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H. H. PULSIFER

2,461,232

PLAYING STEEL

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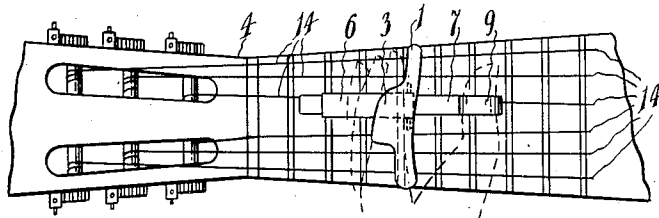


FIG. 1.

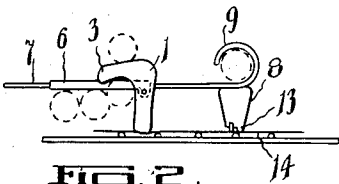


FIG. 2.



FIG. 3.

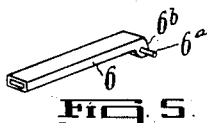


FIG. 4.

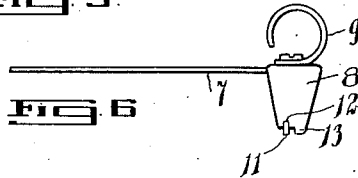


FIG. 5.

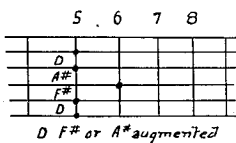


FIG. 6.



FIG. 7.

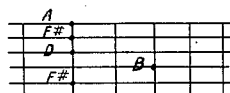


FIG. 8.

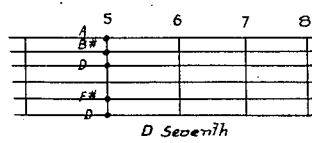


FIG. 9.

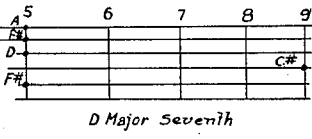


FIG. 10.

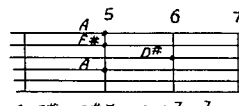


FIG. 11.

A F# or D# diminished

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UNITED STATES PATENT OFFICE

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PLAYING STEEL

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9 Claims. (Cl. 84—319)

1

The invention refers to tone bars for stringed musical instruments such as Hawaiian or steel guitars. In its common aspect, a device of this character comprises a simple steel bar which is placed across the guitar strings at a suitable point along the length thereof for the purpose of varying the effective length of the strings and ordinarily producing a major chord thereon. It is possible to produce some minor, augmented diminished and other chords under certain playing conditions, using the standard steel, but these only to a limited extent, and then largely by deflecting the said steel from its normal position.

The principal object of the invention is to provide a tone bar equipped with auxiliary means for extending the musical playing range of a Hawaiian guitar, or similar stringed musical instrument.

A second object is an efficient device of the character described which is easy to use and inexpensive to make.

A third object is a steel having auxiliary playing means which can be simply shifted into or out of co-operation with the main member and which will not create any undesirable tonal effects during the shift.

The foregoing and further objects of the invention will become more fully apparent on examining the following specification and the drawings, hereunto annexed, illustrating a preferred embodiment of the invention by way of example only, wherein:

Figure 1 is a plan view of a guitar neck showing the tone bar contemplated by this invention, held across the strings thereof,

Figure 2 is a side elevation of the tone bar with the auxiliary member in operative position,

Figure 3 is similar to Figure 2, with the exception that the auxiliary member is here shown out of operative position,

Figure 4 is a view in perspective of the improved guitar tone bar,

Figure 5 is a perspective view of a detail,

Figure 6 is a side elevation of a detail,

Figures 7 to 12 are schematic views illustrating different positions of engagement of the tone bar and supplementary member to produce different chords.

Like parts are identified by like reference numerals throughout the drawings.

The main steel 1, visualized by this invention, is of relatively common form and purpose, with the exception that its central portion is higher than its ends, and has an overhang 3 adapted to

2

be held between adjacent fingers on the left hand of the player, one of said fingers passing below the overhang 3, and the other above it. Properly positioned on the guitar 4, the said overhang 3 will extend toward the left of the player or downscale of the instrument. The overhang is irregularly shaped, its edge curving sharply outwardly from the central higher portion of the steel at one side, and gradually curving inwardly to the other side.

An opening 5 is made through the higher portion of the main steel 1 adjacent to but below and to one side of the main portion of the overhang, and one end of a sleeve 6 is hinged therein by pin 6a secured at its ends to the sides of said opening and passing through pintle 6b on the end of sleeve 6. Preferably the said sleeve 6 is of rectangular cross section and adapted to swing in a vertical plane. A slide bar 7 having a cross section corresponding to that of the sleeve 6 is slidably accommodated therewithin. At its upscale end is firmly secured a somewhat wedge-shaped, auxiliary steel 8, which has a thumb ring 9 pivotally mounted on its upper edge to permit adjustment to the angular position of the thumb.

The lower end 10 of the auxiliary steel carries a damper 11, of rubber, felt or equivalent material, in a slot 12. A ridge 13 which is a continuation of the outer face of the steel, extends below the lower end 10 of the steel. The height of the ridge 13 should not exceed that of the damper 11.

In operation, the main steel 1 is placed across the several guitar strings 14 with the overhang 3 held between the first and second fingers of the left hand and the thumb ring 9 engaged by the thumb. The auxiliary steel is moved to and from the main steel by corresponding movements of the thumb, the slide bar 7 sliding back and forth in said sleeve. The auxiliary steel is raised from the chords and brought into engagement therewith by an up and down movement of the thumb, the slide bar swinging up and down in sleeve 6 which pivots on its hinge. The sleeve 6 provides a guard for the slide bar to prevent interference with its sliding movement by the lower gripping finger. It also serves as a guide to retain the auxiliary steel in proper position relative to the main steel. When it is desired to play a novel chord, depending on the tuning of the guitar, the auxiliary steel 8 is drawn by the thumb over the proper fret and brought down on the proper string. It is to prevent the incidence of undesirable effects, created by this step, that the

3

damper 11 is utilized. It will be apparent that in the bringing down of the auxiliary steel 8, the said damper 11 will strike the string first and muffle it until the ridge 13 is in place.

It will also be apparent that, in use, the said auxiliary steel 8 may be moved from one string to another and from one fret to another, with any required rapidity, being limited in scope only by the position of the main steel 1. Actually, the average hand can separate the two steels by some four frets, made possible by the rotatability of the thumb ring 9, which accommodates itself to the necessary thumb angle.

Of course when not required auxiliary steel 8 may be removed by pulling the slide bar 7 out of the sleeve 6, in which case with the main steel 1 alone the guitar may be played in the usual manner.

In Figures 7 to 12 the longitudinal lines represent the strings and the transverse lines the frets. The dots represent the points at which the strings are pressed against the stops by the steels to produce different chords.

Figure 7 shows the positions for playing the chords D, F#, or A# augmented,

Figure 8 the chord B minor,

Figure 9 the chord B minor seventh, or D 6th,

Figure 10 the chord D seventh,

Figure 11 the chord D major seventh, and

Figure 12 the chords A, F# or D# diminished.

What I claim as my invention is:

1. A tone bar for a stringed musical instrument comprising, a main steel, and an auxiliary steel carried thereby, the said auxiliary steel being adapted to move to and fro with respect to the main steel and to swing in a plane perpendicular thereto so as to permit accurate and rapid adjustment of the two steels.

2. A tone bar for a stringed musical instrument comprising a main steel, an auxiliary steel carried thereby adapted to contact at least one of the instrument strings, and dampening means carried by the said auxiliary steel to muffle the strings immediately before and after such contact.

3. A tone bar for a stringed musical instrument comprising a main steel, an auxiliary steel carried thereby adapted to contact at least one of the instrument strings and dampening means carried on the string engaging edge of the said auxiliary steel to muffle the strings immediately before and after such contact.

4. A tone bar for a stringed musical instrument comprising a main steel, an auxiliary steel carried thereby, a ridge depending from the lower edge of the said auxiliary steel adapted to contact one or more of the instrument strings, a slot formed in the lower edge, and a damper held within and extending downwardly from the said slot, being adapted to muffle the said strings immediately before and after they are contacted by the said ridge.

5. A tone bar for a stringed musical instrument

4

comprising a main steel, an auxiliary steel carried thereby and adapted to contact one or more of the instrument strings, and to move to and fro with respect thereto, and to swing in a plane perpendicular to the main steel so as to permit accurate and rapid adjustment of the two steels, and dampening means carried on the string engaging edge of the said auxiliary steel to muffle the strings immediately before and after such contact.

6. A tone bar for a stringed musical instrument comprising a main steel, a slide bar slidably and pivotally carried thereby, and an auxiliary steel secured to the said slide bar so as to permit accurate and rapid adjustment of the two steels.

7. A tone bar for a stringed musical instrument comprising a main steel having an opening therein, a sleeve pivotally journaled in the said opening, a slide bar reciprocally accommodated within the said sleeve, and an auxiliary steel carried by the said slide bar so as to permit accurate and rapid adjustment of the two steels.

8. A tone bar for a stringed musical instrument comprising a main steel having low end portions and a relatively high central portion, an overhang extending from said central portion adapted to be grasped between two fingers, a slide bar extending through an opening in the relatively high central portion below and adjacent to said overhang, and an auxiliary steel carried by the slide bar.

9. A tone bar for a stringed musical instrument comprising a main steel having low end portions and a relatively high central portion, an overhang extending from the said central portion adapted to be gripped between two fingers, an opening through the said central portion, a sleeve, one end whereof is pivotally journaled in the said opening, said sleeve being adapted to swing in a plane perpendicular to that of the main steel, a slide bar reciprocally accommodated within the sleeve, an auxiliary steel secured to the slide bar so as to permit accurate and rapid adjustment of the two steels, and rotatable thumb engaging means mounted on the top edge of the said auxiliary steel, the lower edge whereof has a depending ridge and a vertical slot and a damper held within and projecting downwardly from the said slot.

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