June 8, 1937. A. W. GROVER 2,082,951

ADJUSTABLE BRIDGE FOR STRINGED MUSICAL INSTRUMENTS

Filed June 25, 1935

Fig. 1.

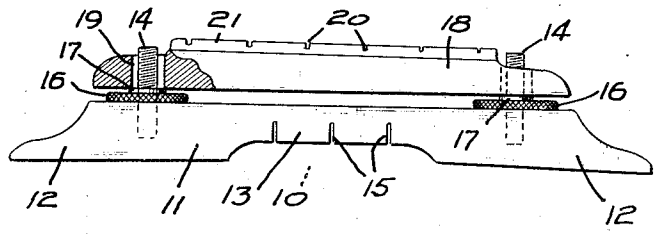


Fig. 2.

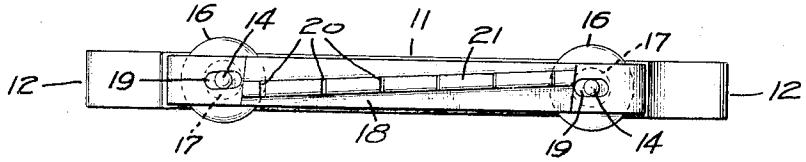
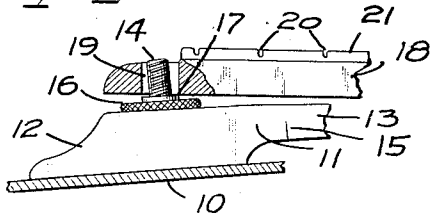


Fig. 3.



Albert W. Grover
INVENTOR
BY
his ATTORNEY.

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ADJUSTABLE BRIDGE FOR STRINGED MUSICAL INSTRUMENTS

Albert W. Grover, Merrick, N. Y.

Application June 25, 1935, Serial No. 28,286

6 Claims. (Cl. 84—298)

My invention relates to improvements in adjustable bridges for stringed musical instruments and has reference particularly to a bridge of this character provided with a base member having a flexible mid-section adapted to allow the base to conform to the arched supporting top of the instrument when the bridge is subjected to the tension of the strings.

The present invention is expressly devised for use as a bridge for guitars, which vary considerably as regards the degree with which their tops are arched and unless some means is provided in the bridge construction to allow it to conform to the supporting contours of the tops, it will not be possible for any one bridge to fit all guitar tops. With this thought in mind it is the purpose of this invention to give to the base of the bridge a slightly flexible mid-section which allows the same to give under tension of the strings and to firmly engage the curved surface of the instrument top.

However, the flexing of the base presents a problem, which results in the upright screw posts at the ends of the base taking inclined positions corresponding to the inclinations of these ends and, inasmuch as the top bar of the bridge is adjustable vertically along the posts the latter bind in their openings when displaced at an angle to each other. To overcome this difficulty the present invention comprehends the use of slotted openings in the ends of the top bar to receive the upright screw posts of the base member, so that the latter willl have sufficient play within the slots in the direction of their movements with the ends of the base.

I accomplish the purposes of my invention by means of the bridge hereinafter described, set forth in the claims and illustratively exemplified in the accompanying drawing in which:

Figure 1 is a side elevational view of the bridge showing a portion of the top bar in section;

Figure 2 is a top plan view of the bridge; and

Figure 3 is a side elevational view of one end of the bridge showing the latter accommodating itself to an extremely highly arched top of a musical instrument.

Referring to the drawing, 10 denotes the top of a guitar showing the arched section characteristic of this type of instrument. The bridge is supported on the top 10 and comprises a base 11, which is preferably formed of wood, and which consists of an elongated block having foot portions 12 at opposite ends and a longitudinally recessed mid-section 13. The top surface of the base 11 is straight throughout its length and screw posts 14 project upright from adjacent opposite ends of the top. The bottom of each foot portion 12 is inclined downwardly to a slight degree towards the outer ends of the bridge and the under side of the recessed mid-section 13 is provided with a plurality of upright parallel saw cuts 15, which give to the base a certain flexibility and allow the foot portions 12 to conform themselves to the contour of the instrument top 10.

Each screw post 14 accommodates an adjusting rest 16, which comprises a knurled wheel with a threaded bore to traverse the post 14 and a flange or shoulder 17 on its upper surface to support the top bar 18 of the bridge. The top bar is also of wood and its length and width correspond to those of the flat top of the base 11. The ends of the bar taper off slightly and are provided with upright slots 19, the major axes of which are alined and disposed longitudinally of the bridge. The slots 19 receive the posts 14 and allow arcuate movement thereof without binding against the ends of the slots; thus any arched position taken by the base 11 and movement of the posts perpendicular thereto will not affect the horizontal position of the top bar 18, which is under tension of the strings bearing in suitable grooves 20 in a raised bead 21 on the top of the bar 18, the bead 21 being disposed at an angle to the longitudinal axis of the bar to compensate for the difference in the weight of the strings and the relative tension thereof.

In operation the base 11 of the bridge is placed in position upon the arched top of the guitar or other instrument and the strings set in the grooves 20. If the contour of the arched top is different from the general line of the under surfaces of the feet 12, and the strings are brought under tension to tune the instrument, the top bar 18 will bear down upon the rests 16 with sufficient force to cause the mid-section 13 to give until the feet 12 are firmly contacting the top of the instrument. Relative adjustment is also possible in the bridge by raising and lowering the rests 16, as required in this particular type of bridge.

Having now described my invention and the manner in which the same operates, what I claim and desire to secure by Letters Patent is:

1. In a bridge for stringed musical instruments, the combination of a base provided with a slotted section to weaken the same and cause it to yield under tension, and a top bar supported upon said base.

2. In a bridge for stringed musical instruments, the combination of a base provided with a re-

duced slotted section to weaken the same and cause it to yield under tension, posts at the ends of the base, and a top bar being supported on the base and having slots at its ends to loosely engage the posts in the longitudinal direction of the bar.

3. In a bridge for stringed musical instruments, the combination of a base having a slotted mid-section recessed at its under side to reduce the thickness of the material and to cause the recessed portion to yield under tension, and a top bar adjustably supported on said base.

4. In a bridge for stringed musical instruments, the combination of a base having a mid-section recessed at its under side and provided with upright cuts to allow flexibility of the section, posts at the ends of the base, and a top bar supported on the base and provided with slots directed longitudinally of the bridge to loosely engage the posts in the direction of any movements of the latter with the giving of the base.

5. In a bridge for stringed musical instruments, the combination of a base having foot portions at opposite ends to contact the top of the instrument, and a mid-section recessed at its under side and provided with a plurality of upright saw-cuts to allow the said section to give under tension from overhead, upright posts in opposite ends of the base, rests adjustable over said posts, and a top bar supported upon said rests and provided with longitudinally disposed slots adjacent each end to loosely engage the posts in the longitudinal direction of the bridge.

6. A bridge for musical stringed instruments, as claimed in claim 2, including rests adjustable over said posts intermediate the base and top bar, each rest having a shoulder upon which the bar rests.

ALBERT W. GROVER.