May 25, 1965 E. F. ANDERSON 3,185,011

STRINGED MUSICAL INSTRUMENT

Filed Nov. 22, 1963

FIG. 1

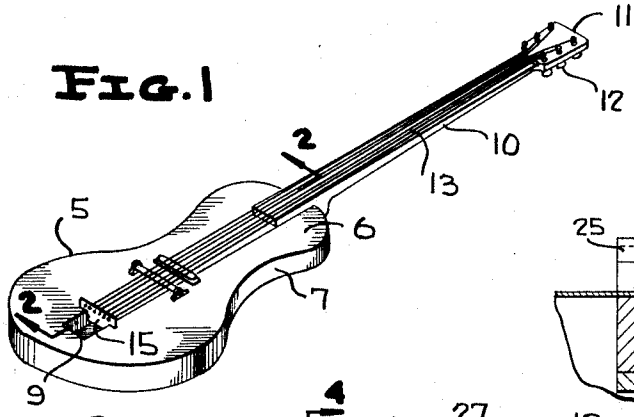
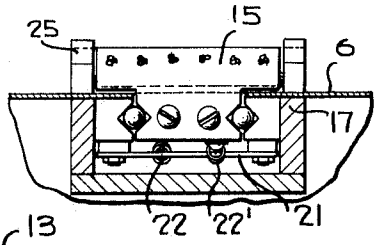


FIG. 3



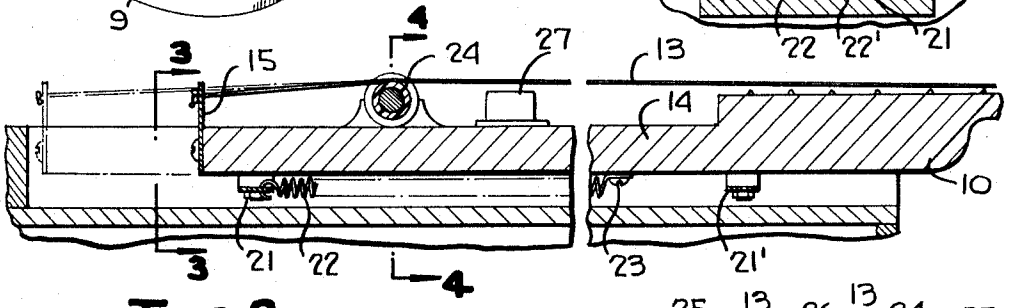
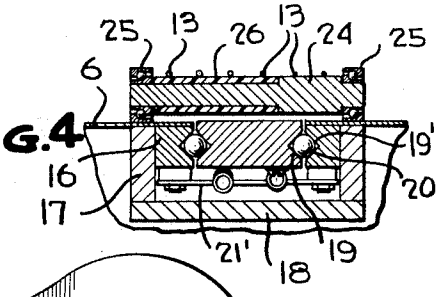


FIG. 2

FIG. 4



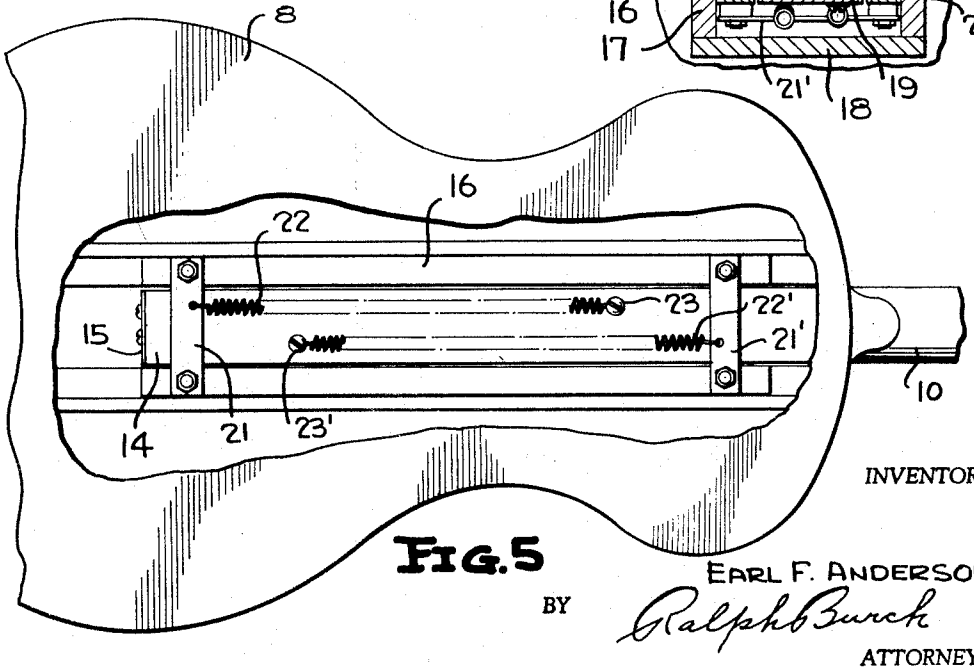


FIG. 5

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STRINGED MUSICAL INSTRUMENT

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10 Claims. (Cl. 84—293)

This invention relates to improvements in stringed musical instruments such as a guitar and the like.

It is an object of the invention to provide a guitar having its strings mounted for longitudinal movement across the bridge to vary the vibrating length of the strings to produce a vibrato effect or other expressions where variation of pitch is necessary.

A further object of the invention resides in mounting the neck for longitudinal sliding movement on the body of a guitar with the strings supported by the neck and movable across a bridge affixed to the body.

A still further object of the invention resides in providing spring means for holding the neck of the guitar in a normal position and yet allow the neck to move in either direction by manipulation of the player's left hand.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawing forming a part of this specification and in which like numerals are employed to designate like parts throughout the same,

FIG. 1 is a perspective view of a guitar constructed in accordance with my invention,

FIG. 2 is a longitudinal sectional view taken on line 2—2 of FIG. 1,

FIG. 3 is a cross sectional view taken on line 3—3 of FIG. 2,

FIG. 4 is a cross sectional view taken on line 4—4 of FIG. 2, and

FIG. 5 is a bottom plan view of the body with the bottom wall broken away.

In the drawings, wherein for the purpose of illustration a preferred embodiment of the invention is shown, the numeral 5 denotes the body of a guitar having a top wall 6, side wall 7 and bottom wall 8. A slot 9 extends longitudinally of the top wall 6 through one end of the body but terminates short of the opposite end. A neck 10 having a head 11 for supporting the key pegs 12 to which one end of strings 13 are attached has a longitudinal extension 14 at the end opposite the head which is slidably fitted in the slot 9. The free end of the extension 14 supports a tail piece 15 to which the opposite ends of the strings are attached. Beneath the top wall 6 on opposite sides of the slot 9 are guide rails 16 attached to the side walls 17 of a frame 18 suspended from the top wall 6. The side faces of extension 14 are disposed in confronting relation to the inner faces of the guide rails 16 and both the side faces and inner faces are provided with longitudinal grooves 19 and 19' for receiving steel balls 20 which slidably support extension 14 for movement longitudinally of the slot 9. A pair of cross bars 21 and 21' extend between the guide rails 16, in spaced apart relation, and attached to each cross bar is one end of coil springs 22 and 22', the opposite ends of said springs being attached, as at 23 and 23' to the bottom of extension 14. The springs are tensioned to normally hold the extension 14 in spaced relation to the closed end of slot 9. A rotatable bridge 24 extends across the extension 14 beneath the strings 13 having its ends journaled in bearings 25 mounted on the top wall 6 of the body. A portion of the bridge 24 is fitted with a plastic sleeve 26 which supports the wound strings of the guitar, the unwound strings being in direct contact with the uncovered portion of the bridge. An electric pick-up 27 is mounted forward of the bridge 24 beneath the strings.

In use, the springs 22 and 22' pull the neck of the guitar in opposite directions and are tensioned to normally hold the strings 13 in a normal position on the bridge 24. When desired the player by manipulation of his left hand can move the neck 10 longitudinally of the body 5 to increase or decrease the vibrating length of the strings and thus produce a vibrato effect or other expressions where variation of pitch is necessary. As the neck is moved in either direction the tension of the springs increases and the further the neck is moved it will be more rapidly returned to its normal position when released.

It is to be understood that the form of the invention herein shown and described is a preferred example of the same and changes in the shape, size and arrangement of the parts may be made without departing from the spirit of the invention or scope of the subjoined claims.

Having thus described my invention, I claim:

1. A musical instrument comprising a body, a neck slidably mounted for movement longitudinally of said body, a plurality of strings having their ends connected to the ends of said neck, and a rotatable bridge mounted on said body extending beneath and in bearing engagement with said strings.

2. A musical instrument as described in claim 1 including means for yieldably holding said neck in a fixed position.

3. A musical instrument comprising a body having a longitudinal slot opening through one end thereof, a neck slidably mounted in the slot of said body, a plurality of strings extending the length of said neck and connected at their ends to said neck, a bridge fixedly mounted on said body and extending across said neck beneath said strings, and means exerting a tension on said neck in opposite directions to hold said neck in a normal position and yet allow said neck to be moved by manipulation of the player's hand.

4. A musical instrument as described in claim 3 wherein said bridge is rotatable.

5. A musical instrument comprising a body having a longitudinal slot opening through one end of said body, guide rails extending along the sides of the slot in said body having longitudinal grooves in their confronting faces, a neck having one end disposed in said slot between said guide rails, the sides of said neck having longitudinal grooves in opposed relation to the grooves of said guide rails, ball bearings disposed in the grooves of said guide rails and slidably supporting said neck for longitudinal movement in the slot of said body, a plurality of strings attached at their ends to the ends of said neck, a roller mounted on said body and extending across said neck beneath and in bearing engagement with said strings, cross bars extending across the slot of said body beneath said neck adjacent each end of the slot, and a pair of springs having one end attached to a cross bar different from that of the other spring and their other end attached to said neck for exerting a pull on said neck in opposite directions.

6. A musical instrument as described in claim 5 wherein a portion of said roller is covered with a plastic sleeve.

7. A musical instrument comprising a body, a bridge fixedly mounted on said body, a plurality of strings extending transversely across and in bearing engagement with said bridge, reciprocating means for supporting and moving said strings longitudinally across said bridge to vary the distance between the bridge and the ends of the strings, and means exerting a tension on said reciprocating means in opposite directions for holding said strings in a normal position on said bridge.

8. A musical instrument as described in claim 7 wherein said bridge is rotatable.

9. A stringed musical instrument comprising a body, a neck slidably mounted for movement longitudinally of said body, a plurality of strings extending longitudinally

of said neck having their ends connected to the ends of said neck, and a bridge fixedly mounted on said body transversely above said neck and beneath said strings, said neck and strings being movable longitudinally of said body to move the strings back and forth across said bridge.

10. A stringed musical instrument as described in claim 9 including means for yieldably holding said neck and strings in a fixed position.

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