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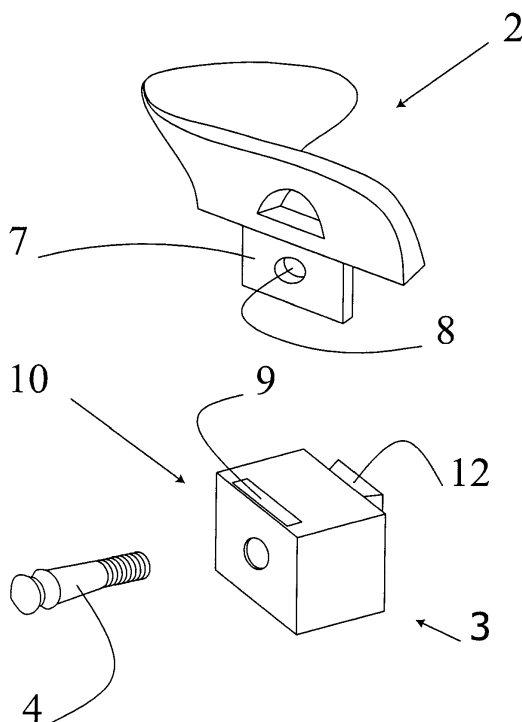
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(54) **Fixing device of chin rest or lath for chordophone instrument**

(57) A fixing device of a chin rest (2) or a lath (13) for string instrument (1) played using a bow, fitted with an internal reinforcement (3) into which a pin (4) is inserted

for the attachment of a tailpiece (5), provides that the chin rest (2) or the lath (13) has a shelf (7) insertable into a slot (9) of the reinforcement (3) at a coupling condition (A) of the chin rest (2) or lath (13) to the instrument (1).

FIG.4



Description

[0001] The present invention relates to string instruments, in particular it refers to a fixing device of a chin rest or a lath for chordophone instrument.

[0002] There are known devices for bonding the chin rest to string instruments which provide the use of a pair of adjustable metal supports to removeably fix the chin rest to the string instrument, such as violin or viola.

[0003] The main disadvantage of such known devices consists in the fact that the metallic supports, in order to guarantee an optimal constraint, must be precisely settled and that an eventual excessive clamping of the same could damage the instrument.

[0004] Another disadvantage is that the supports protrude from the instrument shape and can disturb the musician both in practical and in aesthetic way.

[0005] Furthermore these supports and the associated chin rest cause permanent dents and wear of the top and the bottom plane of the soundboard, hardly removable.

[0006] The main purpose of this invention is to propose a chin rest for string instruments played with bow, with a fixing device to constrain this one to the instrument without any adjustable external supports.

[0007] Additional purpose of the invention is to propose a device for blocking a chin rest or a lath to the string instruments in an easy way and that does not require particular and specific expedients to take this operation.

[0008] Other purpose is to propose a device to constrain the chin rest or the lath in an economic and safety use.

[0009] The characteristics of the invention are outlined below with particular reference to the drawings in which:

- figure 1 shows a bottom view of a violin to which is applied a chin rest with adjustable external supports according to the known art;
- figure 2 shows a bottom view of the violin of figure 1 to which is applied a chin rest with supports according to the present invention;
- figure 3 shows a schematic front view of the violin with a chin rest according to the present invention;
- figure 4 shows a exploded view of the chin rest and its associated restraint device;
- figure 5 shows a partial internal view of the violin, of the chin rest and its associated restraint device;
- figure 6 shows a section of plane VI-VI of figure 5;
- figure 7 shows an exploded view of a lath and its associated restraint device;
- figure 8 shows a bottom view of the violin to whom is applied the restraint device for the lath according the present invention.

[0010] Referring to figures 1 to 6, numeral 1 indicates a viola or a violin or other string instrument provided with reinforcement 3 glued inside the instrument at its bottom.

[0011] In this reinforcement 3 is inserted a pin 4 for coupling, by means of a cable 6, a tailpiece 5 having, at

one end, a fine tuners of the four strings of the violin 1.

[0012] A chin rest 2 is normally constrained to the instrument and is provided at one side of an upper notch to support the chin and at the other side has a shelf 7 with a central hole 8 and is inserted into a slot 9 of the reinforcement 3 passing through a corresponding slot carried out in the top plane of the soundboard of the string instrument.

[0013] The reinforcement 3 has an housing 11 into which a wedge 12, shaped foursided truncated pyramid, is complementarily inserted.

[0014] Between the wedge 12 and the housing 11 is placed a material in order to absorb vibrations, both acoustic and mechanical. In the preferred embodiment this material is felt and is glued to the inner surface of the housing 11 and to the outer surface of the wedge 12.

[0015] Wedge 12 is supplied of a threaded element directly on wedge 12, otherwise this element is made of a bolt, known and not illustrated, constrained to the same wedge 12.

[0016] In operation the shelf 7 is inserted into the housing 9 through the slot in the top plane soundboard and subsequently the pin 4 is inserted into the hole 8 both through a corresponding hole in the side wall or lower band side of the soundboard and through a corresponding hole of the reinforcement 3.

[0017] Under a coupling condition A, the pin 4, for example equipped with a threaded element at its internal end such as a screw, is screwed into threaded element 14 of wedge 12, so keeping it in touch with the shelf 7 and constraints this latter with the reinforcement 3.

[0018] A variant of the device provides that the pin 4 is not threaded but has four wedge-shaped faces and may therefore be forcibly inserted with interference into the hole 8 in order to fix the chin rest 2 to reinforcement 3.

[0019] Figures 7 and 8 shows a lath element 13 fixed on the top of the shelf 7 instead of the chin rest 2.

[0020] When the instrument is played or displayed without the chin rest 2, the fixing device has the lath 13 and the shelf 7 is inserted into the slot 9 of the reinforcement 3 and then is blocked by the pin 4. In this configuration, the lath 13 is placed aligned with the upper edge 15 connecting the top plane of the soundboard and the side bands.

[0021] An alternative embodiment provides that the shelf 7, regardless of having or not the hole 8, is inserted by trap into the slot 9 of reinforcement 3 through the corresponding slot of the soundboard by .

[0022] The main advantage of this invention is to provide a string musical instrument chin rest with a device for fixing the same to this instrument without external adjustable support and then giving a pleasant appearance of the instrument.

[0023] Another advantage is to avoid any dent and wearing on the top and the bottom plane of the soundboard due to the fixing device of chin rest or lath.

[0024] Another advantage is to provide a chin rest that can be attached to the string instrument easily and that

does not require special and specific precautions to make this operation.

[0025] Other advantage is to provide a device to bond the chin rest or the lath of economic and safe way of use.

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Claims

1. Fixing device of a chin rest (2) or a lath (13) for a string instrument (1) having an internal reinforcement (3) into which a pin (4) is inserted for coupling a tailpiece (5), said device (10) **characterized in that** the chin rest (2) or the lath (13) has a shelf (7) insertable into an housing (9) of the reinforcement (3) in correspondence of a coupling condition (A) of the chin rest (2) or the lath (13) to the string instrument (1). 10 15
2. Device according to claim 1 **characterized in that** the shelf (7) has a hole (8) into which the pin (4) is inserted in correspondence of the coupling condition (A). 20
3. Device according to claim 2 **characterized in that** the pin (4) is inserted by interference into the hole (8) in order to fix the chin rest (2) or the lath (13) to the reinforcement (3). 25
4. Device according to any of the preceding claims **characterized in that** the reinforcement (3) has an housing (11) into which a wedge (12) is inserted that it is fixed to the shelf (7) in order to constrain this latter to the reinforcement (3) in correspondence of the coupling condition (A) by coupling the pin (4) to the same wedge (12). 30 35
5. Device according to claim 4 **characterized in that** between the wedge (12) and the housing (11) is placed a material fit for absorbing vibrations. 40
6. Device according to claim 4 **characterized in that** the coupling of the pin (4) to wedge (12) is obtained through their mutual screwing. 45
7. Device according to claim 4 **characterized in that** the wedge (12) and the pin (4) have a threaded element. 50
8. Device according to claim 1 **characterized in that** in the coupling condition (A) the lath (13) is aligned to the upper junction edge between the upper plane of soundboard and the side band. 55

FIG.1

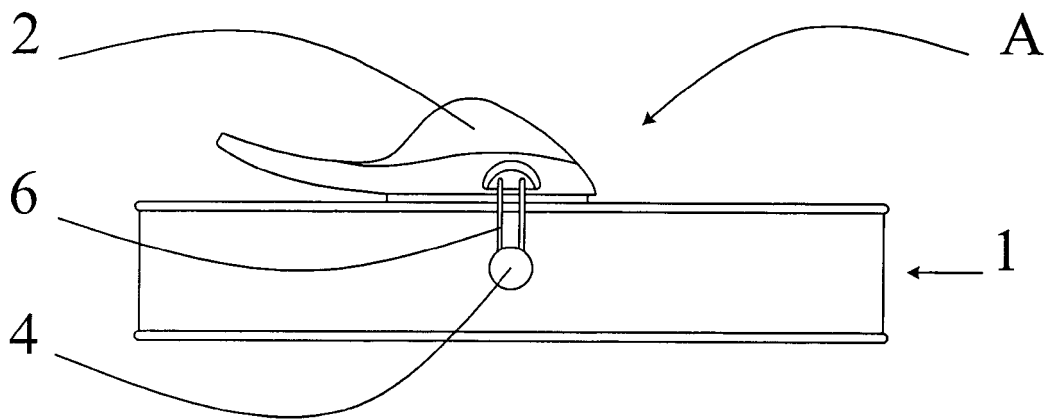
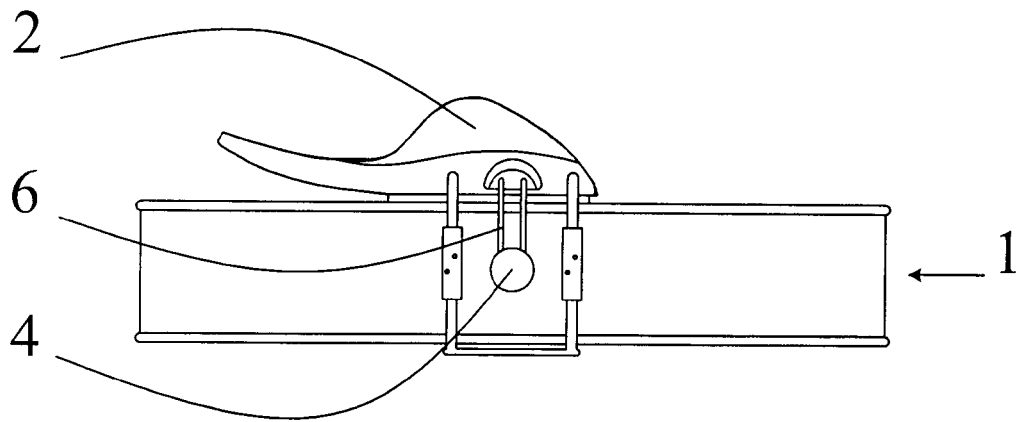


FIG.2

FIG.3

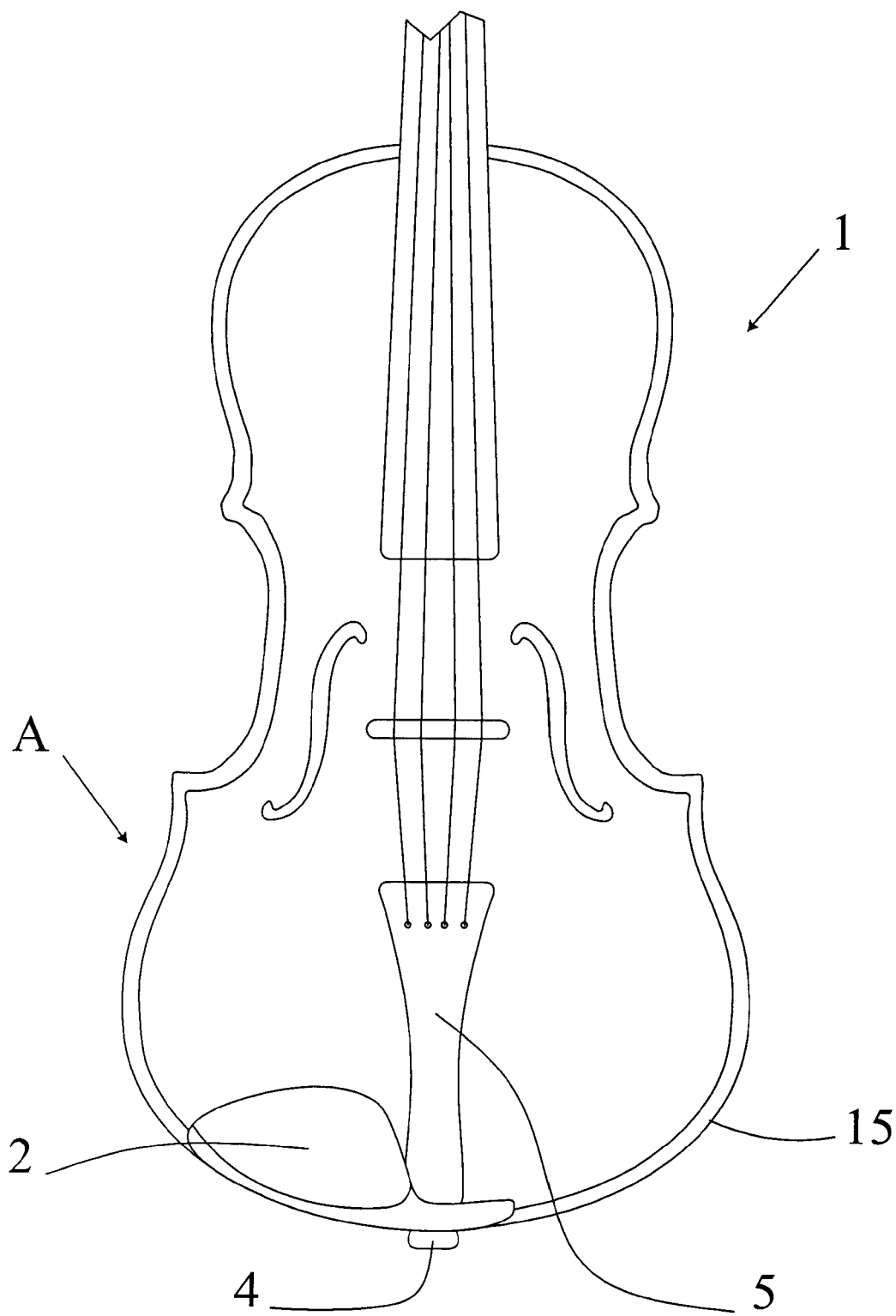


FIG.4

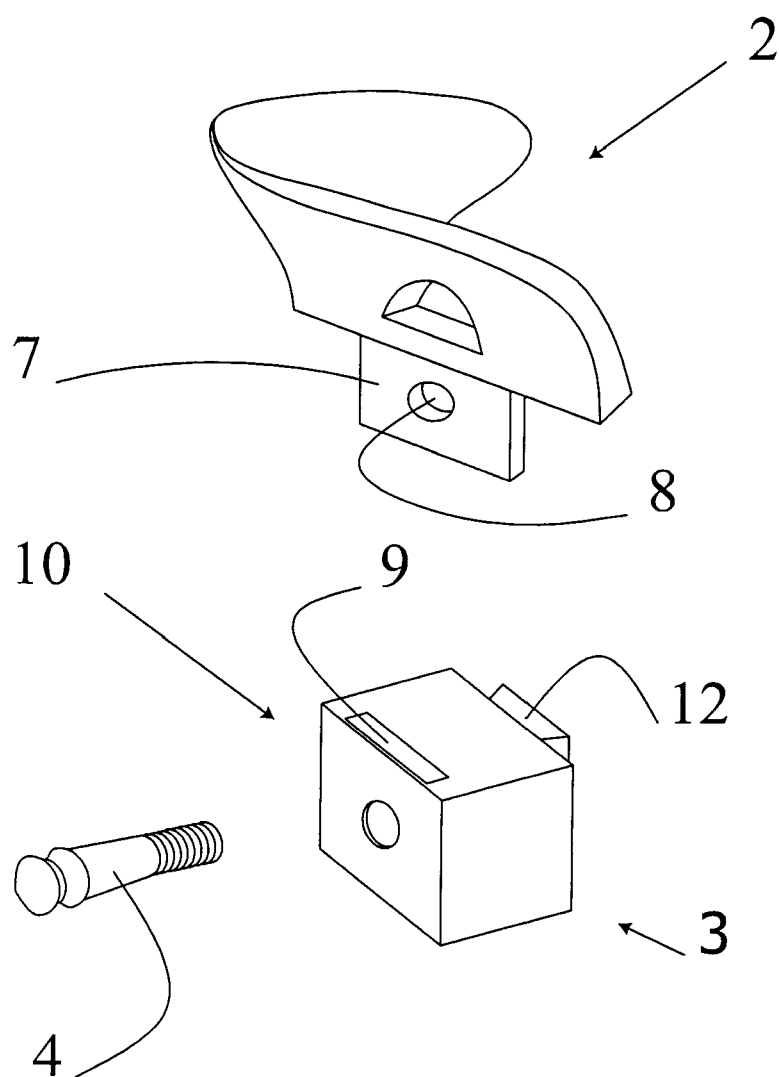


FIG.5

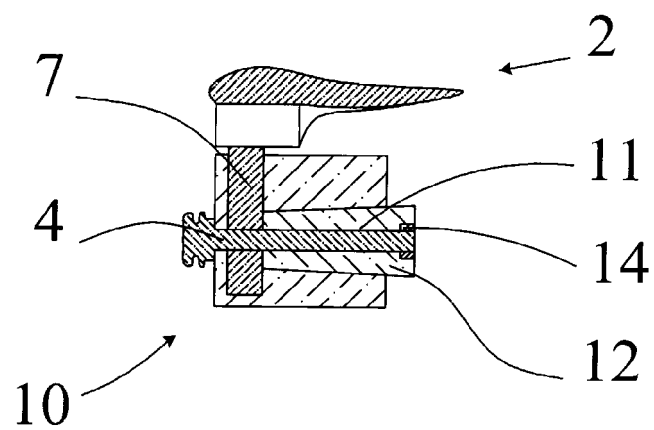
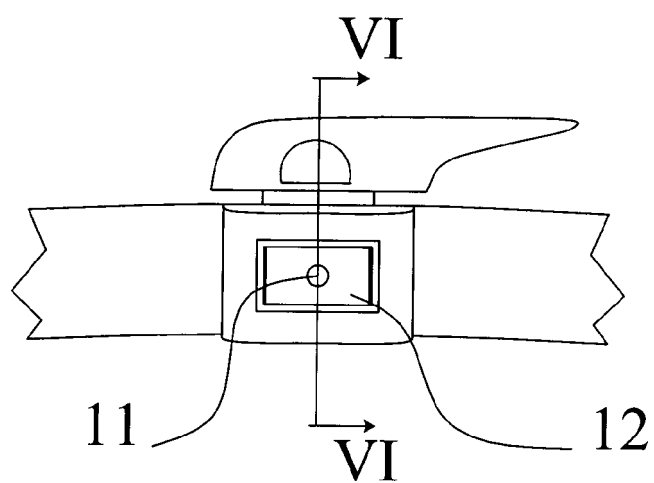


FIG.6

FIG.7

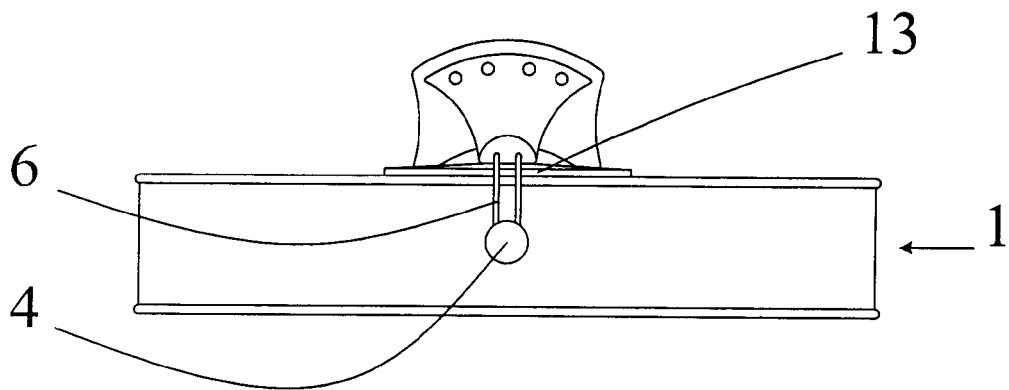
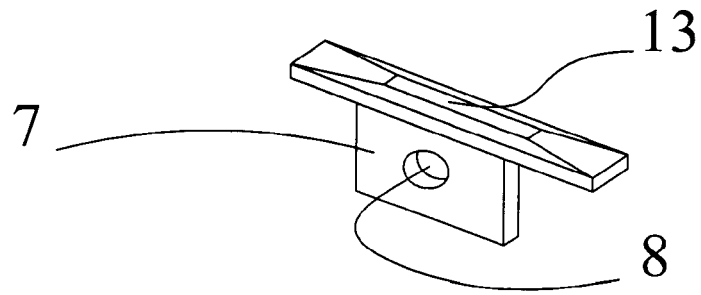


FIG.8



EUROPEAN SEARCH REPORT

Application Number
EP 10 16 3174

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A	* abstract * * column 3, line 32 - column 4, line 35; claim 1; figure 3 *	2-8	
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A	US 3 175 446 A (YEHUDI MENUHIN ET AL) 30 March 1965 (1965-03-30) * the whole document *	1-8	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			G10D
Place of search		Date of completion of the search	Examiner
Munich		29 July 2010	Gerken, Stephan
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 10 16 3174

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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29-07-2010

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