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3,406,603

MUTE FOR STRINGED INSTRUMENTS

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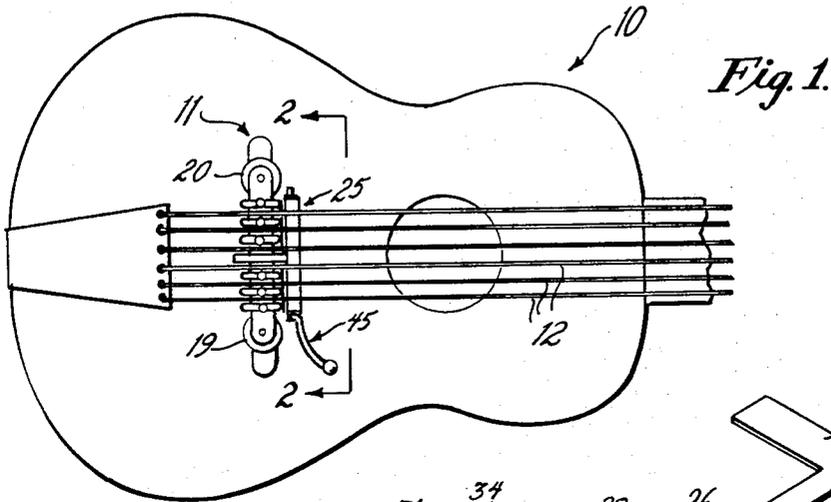


Fig. 1.

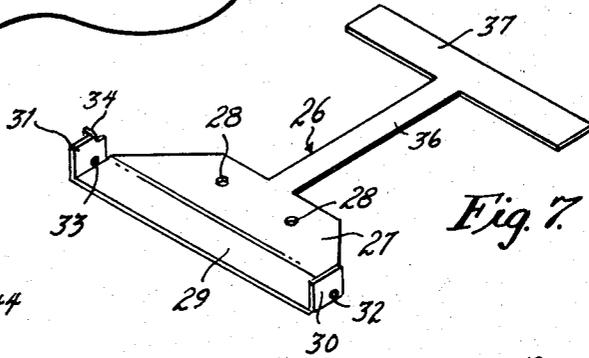


Fig. 7.

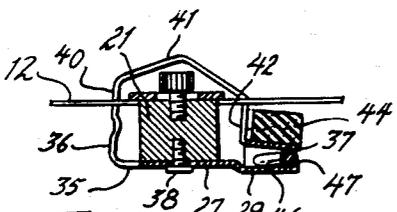


Fig. 5.

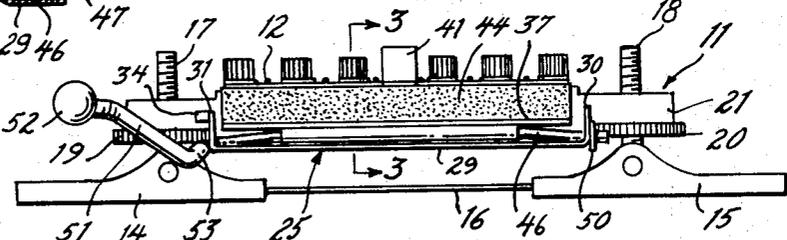


Fig. 2.

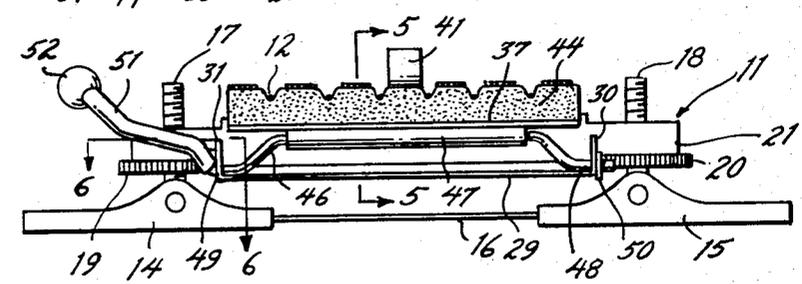


Fig. 4.

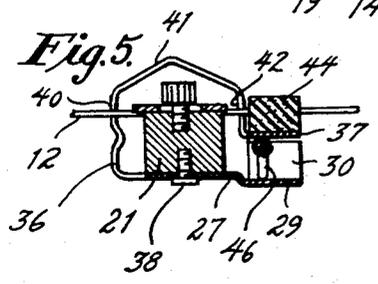


Fig. 5.

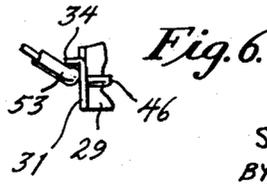


Fig. 6.

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3,406,603
MUTE FOR STRINGED INSTRUMENTS
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ABSTRACT OF THE DISCLOSURE

This invention concerns the provision of a mute for stringed instruments which is totally mounted on the bridge of the instrument for ease of operation without adversely affecting tone.

The mute is formed from a single sheet of resilient material. One portion of which is bent over the bridge and the pad of muting material placed thereon. A second portion supports a lever which activates the mute.

Background of the invention

While it has been conventional to provide mutes for stringed instruments of various constructions, prior-art mutes have been relatively complex in construction, often requiring attachment to the sounding members of the instrument, and usually difficult and inconvenient to operate.

Summary of the invention

Accordingly, it is an important object of the present invention to provide a novel mute construction for stringed instruments which requires no attachment or connection of any kind to sounding members of the instrument, being connected solely to the bridge, which is extremely simple in construction, durable and reliable throughout a long useful life, and which can be economically manufactured and employed as original equipment with a stringed instrument or as an attachment thereto.

It is still another object of the present invention to provide a mute for stringed instruments having the advantageous characteristics mentioned in the preceding paragraph, which is capable of highly effective muting action, while being extremely easy and convenient to operate.

Other objects of the present invention will become apparent upon reading the following specification and referring to the accompanying drawings, which form a material part of this disclosure.

The invention accordingly consists in the features of construction, combinations of elements, and arrangements of parts, which will be exemplified in the construction hereinafter described, and of which the scope will be indicated by the appended claims.

Brief description of the drawing

FIGURE 1 is a partial top plan view showing a stringed instrument employing a mute constructed in accordance with the teachings of the present invention;

FIGURE 2 is an elevational view taken generally along the line 2-2 of FIGURE 1 illustrating the instant mute in operative association with a bridge;

FIGURE 3 is a transverse sectional view taken generally along the line 3-3 of FIGURE 2;

FIGURE 4 is an elevational view similar to FIGURE 2, but illustrating the mute in its operative or muting engagement with the strings of the instrument;

FIGURE 5 is a transverse sectional view taken generally along the line 5-5 of FIGURE 4;

FIGURE 6 is a partial sectional view taken generally along the line 6-6 of FIGURE 4; and

FIGURE 7 is a perspective view showing a blank for use in construction of the instant mute.

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Referring now more particularly to the drawings, and specifically to FIGURE 1 thereof, a stringed instrument is generally designated 10, and may be a guitar, as illustrated, or other stringed instrument having a bridge 11 and a plurality of strings 12 extending transversely across the bridge.

The bridge 11 is of the type disclosed in my prior United States Patent No. 2,786,382, and includes a pair of feet 14 and 15 for resting on the top wall of a guitar 10, or the like, and connected together by a flexible strip 16. Upstanding from respective feet 14 and 15, pivotally connected thereto, are threaded standards, studs or posts 17 and 18. A knurled nut is threadedly engaged on each post 17 and 18, as at 19 and 20, respectively, and a bridge proper 21 extends between the posts 17 and 18, over the strip 16. The bridge proper 21 may have holes adjacent to opposite ends for slidably receiving respective posts 17 and 18, and is vertically adjustable on the posts by the nuts 19 and 20. That is, the bridge 21 passes transversely beneath the strings 12, in upward bearing engagement with the undersides thereof, and is thereby held against the upper sides of the nuts 19 and 20.

The mute of the present invention is generally designated 25, and is formed essentially from the integral blank 26 of FIGURE 7. The blank 26 is cut and bent from a single sheet of resilient material, such as steel, and configured to define a generally trapezoidal base portion 27 having thru fastener-receiving holes 28. Extending integrally from the longer side of the trapezoidal base 27, and offset slightly downward therefrom is a generally rectangular mounting portion 29. At opposite ends of the mounting portion 29 are a pair of generally rectangular, upstanding tabs 30 and 31, each having a thru hole, as at 32 and 33, which holes are in alignment with each other. One tab 31 may have an upper corner portion 34 bent at right angles to the remainder of the tab, for a purpose appearing presently.

An elongate strip 36 extends from the base portion 27 oppositely away from the mounting portion, and is provided on its distal end with a transversely elongate, generally rectangular carrier portion 37.

In assembly with the bridge 11, the blank 26 has its base portion 27 secured to the underside of the bridge proper 21, as by fasteners 38 extending through holes 28, see FIGURES 3 and 5. The mounting portion 29 extends laterally on one side of the bridge proper 28, spacedly beneath the strings 12. The mounting portion is thus disposed transversely of the strings 12, and the upstanding end tabs 30 and 31 are located on opposite sides of the group of strings.

The strip 36 includes a resilient arm 35 extending laterally from the base 27 on the side of bridge proper 21 opposite to mounting portion 29. The strip 36 continues from the end of arm 35 upwardly, as at 40 passing between the strings 12 to an elevation greater than the strings, and is bent to extend thence over the bridge proper 21, as at 41 onto the same side of the bridge proper as the mounting portion. The strip 36 thence passes downwardly between the strings 12, as at 42 to a location proximate to and above the mounting portion 29. The extension portion 42 is connected at its lower end to the transversely elongate portion or carrier 37, which is bent to extend generally horizontally, substantially conformably overlying the mounting portion. By resiliency of the arm 35 and extension portions 40, 41 and 42, the carrier portion or plate 37 is resiliently movable upwardly and downwardly toward and away from the strings 12. A pad 44 of muting material, such as soft rubber, or the like, is adhesively or otherwise suitably secured on the upper surface of carrier 37 for movement therewith into and out of muting engagement with the strings 12.

Lever means is generally designated 45, and is mounted on the mounting means 30, 31. The lever means 45 may be formed of wire or rod stock, and include a crankshaft 46 having an offset medial portion 47, and aligned bearing portions 48 and 49. The crankshaft 46 is interposed between the mounting portion 29 and carrier 37, the latter being resiliently biased downwardly toward the former.

The bearing portions 48 and 49 of the crankshaft 46 extend rotatably through respective aligned apertures 32 and 33, the latter defining journal bearings therefor. Thus, the crankshaft 46 is rotatable between its lower position of FIGURE 3, with the offset medial portion 47 lying on the mounting portion 29, and a raised position, FIGURE 5.

At one end of the crankshaft 46, adjacent to the bearing portion 48, may be provided a retaining clip 50 outward of the journal bearing 30 to prevent withdrawal therethrough of the crankshaft. The other end of the crankshaft 46, outward of the journal bearing 31 may be provided with an actuating arm 51, carrying an end knob 52 for convenient finger swinging thereof. The actuating arm 51 includes an inner portion 53 bent at a sharp angle to the adjacent bearing portion 49, just outward of the journal bearing 31. The arm portion 53 is swingable with the crankshaft 46 to abuttingly engage the stop 34 upon upward movement of the crankshaft to limit the latter to its upper position shown in FIGURE 5.

Thus, during play of the instrument 10, it is only necessary for the performer to quickly and easily move the actuating arm 51 either to its muting position of FIGURE 4, with the pad 44 engaging the undersides of strings 12, or to its lowered, nonmuting position of FIGURE 2. In the latter position the carrier 37 and muting pad 44 are stable, as the carrier resiliently holds the crankshaft 46 downward against the mounting portion 29. In the raised, muting position, the crankshaft 46 may be just over dead center, and therefore stably retained in this position by the downward bearing pressure of carrier 37 tending to hold the actuating-arm portion 53 against stop 34.

From the foregoing, it is seen that the present invention provides a mute construction for stringed instruments which fully accomplishes its intended objects and is well adapted to meet practical conditions of manufacture, installation and use.

Although the present invention has been described in some detail by way of illustration and example for purposes of clarity of understanding, it is understood that certain changes and modifications may be made within

the spirit of the invention and scope of the appended claims.

What is claimed is:

1. A mute for a stringed instrument including a bridge and strings over said bridge, said mute comprising a base secured to the underside of said bridge, said base having a mounting portion extending laterally on one side of said bridge, a resilient arm projecting from said base on the other side of said bridge, an extension on said arm passing over said bridge and terminating proximate to and above said mounting portion, a transverse carrier on said extension directly over said mounting portion, muting material on said carrier and movable therewith upward into muting engagement with said strings and downward out of said muting engagement, mounting means on said mounting portion, and lever means mounted by said mounting means and operatively connected to said carrier for effecting up-and-down movement thereof.

2. A mute according to claim 1, said mounting means comprising a pair of spaced journal bearings on said mounting portion aligned transversely of said strings, and said lever means including a crankshaft journaled in said journal means for rotation against the underside of said carrier to raise and lower the latter.

3. A mute according to claim 2, said lever means including an actuating arm extending from one end of said crankshaft, and stop means engageable with said lever means to limit rotation thereof.

4. A mute according to claim 1, said base, mounting portion, arm, extension and carrier all being integrally fabricated of a resilient sheet material.

5. A mute according to claim 4, said mounting means comprising a pair of spaced facing tabs integral with and upstanding from opposite ends of said carrier, said tabs having aligned openings defining journal bearings, and said lever means including a crankshaft journaled in said journal bearings for rotation against the underside of said carrier to raise and lower the latter.

6. A mute according to claim 5, said lever means including an actuating arm extending from one end of said crankshaft, and stop means engageable with said lever means to limit rotation thereof.

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JOHN F. GONZALES, *Assistant Examiner*.