

July 12, 1966

C. L. FENDER

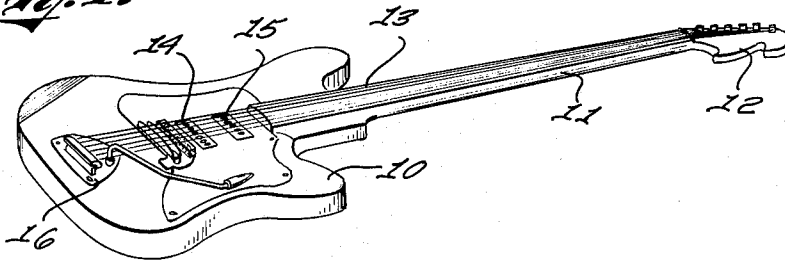
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MUTE OR DAMPER DEVICE FOR A GUITAR

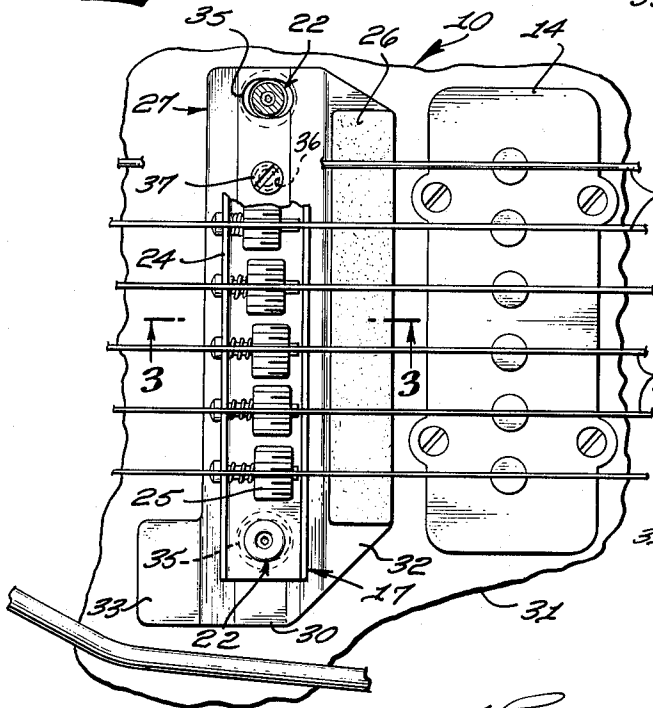
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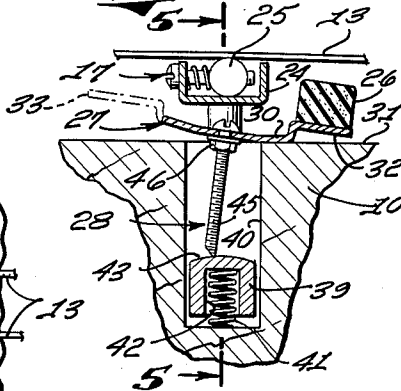
*Fig. 1.*



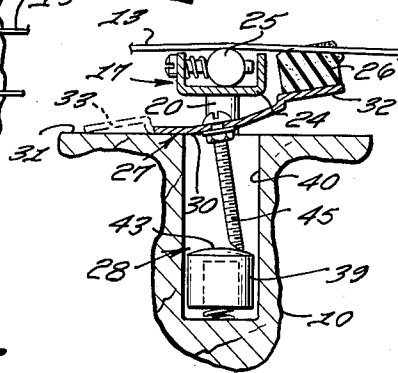
*Fig. 2.*



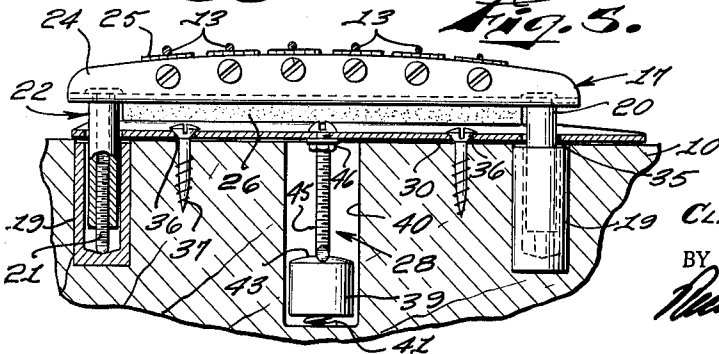
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



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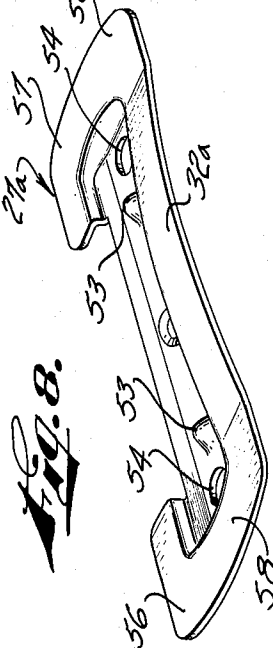
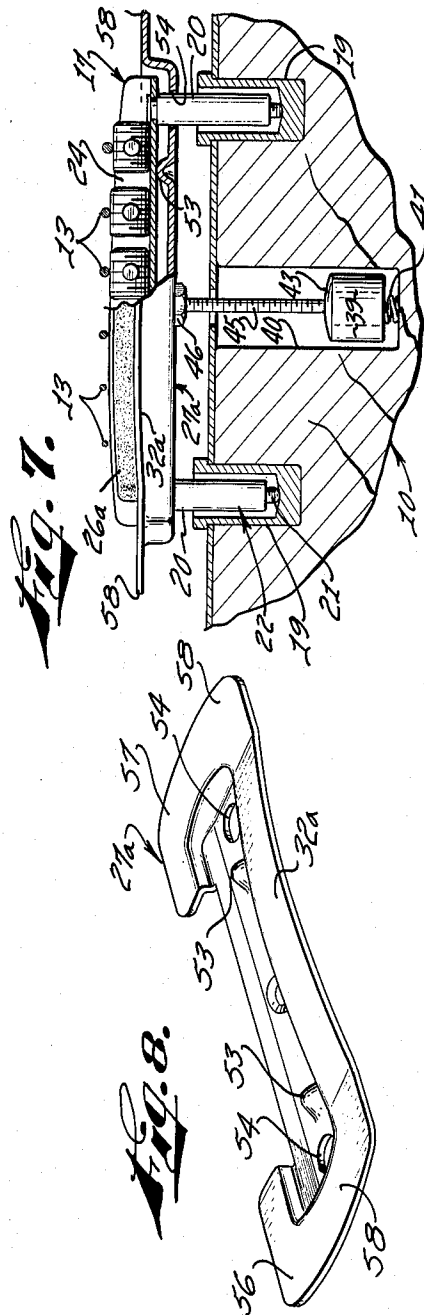
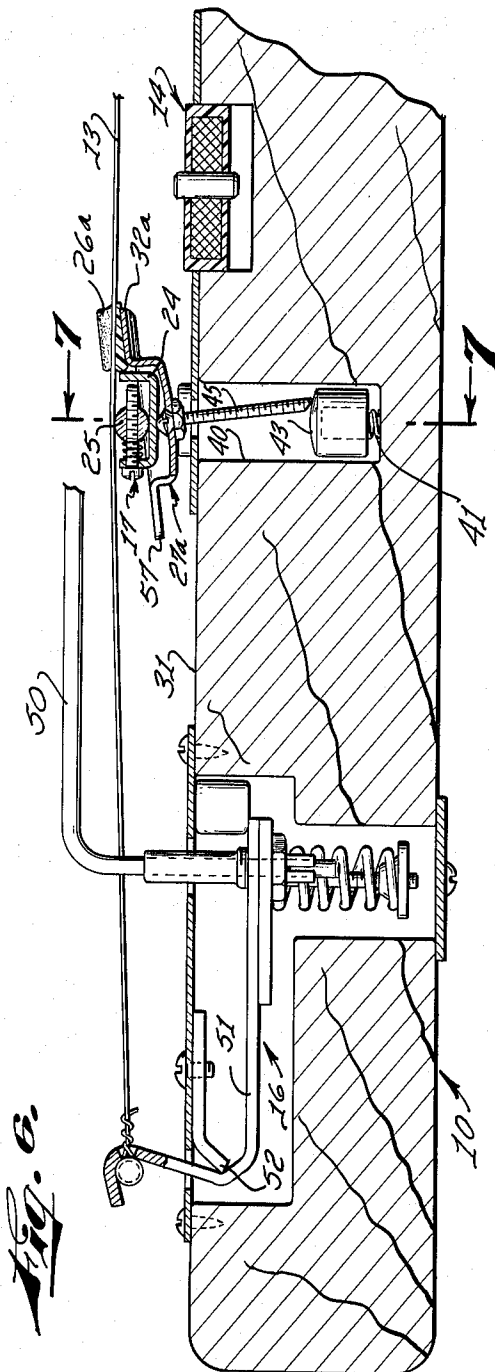
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3,260,148

MUTE OR DAMPER DEVICE FOR A GUITAR

Filed Nov. 12, 1964

2 Sheets-Sheet 2



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3,260,148

**MUTE OR DAMPER DEVICE FOR A GUITAR**  
 Clarence L. Fender, Fullerton, Calif., assignor, by mesne assignments, to Columbia Records Distribution Corp., New York, N.Y., a corporation of New York  
 Filed Nov. 12, 1964, Ser. No. 412,875  
 10 Claims. (Cl. 84-267)

This application is a continuation-in-part of my co-pending application Serial No. 169,385, filed January 29, 1962, for Mute or Damper Device for a Guitar.

This invention relates to a mute or damper device for a guitar, such as an electric guitar of the Spanish type. The invention further relates to a combination mute and pivoting bridge assembly, incorporated in a guitar.

An object of the invention is to provide a highly effective, simple and economical mute device which may be employed by the guitarist in order to damp the vibrations of the guitar strings, and to achieve a variety of novel effects such as the simulation of a banjo.

A further object of the invention is to provide a combination guitar and mute device, the mute being adapted to be shifted readily between operative and retracted positions.

An additional object is to provide a guitar mute which is constructed and mounted in such manner that it does not interfere in any manner with movement of the guitarist's hand during playing of the instrument, regardless of whether the mute is being utilized or is in its retracted position.

An additional object is to provide a combination guitar mute and bridge, the major portion of the mute being mounted beneath the bridge in order to reduce to a minimum the amount of useful space adjacent the guitar face which is occupied by the mute.

Another object is to provide a combination mute and pivoting-bridge assembly, such assembly being highly simple and economical yet achieving the important result of substantially eliminating wear on the cushion or pad portion of the mute.

A further object is to provide a mute which is mounted on, and therefore adjusts automatically with, a bridge element.

These and other objects and advantages of the invention will be more fully set forth in the following specification and claims, considered in connection with the attached drawing to which they relate.

In the drawing:

FIGURE 1 is a perspective view illustrating a guitar incorporating mute means constructed in accordance with a first embodiment of the present invention;

FIGURE 2 is a greatly enlarged fragmentary plan view illustrating the bridge and mute portion of the guitar of FIGURE 1;

FIGURE 3 is a fragmentary longitudinal sectional view taken on line 3-3 of FIGURE 2, and illustrating the mute in its retracted or inoperative position;

FIGURE 4 is a sectional view corresponding to FIGURE 3 but illustrating the mute in its operative or working position;

FIGURE 5 is a fragmentary transverse sectional view taken on line 5-5 of FIGURE 3;

FIGURE 6 is a longitudinal sectional view of a mute and pivoting-bridge assembly constructed in accordance with a second embodiment of the invention;

FIGURE 7 is a transverse sectional view taken generally on line 7-7 of FIGURE 6, but showing the mute in its position out of engagement with the strings; and

FIGURE 8 is an isometric view showing the pivoting element of the embodiment of FIGURE 6, the pad or cushion (soft body) being omitted.

The invention is illustrated as incorporated in an electric guitar of the type described and claimed in my Patent No. 2,972,923, issued February 28, 1961, for Floating Tremolo and Bridge Construction for Lute-Type Musical Instruments. Except as will be described in detail therein, the illustrated guitar is identical to the one described and claimed in the cited patent.

The electric guitar is illustrated as having a body 10, a fretted neck 11, a head 12, strings 13, and electromagnetic pickups or transducers 14 and 15. The pickups 14 and 15 are selectively operable to sense the vibrations of strings 13 and transmit currents corresponding thereto to suitable amplifier and loud-speaker means, not shown.

The strings 13 are stretched or tensioned between suitable tuning pegs or screws (on head 12) and a tremolo device 16 which is described in the cited patent. The tremolo device 16 cooperates with a floating bridge 17 to provide a tremolo action in the substantial absence of friction.

Floating bridge 17 is also identical to the one described in the cited patent and illustrated in FIGURES 3 and 7 thereof, except that the upwardly-extending head portions of the thimbles 19 (corresponding to elements 68 in the patent) are eliminated in order to provide clearance for the mute device of the present invention. Thus, the internally-threaded sleeve components 20 (corresponding to elements 64 in the patent) of the floating bridge extend downwardly into the thimbles 19 and cooperate with the pins or screws 21 (corresponding to elements 66 in the patent) to permit pivoting of the bridge as shown in FIGURE 7 of the patent. Pins 21 also permit adjustment of the length of the leg or rock post assemblies 22 (corresponding to assemblies 62 in the patent) which support the string-engaging portion of the bridge means.

As described in detail in the patent, the bridge further comprises a channel 24 (corresponding to element 61 in the patent) having adjustably mounted thereon a plurality of externally-threaded bridge elements 25 (corresponding to elements 63 in the patent). The bridge elements are respectively associated with the six strings 13 of the guitar to support the same in desired positions.

The mute or damper device of the first embodiment of the present invention (FIGURES 1-5) comprises a soft vibration-damping body 26 adapted to engage simultaneously all of the strings 13 to damp the same, rocker means 27 associated with body 26 to shift it between the retracted position of FIGURE 3 and the operative position of FIGURE 4, and a novel detent mechanism 28 connected to the rocker means to maintain it selectively in its retracted and operative positions.

The body 26 is formed of a suitable soft material. It preferably comprises an elongated rectangular mass of a sponge elastomer such as rubber, for example on the order of one-quarter inch in cross-sectional dimension, which is sufficiently long to engage the various spaced-parallel strings 13. It is an important feature of the invention that the body is positioned to engage the strings 13 at points closely adjacent the bridge 17, so that vibrations of the strings 13 are damped in a desirable and not excessive manner. Referring to the drawing, it will be observed that the body 26 is disposed parallel to the bridge channel 24 and is within a minor fraction of an inch thereof when the body is in the operative position shown in FIGURE 4. It is also to be observed that the adjacent one of the electromagnetic pickups, number 14, is located only a short distance on the opposite side of body 26 from bridge 17. Thus, the elastomeric body 26 is disposed intermediate and adjacent the bridge and the pickup 14.

Rocker means 27 is illustrated to comprise a metal

stamping having a slightly trough-like or rounded center rocking portion 30 mounted perpendicularly of the strings 13 beneath bridge channel 24 and adapted to be rockingly supported on the face surface 31 of the guitar body 10. Along one of its edges, relatively adjacent pickup 14, the rocking portion 30 is integrally associated with a body-supporting portion 32 to which is adhesively secured the lower surface of elastomeric body 26. At its opposite surface, remote from pickup 14 and adjacent only one end of the rocking portion 30, is integrally formed an actuating portion or lug 33 adapted to be manually depressed by the guitarist. The actuating portion 33 is disposed to one side of the strings 13 and does not interfere therewith, being preferably located on the side of the guitar body which is normally held lowermost during playing of the instrument.

The body-supporting portion 32 and the actuating portion 33 are shown in FIGURES 3 and 4 as being disposed in generally the same plane which is at a slightly higher elevation than the edges of the trough-like rocker. There is, accordingly, no interference by portions 32 and 33 with rocking action of the trough on face surface 31.

The trough-like rocking portion 30 of rocker means 27 is formed at opposite ends thereof with oversize elongated openings 35 through which extend the sleeve components 20 of bridge legs 22. Such openings 35 are sufficiently large that, regardless of the pivoted position of the bridge 17, it will not contact the rocker 30.

At spaced points between the oversize openings 35, rocking portion 30 is formed with smaller openings 36 adapted to receive downwardly-extending pivot screws 37 which are threaded into the guitar body 10. The heads of the screws 37 are spaced sufficiently above the body, and the openings 36 are sufficiently large, that rocker means 27 may rock on surface 31 between the extreme positions indicated in FIGURES 3 and 4, causing elastomeric body 26 to first forceably engage and then be retracted entirely away from the guitar strings 13.

The simple and concealed detent mechanism 28 is one of the features of the invention, and comprises a cylindrical piston 39 which is vertically movable in a cylindrical bore 40 formed in body 10 beneath the center of rocker portion 30. Such bore extends perpendicularly to face 31 and is sufficiently large that the piston 39 may move freely therein but may not become cocked or stuck. A relatively strong helical compression spring 41 is seated between the bottom of bore 40 and the upper end of a central passage or opening 42 which is formed in the piston 39, as best shown in FIGURE 3. Such upper passage end is adjacent the rounded or dome-like upper surface 43 of the piston, such surface constituting a section of a sphere.

A detent leg 45 is fixedly secured to the rocker portion 30 and extends downwardly through bore 40 for engagement, at its free end, with the rounded upper surface 43 of piston 39. More specifically, the leg comprises a screw which is inserted downwardly through the rocker means, having a nut 46 to lock the same fixedly in position. Alternatively, the leg may comprise a pin welded or otherwise suitably secured to the rocker.

The free or lower end of leg 45 is cut off in a plane oblique to the axis thereof, in such manner that resistance to pivotal movement of the rocker means 27 in a direction away from the operative position shown in FIGURE 4 will be greater than resistance to pivotal movement of the rocker in a direction toward such operative position.

Let it be assumed that the mute is initially in the retracted or inoperative position shown in FIGURE 3. The body 26 is then spaced a sufficient distance from strings 13 to insure against contact therewith, being held in such retracted position due to the action of the spring-pressed detent piston 39 against the lower end of detent leg 45.

In order to shift the mute to the operative position of

FIGURE 4, for example when it is desired to simulate a banjo, it is merely necessary for the musician to press downwardly on the actuating portion or lug 33. The strings 13 are then engaged forceably by the body 26, which compresses therearound and effectively damps string vibration. However, because of the short distance between the body 26 and the bridge elements 25, the strings will still vibrate sufficiently to produce the desired sounds.

To pivot the mute back to its retracted position, the musician merely presses downwardly upon the body-support portion 32, for example adjacent either end of body 26.

It is emphasized that the mute device is highly unobtrusive, being so located that it cannot possibly interfere with playing of the instrument. The location of the rocker means 27 beneath the bridge channel 24 is particularly advantageous since the only substantial protruding portions of the mute device are the actuating lug 33 and the string-engaging body 26.

The mute and associated components are extremely simple to assemble, it being merely necessary to drop the piston 39 (with its spring 41) into the bore 40, insert the screws 37 through the holes 36, and tighten such screws to the desired positions permitting free pivotal movement of the rocker portion 30 of rocker means 27. The leg assemblies 22 of bridge 17 are then inserted through the oversized openings 35 and into the thimbles 19. It is then merely necessary to connect the strings 13 between head 12 and the tremolo device 16, such strings being supported on the bridge and maintaining the same in position.

It is pointed out the strings 13 are generally parallel to each other and lie generally in a plane which is parallel to that of face 31. One set of ends of strings 13 is connected to head 12, and the other set of string ends is connected to tremolo device 16. The bridge 17 is disposed relatively adjacent such other set of string ends, so that the strings have relatively long operative or playing portions disposed between the bridge and such one set of string ends (connected to head 12). These playing portions are disposed over a major portion of body 10, and over the fretted neck 11. The mute body 26 is associated with such operative or playing portions of the strings, lying between the bridge 17 and the string ends at head 12.

The mute shown in the embodiment of FIGURES 6-8 is even more simple to manufacture and assemble, and more economical, than the one shown in FIGURES 1-5. Despite such increase in simplicity, the embodiment of FIGS. 6-8 achieves the important advantage that rubbing and wear on the elastomeric body 26a by the strings 13 is substantially eliminated.

In the embodiment of FIGURES 1-5, the screws 37 projecting through openings 36 maintain the mute assembly relatively fixed against shifting longitudinally of the strings. Therefore, when the tremolo device 16 is operated to effect tensioning or relaxation of the strings 13, with consequent pivotal movement of the floating bridge 17, the strings rub on the elastomeric element 26 and create wear. (As described in detail in the cited patent, the tremolo device 16—or equivalent thereof—effects tensioning or relaxation of the strings when the operator manipulates the handle or crank 50 shown in FIGURE 6, thereby effecting pivoting of the string-mounting element 51 about a fulcrum region 52.)

The rubbing of the strings 13 on the elastomeric body, and several assembly operations, are eliminated in the embodiment of FIGURES 6-8 by causing the rocker means 27a to pivot not on the face 31 but instead on the underside of bridge channel 24. The rocker means 27a is maintained in pressure contact with bridge channel 24 by operation of leg 45 which is spring-pressed by the piston 39 and the compression spring 41.

Stated more specifically, the spring 41, piston 39, and

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leg 45 cause fulcrum protrusions 53 (formed integrally on the rocker means 27a) to be in pressure engagement with the central region of the generally horizontal web of channel 24.

In contrast with the embodiment of FIGURES 1-5, wherein the openings 35 in the rocker means were sufficiently large to prevent substantial contact between the rocker means and the bridge leg assemblies 22, the rocker means of the embodiment of FIGURES 6-8 includes circular openings 54 which would be only slightly larger in size than the outer diameters of such leg assemblies. The size difference is only sufficient to permit pivoting of the mute between its operative string-engaging position shown in FIGURE 6 and its retracted position at which the cushion 26a is spaced below the strings 13.

Because of the relatively small difference between the diameters of openings 54 and the outer diameters of the sleeves 20 (which form parts of leg assemblies 22), and because of the pressure engagement between fulcrums 53 and the bridge channel, pivoting of the bridge 17 causes corresponding axial movement of the rocker means 27a, so that there is little or no relative movement between the strings 13 and the cushion 26a.

The supporting portion 32a of the rocker means 27a is preferably somewhat curved, as shown in FIGURES 7 and 8, in order that the soft body or cushion 26a will curve generally correspondingly to the elevations of the strings 13, it being understood that such strings are normally disposed on the surface of a large-diameter imaginary cylinder the axis of which is parallel to the strings and a substantial distance therebeneath. The diameter of such imaginary cylinder is so large that the strings "lie generally in a single plane."

It will be noted that, in the embodiment of FIGURES 6-8, the lug or actuating portion 33 is replaced by portions 56 and 57 which are disposed on both sides of the strings, to facilitate access to and operation of the mute. Furthermore, flange portions 58 are provided integrally with the portions 56 and 57 to facilitate pivoting of the rocker means to the position at which the cushion is retracted from the strings. Thus, the central or rocker portion of the rocker means 27a, including the protuberant fulcrum portions 53 and the openings 54, is recessed below a rim formed by flange or rim portions 56-58 (FIGURE 8). Such rim is interrupted in the region between the mute and the tremolo device 16, in order to prevent contact between the rocker means 27a and the strings.

In the assembly of the embodiment of FIGURES 6-8 it is merely necessary to pre-assemble the bridge 17 and then insert the leg portions 22 thereof through openings 54 in the rocker means 27a. The piston 39 and spring 41 are then dropped into the bore or opening 40, following which the combination bridge and mute element is mounted on the guitar body by merely inserting the leg portions 22 into thimbles 19, and leg 45 in bore 40.

The strings 13 are then mounted over the bridge and are tuned to the desired tensioned relationship. The strings thus operate to maintain the lower ends of bridge portions 21 in pivotal engagement with the pivot portions formed at the bottom-inner regions of thimbles 19. The bridge, in turn, operates through the fulcrum regions 53 and the leg 45 to force the piston 39 downwardly, against the bias of compression spring 41. All the parts are thus maintained in the desired relationship without the necessity of inserting or adjusting the screws 37 required by the previous embodiment.

Various embodiments of the present invention, in addition to what has been illustrated and described in detail, may be employed without departing from the scope of the accompanying claims.

I claim:

1. A guitar, which comprises
  - a body having a face,
  - a plurality of guitar strings,

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means operably associated with said body to mount said strings in tensioned relationship over said face and in spaced and generally parallel relationship relative to each other,

said strings lying generally in a plane parallel to that of said face,

bridge means disposed between said face and said strings and operably associated with said face and said strings,

said bridge means including a string-contacting component spaced above said face and leg components extending downwardly to said face,

said bridge means being disposed relatively adjacent one set of ends of said strings whereby relatively long operative playing portions of said strings are defined between said bridge means and the other set of ends of said strings,

an elongated rocker element disposed between said string-contacting bridge component and said face,

said rocker element being rockably mounted on said face beneath said strings and extending transversely to said strings,

said rocker element having openings therein adapted to receive freely said leg components of said bridge means,

a body-supporting element mounted adjacent and parallel to said rocker element and connected thereto, said body-supporting element being disposed beneath said operative playing portions of said strings,

a soft vibration-damping body mounted on said body-supporting element for engagement with said operative playing portions of said strings,

means to rock said rocker element on said face to shift said vibration-damping body between a first position in operative engagement with said operative playing portions of said strings and a second position spaced therefrom, and

means to maintain said vibration-damping body selectively in said first and second positions.

2. A guitar, which comprises

a body having a face,

a plurality of guitar strings,

means operably associated with said body to mount said strings in tensioned relationship over said face and in spaced and generally parallel relationship relative to each other,

said strings lying generally in a plane parallel to that of said face,

bridge means disposed between said face and said strings and operably associated with said face and said strings,

said bridge means including a string-contacting component spaced above said face and leg components extending downwardly to said face,

said bridge means being disposed relatively adjacent one set of ends of said strings whereby relatively long operative playing portions of said strings are defined between said bridge means and the other set of ends of said strings,

an elongated rocker element disposed between said string-contacting bridge component and said face,

said rocker element being rockably mounted on said face beneath said strings and extending transversely to said strings,

a body-supporting element mounted adjacent and parallel to said rocker element and connected thereto,

said body-supporting element being disposed beneath said operative playing portions of said strings,

a soft vibration-damping body mounted on said body-supporting element for engagement with said operative playing portions of said strings,

means to rock said rocker element on said face to shift said vibration-damping body between a first position

in operative engagement with said operative playing portions of said strings and a second position spaced therefrom, and  
 detent means to maintain said vibration-damping body selectively in said first and second positions,  
     said detent means comprising a leg fixedly secured to said rocker element and extending downwardly into a bore in said guitar body,  
 a piston mounted movably in said bore and having an end in engagement with the free end of said leg, and  
 spring means to urge said piston toward said rocker element to thereby maintain said free leg end to one side or the other of the center of said end of said piston.  
 3. A guitar, which comprises:  
 a body having a face,  
 a plurality of guitar strings,  
 means operably associated with said body to mount said strings in tensioned relationship over said face and in spaced and generally parallel relationship relative to each other,  
     said strings lying generally in a plane parallel to that of said face,  
 bridge means disposed between said face and said strings and operably associated with said body and said strings,  
     said bridge means including a string-contacting component spaced above said face and leg components extending downwardly to said face,  
     said bridge means being disposed relatively adjacent one set of ends of said strings whereby relatively long operative playing portions of said strings are defined between said bridge means and the other set of ends of said strings,  
 an elongated rocker element disposed between said string-contacting bridge component and said face,  
     said rocker element being rockably mounted between said body and said string-contacting component of said bridge means,  
     said rocker element extending transversely of said strings,  
 a body-supporting element mounted adjacent and parallel to said rocker element and connected thereto,  
     said body-supporting element being disposed beneath said operative playing portions of said strings,  
 a soft vibration-damping body mounted on said body-supporting element for engagement with said operative playing portions of said strings,  
 means to rock said rocker element to shift said vibration-damping body between a first position in operative engagement with said operative playing portions of said strings and a second position spaced therefrom, and  
 means to maintain said vibration-damping body selectively in said first and second positions.  
 4. A guitar, which comprises  
 a body having a face,  
 a plurality of guitar strings,  
 means operably associated with said body to mount said strings in tensioned relationship over said face and in spaced and generally parallel relationship relative to each other,  
     said strings lying generally in a plane parallel to that of said face,  
 bridge means disposed between said face and said strings and operably associated with said body and with said strings,  
     said bridge means being disposed relatively adjacent one set of ends of said strings whereby relatively long operative playing portions of said strings are defined between said bridge means and the other set of ends of said strings,  
 mute means having a string-engaging portion disposed

adjacent said bridge means between said bridge means and said other set of ends of said strings,  
 said mute means also having a pivot portion disposed between said bridge means and said face and adapted to be manually pivoted by the guitarist,  
     said pivot portion being operatively associated with said string-engaging portion in such manner that pivotal movement of said pivot portion shifts said string-engaging portion between a first position in muting engagement with said strings and a second position retracted from said strings, and  
 detent means operatively associated with said mute means to maintain said string-engaging portion selectively in said first and second positions.  
 5. A guitar, which comprises:  
 a body,  
 a plurality of guitar strings,  
 means operably associated with said body to mount said strings in tensioned relationship over said body and in spaced and generally parallel relationship relative to each other,  
 bridge means disposed between said body and said strings and operably associated therewith,  
     said bridge means being disposed relatively adjacent one set of ends of said strings whereby relatively long operative playing portions of said strings are defined between said bridge means and the other set of ends of said strings, and  
 mute means movably mounted on said bridge means for movement between an operative position in engagement with said operative playing portions of said strings, and a retracted position in spaced relationship from said operative playing portions of said strings.  
 6. A guitar, which comprises  
 a body having a face,  
 a plurality of guitar strings,  
 means operably associated with said body to mount said strings in tensioned relationship over said face and in spaced and generally parallel relationship relative to each other,  
     said strings lying generally in a plane parallel to that of said face,  
 bridge means disposed between said face and said strings and operably associated with said face and said strings,  
     said bridge means being disposed relatively adjacent one set of ends of said strings whereby relatively long operative playing portions of said strings are defined between said bridge means and the other set of ends of said strings,  
 said bridge means including a string-contacting component spaced above said face,  
 said bridge means further including leg components extending downwardly to said body whereby a space is provided between said string-contacting component and said body,  
 the ends of said leg components remote from said string-contacting component being pivotally associated with said body to permit pivoting of said bridge means about an axis transverse to said strings,  
 mute means for damping the vibration of said operative playing portions of said strings,  
     said mute means comprising a rocker portion disposed in said space between said string-contacting bridge component and said body,  
     said rocker portion being pivotally engaged with said string-contacting bridge component to permit rocking of said mute means about an axis which is generally parallel to said face and transverse to said strings,

said mute means further comprising a soft vibration-damping body connected to said rocker portion and adapted to engage said operative playing portions of said strings when said rocker portion is in a first rocked condition,

said vibration-damping body being spaced from said operative playing portions of said strings when said rocker portion is in a second rocked condition, and

resilient means disposed between said rocker portion and said body and adapted to bias said rocker portion into engagement with said string-contacting component of said bridge means,

said resilient means forming part of a detent means adapted selectively to maintain said rocker portion in said positions.

7. A guitar, which comprises:

a body having a face,

a plurality of guitar strings,

means operatively associated with said body to mount said strings in tensioned relationship over said face and in spaced and generally parallel relationship relative to each other,

said strings lying generally in a plane parallel to that of said face,

bridge means disposed between said face and said strings and operably associated therewith,

said bridge means being disposed relatively adjacent one set of ends of said strings whereby relatively long operative playing portions of said strings are defined between said bridge means and the other set of ends of said strings, said bridge means including a string-contacting component spaced above said face and leg components extending downwardly into openings in said body,

the ends of said leg components remote from said string-contacting component being pivotally associated with said body for pivoting of said string-contacting component about an axis transverse to said strings and generally parallel to the plane thereof, and

mute means for damping the vibration of said operative playing portions of said strings,

said mute means having a rocker portion including fulcrum means bearing against the underside of said string-contacting bridge component,

said mute means also having a soft body portion fixedly connected to said rocker portion and disposed to engage said operative playing portions of said strings adjacent said bridge means when said rocker portion is in a first rocked position,

said rocker portion being adapted to rock to a second rocked position at which said body is spaced away from operative playing portions of said strings,

said rocker portion having openings therein adapted to receive said leg components of said bridge means,

the diameters of said openings being sufficiently large to permit pivoting of said rocker portion but sufficiently small to effect movement of said rocker portion with said bridge means during pivoting of said bridge means about said transverse axis, and

detent means disposed in a recess in said guitar body beneath said rocker portion,

said detent means being adapted selectively to maintain said rocker portion in said first and second rocked positions,

said detent means comprising a piston mounted in a bore in said guitar body,

said bore being generally perpendicular to said face of said guitar body and being located beneath said rocker portion of said mute means,

said detent means further comprising a compression spring disposed between said piston and the end of said bore which is remote from said face to thereby urge said piston toward said face,

said detent means further comprising a leg connected fixedly to said rocker portion and extending downwardly into said bore for engagement with said piston,

said leg being adapted to move from one side of said bore to the other side thereof in response to rocking of said rocker portion.

8. A guitar, which comprises:

a body,

a plurality of guitar strings stretched over said body, pivoting bridge means extending between said body and said strings and adapted to pivot about an axis transverse to said strings upon tension and relaxing of said strings,

tremolo means to effect selective tensioning and relaxing of said strings to thereby provide a tremolo effect, and a mute mounted on said bridge means and movable therewith during operation of said tremolo means,

said mute including means movably mounted on said bridge means to shift a muting element into contact with said strings and thereafter to retract said muting element from said strings.

9. A combination mute and bridge for a guitar or similar stringed instrument, which comprises:

a bridge having a string-contacting portion and a support portion,

said support portion being adapted to engage a guitar body, said support portion being adjustable to raise and lower said string-contacting portion relative to said body, and

a mute movably mounted on said string-contacting portion for movement between a retracted position and an operative position in engagement with the strings of a guitar.

10. In a guitar, a combination mute and bridge comprising:

a bridge having a string-engaging portion,

said bridge also having a support portion which is adjustable to raise and lower said string-engaging bridge portion,

a mute having a soft portion adapted to engage the guitar strings to mute the same,

said mute also having a fulcrum portion engaged pivotally with said string-engaging portion of said bridge, and

resilient detent means interposed between the guitar body and said fulcrum portion to support the same in pivotal contact with said string-engaging bridge portion, regardless of the vertically-adjusted position thereof, and to maintain said soft mute portion selectively in string-engaging and retracted positions.

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LEO SMILOW, Primary Examiner.