July 29, 1969 E. VAGIAS 3,457,819

INSERT FOR PIANO BRIDGE

Filed June 26, 1967

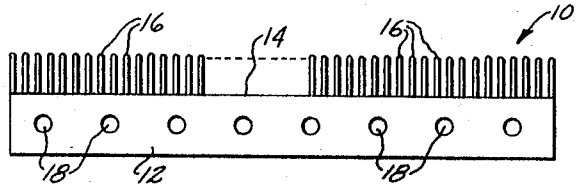


Fig. 1

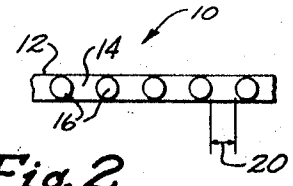


Fig. 2

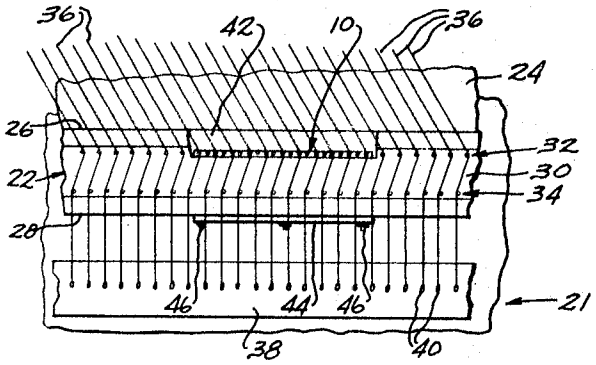


Fig. 3

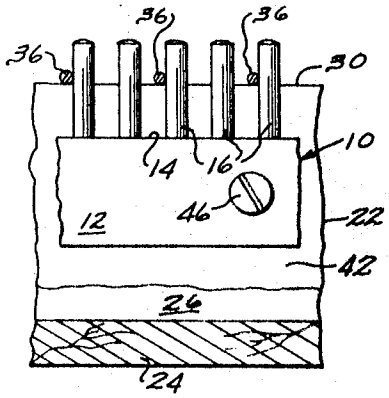


Fig. 5

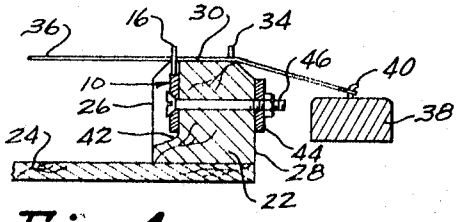


Fig. 4

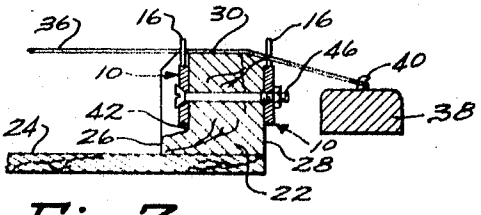


Fig. 7

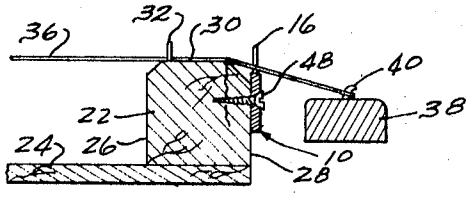


Fig. 6

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INSERT FOR PIANO BRIDGE

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U.S. Cl. 84—209 10 Claims

ABSTRACT OF THE DISCLOSURE

An insert for repairing a piano bridge having a split along a row of pins such that a group of the pins are incapable of supporting tuned vibrators, thus rendering the bridge inoperable. The insert provides pins which replace those inoperable pins and restores the bridge to an operable condition.

BACKGROUND OF THE INVENTION

Field of the invention

This invention relates to an insert for a piano bridge, and more particularly to an insert having a plurality of pins certain of which are adapted to support tuned vibrators.

Description of the prior art

Piano bridges of old pianos, especially the base bridge, are prone to splitting because they become dry. The split normally occurs along one or both rows of pins which support the tuned vibrators. Once the bridge is split in this manner, the tuned vibrators normally supported thereby cannot be played in the normal manner.

Heretofore, the repair of a split bridge has been difficult to accomplish and more often than not, replacement of the entire bridge was necessary. Replacement of the entire bridge was and is a time consuming and an exceedingly expensive operation.

One repair insert has been used in the past to repair a split bridge. This insert consists of a rectangular metal plate having pairs of pins projecting from a face thereof. The plate is secured to the top of the bridge such that a tuned vibrator is supported by the projecting pins. The main disadvantage of this insert is that the tuned vibrator contacts the metal plate with a resulting loss in tone.

SUMMARY OF THE INVENTION

The principal object of the invention is to provide an insert for readily restoring a split piano bridge to an operative condition.

Another object of the invention is to provide an insert having of pins certain of which are adapted to replace inoperative bridge pins and support tuned vibrators.

Still another object of the invention is to provide a metal insert for repairing a split bridge, said insert being relatively inexpensive to manufacture, readily curved to conform to the curvature of a piano bridge, and which may be readily installed with minimum expenditure of time and labor.

A further object of the invention is to provide a metal insert which may be installed in a split bridge such that there is no loss in the musical tone of the tuned vibrator supported thereby.

In accordance with the present invention, a metal insert in provided comprising a body portion having a plurality of spaced-apart pins projecting from one edge thereof in substantially parallel relation. The body portion carries means adapting the metal insert for securement to a piano bridge such that certain of the pins are positioned to support tuned vibrators. The pins are of substantially equal length and thickness and preferably have an arcuate cross section such as round.

Further in accordance with the present invention, a backup plate is provided carrying means adapting it for securement to a bridge. Tie means is provided for trying the insert to the backup plate with the bridge therebetween.

Still further in accordance with the present invention, two of the inserts may be used, one on each side of the bridge. In this instance, the pins are so positioned as to support the tuned vibrators.

BRIEF DESCRIPTION OF THE DRAWINGS

The above and other objects and advantages of the present invention will become apparent from the following detailed description by reference to the accompanying drawings, in which:

FIGURE 1 is a front view of the present metal insert;

FIG. 2 is a fragmentary plan view on an enlarged scale of the present metal insert;

FIG. 3 is a fragmentary plan view of a piano bridge incorporating the present insert;

FIG. 4 is a cross-sectional view taken along the line IV—IV of FIG. 3;

FIG. 5 is a fragmentary front view of the piano bridge of FIG. 3; and

FIGS. 6 and 7 are cross-sectional views similar to FIG. 4 illustrating alternative arrangements according to the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to FIGS. 1 and 2, there is illustrated a metal insert **10** comprising a body portion **12** having an edge **14** with a plurality of generally parallel pins **16** projecting therefrom along the entire length thereof. The body portion **12** is provided with openings **18** which adapt the insert **10** for securement to a bridge as will be described.

The pins **16** are of substantially uniform thickness and length. In addition, the pins **16** are preferably circular as shown in FIG. 2 to prevent the undue stress which would be applied to a tuned vibrator if the pin had sharp edges rather than being rounded. Furthermore, the spacing **20** (FIG. 2) between adjacent pins **16** is equal to at least the combined thickness of two tuned vibrators.

The insert **10** is preferably formed from metals such as brass, stainless steel and the like. The insert **10** may be curved or bent during installation so as to correspond with the curvature of the bridge. Furthermore, the insert **10** may be provided in convenient lengths of say twelve inches and may be cut to the length required in repairing the bridge or may be used in conjunction with a second insert or fragment thereof in the case where the bridge split exceeds the length of the insert.

Referring now to FIG. 3, 4 and 5, there is shown a piano **21** having a bridge **22** supported on a sounding board **24**. The bridge **22** includes opposite faces **26**, **28** and a top **30** from which project front and rear rows of pins **32**, **34**. As is conventional, the front row of pins **32** determine the tuned length of the vibrators **36** while the rear row of pins **34** serve only as support pins. Also as is conventional, the piano **21** includes a metal base **38** having hitch pins **40** to which the ends of the vibrators **36** are connected.

INSTALLATION OF INSERT 10

A split or crack may occur in the bridge **22** such that a group of consecutive ones of the front pins **32** are rendered incapable of supporting the vibrators **36**. In this instance, the insert **10** must be installed on the bridge **22** such that the pins **16** thereof are aligned with the front row of pins **32**. This is essential since the front pins **32** determine the tuned length of the vibrators **36**. Thus

as shown in FIGS. 3, 4 and 5, a recess **42** is provided in the front face **26** of the bridge **22**, which receives the insert **10**. A backup plate **44** is applied to the rear face **28**. Tie means such as fasteners **46** tie the insert **10** to the backup plate **44** with the bridge **22** therebetween. The vibrators **36** are now supported by the pins **16** and the rear pins **34** and the once inoperable bridge **22** is now operative. It is important to note in FIG. 5, for example, that the edge **14** of the body portion **12** is below the bridge top **30**. The vibrator **36** maintains its normal contact with the bridge top. Thus, there is no loss of tone.

A split or crack may also occur in the bridge **22** such that a group of consecutive ones of the rear pins **34** are rendered incapable of supporting the tuned vibrators **36**. In this instance, as shown in FIG. 6, the insert **10** is applied to the rear face **28** of the bridge **22** and secured thereto by fasteners **48** such that the pins **16** thereof project above the bridge top **30** to support the vibrators **36**.

Splits or cracks may also occur in the bridge **22** such that a group of consecutive ones of the front pins **32** and a group of consecutive ones of the rear pins **34** are rendered incapable of supporting the tuned vibrators. In this instance, as shown in FIG. 7, an insert **10** is applied to the recess **42** provided in the bridge front face **26** and a second insert **10** is applied to the bridge rear face **28**. Fasteners **46** tie the inserts **10** together and to the bridge **22**. The pins **16** of the inserts **10** project above the bridge top **30** and support the vibrators **36**.

Although the invention has been shown in connection with one specific embodiment, it will be readily apparent to those skilled in the art that various changes in form and arrangement of parts may be made to suit requirements without departing from the spirit and scope of the invention.

I claim as my invention:

1. In combination, a piano bridge, a plurality of tuned vibrators overlying the top of said bridge, and a piano bridge insert for replacing a group of bridge pins which are incapable of supporting tuned vibrators, said insert comprising a body portion having opposite edges, and spaced-apart members extending transversely from one of said opposite edges, said spaced-apart members providing plural slots for receiving tuned vibrators, said body portion being secured to said bridge with said members projecting above the top of said bridge, certain of said members being engaged by and supporting tuned vibrators.

2. The combination defined in claim **1** wherein said insert is formed from metal.

3. The combination defined in claim **1** wherein said members terminate in spaced-apart ends providing open slot ends remote from said body portion through which tuned vibrators are received.

4. The combination defined in claim **1** wherein said members are of substantially equal length.

5. The combination defined in claim **1** wherein said members are of substantially equal thickness.

6. The combination defined in claim **1** wherein said members are spaced apart by at least the combined thickness of two tuned vibrators.

7. The combination defined in claim **1** including a backup plate, and tie means for tying said backup plate to said insert with said bridge between said backup plate and said insert.

8. The combination defined in claim **1** including a second insert, and means for tying said second insert to the first said insert with said bridge positioned therebetween, certain of the members of both inserts being engaged by and supporting tuned vibrators.

9. The combination defined in claim **1** wherein the length of each of said slots is greater than the thickness of a tuned vibrator.

10. The combination defined in claim **1** wherein said body portion is provided with openings facilitating securement of said insert to said piano bridge.

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U.S. Cl. X.R.

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