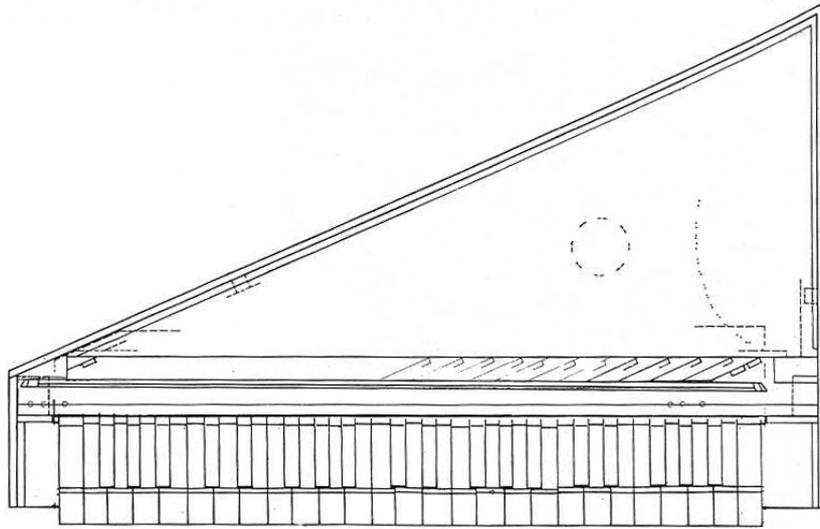


As the shape and dimensions of the cavity (660 mm long, 510 mm deep, 135 mm high) including some margin of play, match those of the instrument (642 mm long, 409 mm deep, 109 mm high) it seems that it had contained the spinet for a long time.

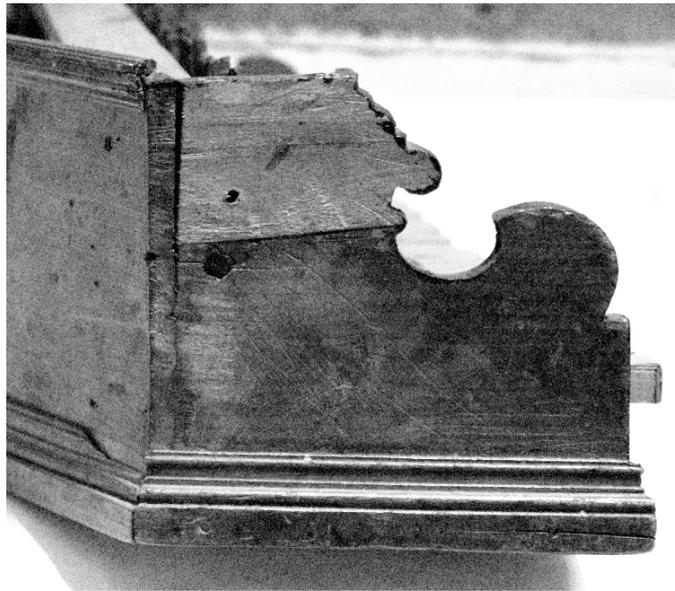


There was also a cardboard box with fourteen reels of wire strings in the remaining space in the cavity. The antique dealer, who had been misinformed about the item typology, said that the piece of furniture and its contents may have belonged to a bequest of a so-called Marchesi di Bagnolo (Bagnolo Mella is a small old town between Brescia and Cremona, in Lombardy, Italy).

The instrument is interesting not only because of its unusual, if not unique, small size but also because of the extreme rarity of the old iron and brass strings.



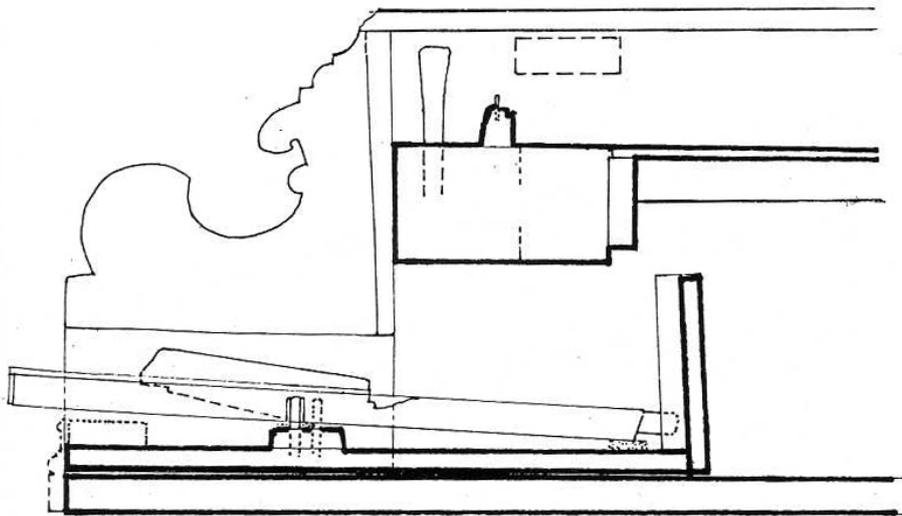
The triangular spinet (642 mm long, 409 mm deep, 109 mm high) is of the "inner" type and it was presumably housed within an external case. All the walls, which are 5mm to 9 mm thick, and the moldings are made of cypress and the bottom of spruce 9 mm thick. Both the side walls end in an elegant cheek.



The left wall was dismantled at some stage and roughly adapted to reduce the length as well as the width of the instrument.

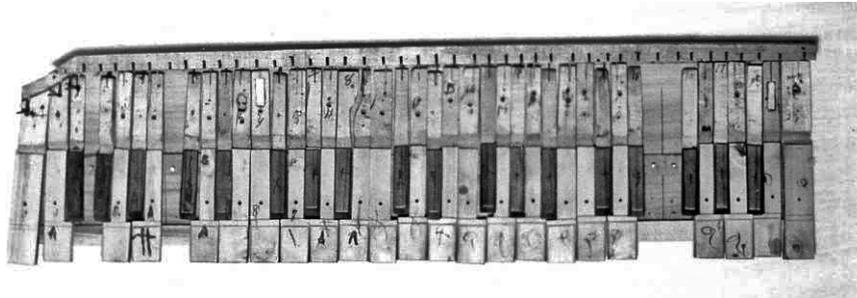
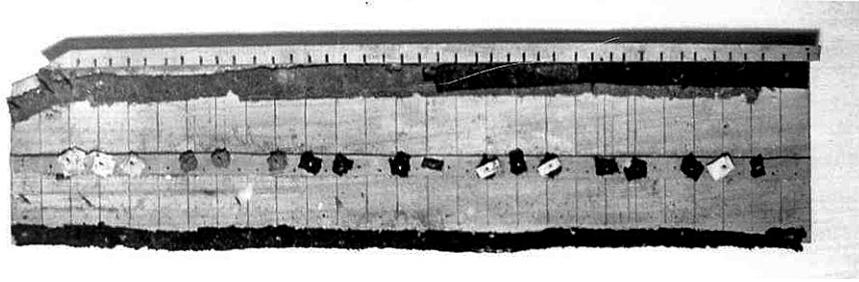


The soundboard is a panel of red spruce, 1.5-2 mm thick, in which a not-very-artistic rose was cut and the original bridge (pale grey line) replaced with a curved one.

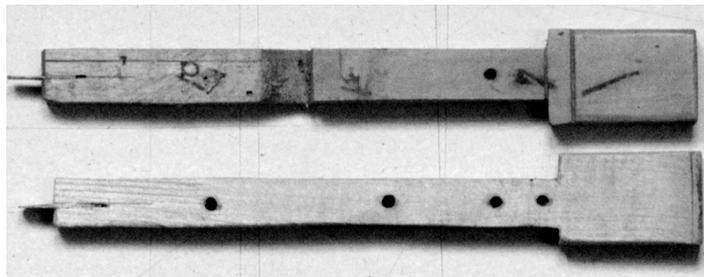


The wrest plank measures 634 mm x 24 mm x 24 mm with the box slide (563 mm x 24 mm x 18 mm) glued to it.

The key bed, which consists simply of a 9 mm-thick spruce board, might have been modified, as its shape is not exactly rectangular. The compass is C/E-c'''.

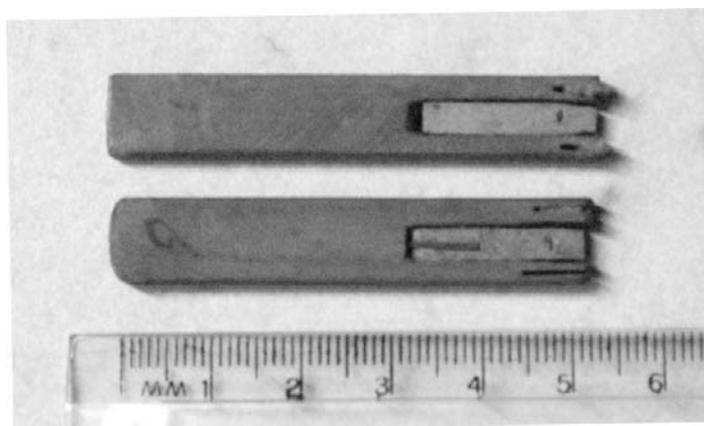


The keys of 79 mm total length have three balance points which demonstrate that they were rearranged at some time in the past, with the addition of a kind of balance rail punchings. More than one (circular) mortise was drilled in most of the keys.



It is not possible to recognize previous key sequences despite the fact that the keys were numbered on the rear and capital letters are written on some palettes. The natural key palettes (of 31 mm x 20 mm) are of boxwood and the sharps (46 mm long) are old walnut. The octave span is 144 mm. The missing G, c, e^{''}, f^{''} keys have been replaced.

18 of the remaining 25 jacks, which are cut from two kinds of walnut, are old, if not original, and have two small slits for inserting tiny strips of cloth.



Some of both the jack types have springs made of tiny brass strips at the rear of the tongues. In a few tongues, all of which have a linear cut around 1.5 mm wide, are the remains of quills (species of bird unknown). Most of these jacks have been numbered with

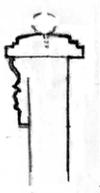
different handwriting. No numbers are present on the remaining 7 jacks which do not have the slits for the cloth.

The instrument was presumably an interesting piece of art until its condition deteriorated due to neglect. The upper edges of the side-walls with the moldings were presumably gold-plated and are coated in dark, solid paint.

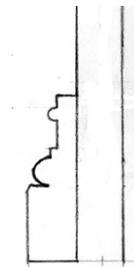


Traces of gilded decorations are still visible on the inner surfaces of the walls protruding above the soundboard.

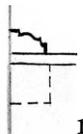
The moldings on the case



upper molding (h = 13 mm)



lower molding (h = 21 mm)

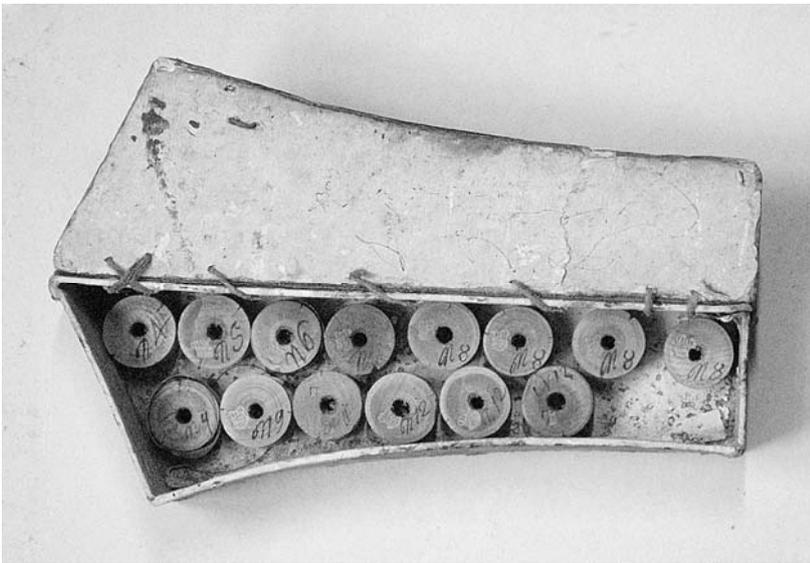


molding outlining the soundboard (h = 3,5 mm)



cross section of the nut (h = 6,5 mm)

The box containing the metal strings signed Boni Francesco



The reels are located inside a cardboard box, signed Boni Francesco, recalling the shape of a harpsichord. Its external measurements are 255 mm long, 85 mm wide and 57 mm high. The walls and lid about 3-4 mm thick are hinged together by a thread. The exterior surfaces are covered with paper coated with yellowy-brown paint.

The reels of wire strings

The reels have been lathed from wooden sticks of poplar and have roughly the same dimensions (thickness: 17.5 mm, external diameter: 27.3 mm and shaft diameter: 22 mm). They have different designs imprinted on one side with capital letters imprinted alongside. The images and letters are the following: MHF / *rose*, *S imperial apple* R, II *flamingo* P and M *bell* K¹:

The different thickness of the wires is shown by numbers handwritten on the side of the reel. All the numbers were written by the same hand apart from those of the bell.²

The list of string measurements

Number on the reel	Imprint	Material	Wire diameter (average)
4	rose	brass	37/100
5	rose	brass	33/100
6	rose	iron	35/100
7	flamingo	iron	28/100
7	rose	iron	25/100
8	rose	iron	25/100
8	rose	iron	-
8	rose	iron	-
8	rose	iron	-
9	rose	iron	-
10	apple	brass	17/100
12	rose	iron	16/100
12	rose	-	-

¹ Some imprints were found on other reels (cfr. PIERRE DUMOULIN, "La decouverte de bobines de cordes de claviers du XVIIIe siecle", *Revue de Musicologie*, Tome LXI – 1975 N° 1, p. 115, Planche A.

RÉMY GUGH, "En remontant la filière de Thoiry à Nuremberg", *Musique Ancienne*, 18 (1984), pp. 4-76). of the same

² The number on the reel published by DUMOULIN, p. 115, was written by the same hand as that of the reels in the box.

The scaling

The following scaling was measured (the bridge pins are irregularly driven)

C/E	627 mm
c	484 mm
c'	276 mm
c''	146 mm
c'''	62 mm

Physical investigation on the wire

- mechanical investigation on the wire
- maximum stress for string n°8 = from 80 kg/mm² to 120 kg/mm²
- hardness of the alloy
- micrography of the longitudinal structure
- SEM-scansion microanalysis
- chemical investigations on the wire
- ICP-MS spectrography

Due to the small amount of old wire remaining it would have been irresponsible to use lengths of all the wires for acoustical investigation. Therefore it was decided to test only a sample of wire n°8, being the only reel almost full of wire.

More details about exam results will be the subject of another Comm.

This article has been written to provide English-speaking readers with a summary of the information found in my books listed above, both of which are still out-of-print.

Bibliography

Marco Tiella, *Atti del seminario per la didattica del restauro liutaio*, Premeno 1981, Longo, Rovereto 1982

Marco Tiella, *Strumenti per Mozart*, Longo, Rovereto 1991

Denzil Wraight, 'Principles and Practice in Stringing Italian Keyboard Instruments', *Early Keyboard Journal* 18 (2000), 175-238.