March 30, 1926. 1,578,744

C. E. C. J. MANBY

FINGER BOARD OF VIOLINS AND LIKE STRINGED INSTRUMENTS

Filed August 10, 1925

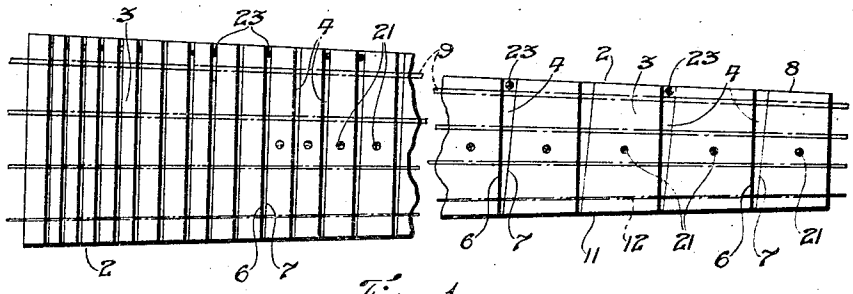


Fig. 1.

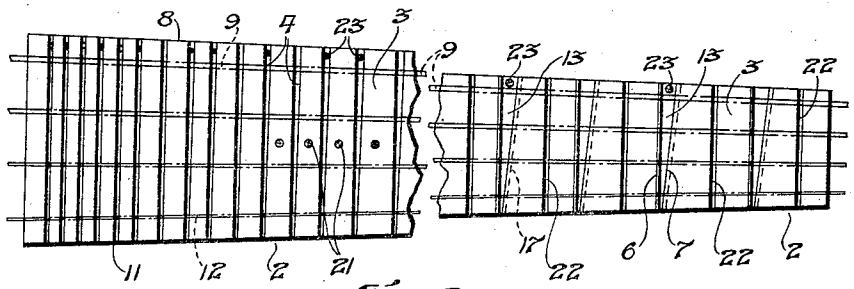


Fig. 2.

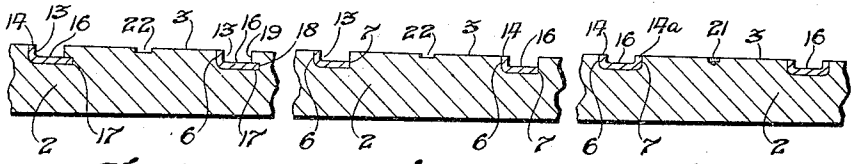


Fig. 3. Fig. 4. Fig. 5.

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UNITED STATES PATENT OFFICE.

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FINGER BOARD OF VIOLINS AND LIKE STRINGED INSTRUMENTS.

Application filed August 10, 1925. Serial No. 49,409.

To all whom it may concern:

Be it known that I, CHARLES EVELYN CREASY JENSEN MANBY, a subject of the King of Great Britain and Ireland, residing at Hawksburn, a suburb of the city of Melbourne, in the county of Bourke, State of Victoria, Commonwealth of Australia, have invented certain new and useful Improvements in and Relating to the Finger Boards of Violins and like Stringed Instruments, of which the following is a specification.

This invention relates to the finger-boards of violins and like stringed instruments, and involves certain improvements in the type of finger-board described in my prior United States Patent No. 1,095,900 dated 5th May 1914 which provides properly spaced transverse guide grooves in the upper face of the finger-board whereby the player is enabled to press down or stop the strings at the correct half-tone or semi-tone positions on the finger-board and to produce notes in perfect harmony.

According to the aforesaid prior patent the transverse grooves are of the same width from side to side of the finger-board, and while they ensure the stopping of the strings at the correct positions and also improve the tonal quality, they have the objection that the player's fingers are liable to be impeded by the grooves when playing on the thinner strings, especially during gliding or sliding actions, and more particularly when metal strings are employed. Such metal strings are now used to a considerable extent and with increasing popularity in violins, both for the relatively thin as well as the thicker strings, and when used in conjunction with the features of the present invention their utility and effectiveness are greatly enhanced as will be hereinafter better understood.

Moreover, finger-boards having grooves as above mentioned, particularly when employed with metal strings, have hitherto had the disadvantage that through repeated use the edges of the transverse grooves become worn and uneven and may be widened beyond their proper limit with consequent detriment to the efficiency of the device.

One of the objects of the present invention is to provide a finger-board having tapered transverse grooves which become gradually narrower from that side of the finger-board where the first or thickest string is located and where a relatively wide groove is required, to the other side where the thinnest string is disposed and at which point it is desirable that the grooves be narrower. Important advantages are derived from this construction as hereinafter described.

Another object of the invention is to provide liners of metal or other suitable material for insertion in the transverse grooves of the finger-board, whereby the edges thereof are protected against wear and the grooves prevented from becoming widened. Another and more important advantage of the metal or like liners is the clearer and generally improved tonal effect produced in the stopping of metal strings thereon and the liners and grooves may be employed with advantage in violins, mandolins and other stringed instruments of a like nature and may even be substituted for the usual upstanding frets employed in banjos.

The invention also contemplates the provision of quarter tone grooves or indication recesses in the upper face of the finger-board between the half-tone or semi-tone grooves. This feature materially increases the advantage of the device to beginners and others and ensures that the stopping of the quarter tones is correctly effected to produce notes in perfect harmony.

But in order that this invention may be better understood reference will now be made to the accompanying drawings which are to be taken as part of this specification and read herewith:

Figure 1 is a broken plan view of a violin finger-board constructed in accordance with one form of the invention and showing the transverse grooves tapering from side to side of the finger-board.

Figure 2 is another broken plan view of a violin finger-board showing a slightly modified form of the invention wherein the aforesaid liners are inserted in certain of the transverse grooves.

Figure 3 is an enlarged longitudinal section of a portion of the finger-board seen in Figure 2.

Figure 4 is an enlarged longitudinal section of a portion of a finger-board similar to that seen in Figure 2 but showing a modified construction of the liners.

Figure 5 is an enlarged longitudinal section of a portion of a finger-board similar to

that seen in Figure 2 but showing a further modified construction of the liners.

In the drawings the numeral 2 denotes a finger-board of any suitable shape and size which, as described in my aforesaid prior United States Patent No. 1,095,900, dated 5th May, 1914, is provided on its upper face 3 with parallel, transverse guide-grooves 4 spaced at appropriate distances apart according to the proper semi-tone stopping positions of the strings.

In accordance with the present invention the edges 6 which are disposed nearest the instrument bridge and are hereinafter referred to as the upper edges of the grooves 4 extend substantially at right angles to the length of the finger-board, but the other or lower edges 7 of said grooves converge towards the edges 6 from the side 8 of the finger-board adjacent which the thickest or bass string 9 is located to the other side 11, where the thin or "E" string 12 of a violin is disposed. This tapering of the grooves 4 obviates any liability of the player's fingers being caught or impeded by said grooves when playing on the thin string or strings where the grooves 4 are relatively narrow. At the same time the requisite width of groove is provided for the thicker strings where the liability of impeding the player's fingers is negligible. Furthermore owing to the graduation of the width of the groove in accordance with the thickness of the strings and the inclination of the edge 7, the grooves greatly facilitate gliding or sliding of the fingers on the strings and enable the player to "feel" the grooves more readily and without excessive pressure and consequent discomfort to the fingers. It has also been found that the tapered or wedge-shaped formation of the grooves as above mentioned has the further advantage that the objectionable twang sometimes caused through the sideward slipping of the stopped string, is avoided owing to the better holding of the string due to the convergence of the grooves towards that side 11 of the finger-board 2 to which the player's finger tends to pull the strings.

Liners 13 of metal or other suitable material may be provided for insertion in the grooves 4 in order that the edges thereof may be protected from wear and the tonal effects produced in the stopping thereon of the strings, particularly metal strings, may be enhanced.

Owing to the fact that in producing a note the string is stopped by pressing it down to form a contact with the upper edge 6 of the guide groove 4, it will be evident that the greater part of the wear occurs on the upper edges 6 of the grooves. For this reason the liners 13 may be formed as shown in Figures 2, 3, and 4 wherein they are provided with an upstanding side 14, which engages the upper edge 6 of the groove 4, and with a base portion 16 which engages the bottom of the groove and renders the liner of appproximately L shape in cross section.

Or, as seen in Figure 5, the liners 13 may be of approximately U shape in cross section, being formed with two parallel upstanding sides 14 and 14^a and a base portion 16, thus providing protection for both edges 6 and 7 of the grooves 4.

The liners 13 may be held in position in the guide grooves 4 in any suitable manner such as by forcing or expanding them in the grooves so as to form a tight fit therein. Or as seen in Figures 2 and 3 the base portion 16 of the liner may be extended as at 17 in order to fit into a corresponding slot 18 formed in the finger-board 2, beneath an overhanging shoulder 19. The extended portions 17 of the liner bases together with the slots 18 into which they fit, correspond to the tapered shape of the lower edges 7 of the grooves 4 and by forcing these tapered liners in through the wider ends of the grooves they act as wedges to hold themselves in position.

To assist beginners and others, intermediate or quarter-tone indicating marks may be employed between the main or semi-tone guide grooves 4, particularly towards the lower or narrower end of the finger-board where the main grooves 4 are spaced at relatively wide distances apart. These quarter-tone indicators may consist of small holes or recesses 21 formed in the upper face of the finger-board and adapted to accommodate any suitable filling material, of a white or other distinctive colour, or, alternatively the intermediate or quarter-tone indicators may consist of relatively narrow transverse guide-grooves 22, which are disposed between and are considerably narrower than the main or half-tone grooves 4. These narrow quarter-tone grooves may be of uniform width throughout, or otherwise as desired.

In previous finger-boards of this character as described in my aforesaid prior patent, provision was made for only the main transverse guide-grooves 4 corresponding to the full tone and half-tone stopping positions, but by the present invention the marked indications provided by the filled recesses 21 or the narrow transverse guide-grooves 22 enable the player to stop the strings at the correct positions to produce quarter tones in perfect harmony, the full tones being preferably distinguished by means of different colored markings 23 adjacent the ends of the respective guide grooves 4, these markings consisting of a colored filling material inserted into holes or recesses in the bottom of the grooves.

It will be evident that owing to the close spacing of the main guide grooves 4 to-

wards the upper or bridge end of the finger-board, confusion might arise if the intermediate or quarter tone grooves 22 were employed at this part of the finger-board. For this reason it is preferable to employ the holes or recesses 21 to indicate the quarter tone positions where the main grooves are relatively close together, these holes or recesses 21 being used, if desired, for practically the who e length of the finger-board as in Figure 1 or in conjunction with the various quarter-tone grooves 22 as in Figure 2.

Furthermore the tapering of the guide grooves and the provision of liners 13 as aforesaid are primarily intended for the relatively widely spaced grooves as indicated in the drawings, and these features of the invention need not be availed of near the upper or bridge end of the finger-board where the transverse grooves are ordinarily narrow and closely spaced as shown. At this part of the finger-board gliding actions do not occur to any material extent and the strings may be effectively stopped on the narrow grooves without impediment or obstruction to the fingers.

Having now described my invention what I claim as new and desire to secure by Letters Patent is:—

1. A finger-board for violins and like stringed instruments of the type having transverse guide grooves formed in its upper face, characterized in that the edges of said guide grooves taper inwardly or converge from the thicker or bass string side towards the opposite side of the finger-board.

2. A finger-board for violins and like stringed instruments of the type having transverse guide grooves formed in its upper face, characterized in that the edges of said grooves taper inwardly or converge from the thicker or bass string side towards the opposite side of the finger-board; the lower edges of said tapered grooves being inclined while the upper edges, which are disposed nearest the instrument bridge, extend at right angles to the length of the finger-board.

3. A finger-board for violins and like stringed instruments of the type having transverse guide grooves formed at spaced intervals in its upper face, characterized by liners accommodated in said grooves and extending along one edge thereof.

4. A finger-board for violins and like stringed instruments having in combination transverse guide grooves formed in its upper face, the edges of said grooves tapering inwardly or converging from the thicker or bass string side towards the opposite side of the finger-board, and liners accommodated in said grooves and extending along the upper edges thereof.

5. A finger-board for violins and like stringed instruments having in combination transverse guide grooves formed in its upper face, the edges of said grooves tapering inwardly or converging from the thicker or bass string side, towards the opposite side of the finger-board, and liners of substantially L shape in cross section accommodated in said grooves so that an upstanding lip of each liner extends along the upper edge of the respective transverse groove, and a base portion of the liner engages the bottom of said groove.

6. A finger-board for violins and like stringed instruments having in combination transverse guide grooves formed in its upper face, the edges of said grooves tapering inwardly or converging from the thicker or bass string side towards the opposite side of the finger-board, and liners of substantially L shape in cross section accommodated in said grooves so that an upstanding lip of each liner extends along the upper edge of the respctive transverse groove, and a base portion of the liner engages the bottom of said groove; said base portion being provided with an extension which fits into a slot formed in the finger-board beneath an overhanging shoulder at the lower side of the respective groove.

7. A finger-board for violins and like stringed instruments having in combination main transverse guide grooves formed in its upper face at the semi-tone stopping positions of the strings, the edges of said main guide grooves tapering inwardly or converging from the thicker or base string side to the opposite side of the finger-board, and quarter-tone indicators consisting of relatively narrow grooves or recesses formed in said upper face of the finger-board between said main guide grooves.

8. A finger-board for violins and like stringed instruments having in combination main transverse guide grooves formed in its upper face at the semi-tone stopping positions of the strings, the edges of said main guide grooves tapering inwardly or converging from the thicker or bass string side to the opposite side of the finger-board, and quarter-tone indicators consisting of small holes or recesses formed in said upper face of the finger-board between the main guide grooves, said holes or recesses being filled with a distinctive coloring material.

In testimony whereof I affix my signature.

CHARLES EVELYN CREASY JENSEN MANBY.