Sept. 3, 1929. G. E. KING 1,727,238

VIBRATILE MUSICAL INSTRUMENT

Filed April 28, 1927

Fig. 1.

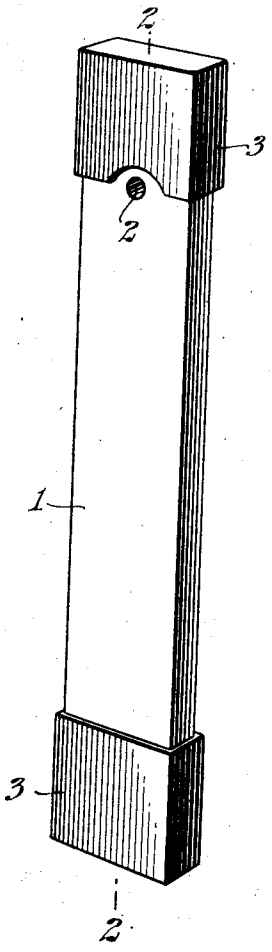
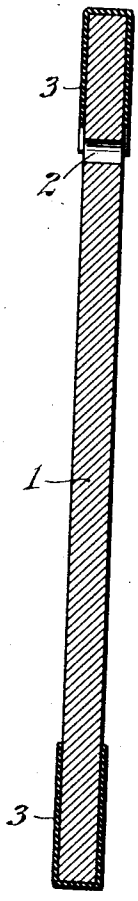


Fig. 2.



WITNESSES

Edw. Thorpe.

S. W. Hooker

INVENTOR

George E. King

BY Munn & Co

ATTORNEY

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UNITED STATES PATENT OFFICE.

GEORGE EVERETTE KING, OF RICHMOND HILL, NEW YORK.

VIBRATILE MUSICAL INSTRUMENT.

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This invention relates to vibratile musical instruments and more particularly to metallic devices which produce sound when vibrated by percussion or a blow from a hammer.

My invention has particularly to do with musical instruments which have many names as, for example, harp, celesta, chimes, glockenspeil, marimba and numerous others in which bars, bells, tubes, gongs, etc., are employed.

With devices of this character in general use and particularly in relation to such devices constituting the lower notes of the scale it is difficult and in most cases impossible to control the various harmonics or overtones, and this is particularly true after the devices have been used for any length of time.

I have discovered that by the employment of dead metal on the devices, secured thereto at a point or points removed from the vibrating centers thereof, the harmonics or overtones can be controlled, it being understood of course that where such dead metal is used it is desirable or necessary to give a sharper or harder blow or percussion to bring about the proper vibration, but the harmonics or overtones will be eliminated and the fundamental or hum tone will predominate.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arragements of parts, which will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings—

Figure 1 is a perspective view of a metal bar constituting a vibrating element of a musical instrument;

Figure 2 is a view in longitudinal section on the line 2—2 of Figure 1.

While I have illustrated and shall hereinafter describe a bar showing my invention it is to be distinctly understood that I have selected the bar for illustration only as the invention applies with equal facility to bells, tubes, gongs and other metal vibrating musical devices.

1 represents the bar, which is of suitable metal for giving off a note when struck or vibrated by percussion. The center of this bar of course constitutes the center of vibration, and the blow or vibrating element will act upon the center or intermediate portion of the bar.

The bar 1 is shown with an opening 2 for the reception of a suspension device although of course the bar may be suspended or mounted in any desired manner. On this bar 1 at both ends I have shown dead metal 3 secured thereon. This dead metal 3 may be lead or any other metal or composition which will answer the purpose, and the dead metal may be secured to the bar by solder or by any other suitable means which will cause a proper juncture of the parts so that the dead metal will constitute a deadening means to overcome and practically eliminate harmonics or overtones.

It is of course to be understood that in applying the dead metal the skill of the builder will be necessary to know just how much dead metal shall be used and just where it shall be placed, and in many cases it will be necessary only to apply the dead metal to one end of the bar or other musical instrument as above set forth.

Hence the invention consists broadly in the application of dead metal to a metallic instrument at a point removed from the vibrating center whereby the dead metal functions to prevent harmonics and overtones but does not interfere with the fundamental or hum tone but on the contrary compels said fundamental or hum tone to predominate.

Therefore while I have illustrated my invention as applied to a bar it is to be distinctly understood that the invention is not limited by the illustration and description and applies broadly to analogous devices. Hence I do not limit myself to the specific details set forth but desire to cover the invention broadly as set forth in the following claims.

I claim:

1. A vibratile musical instrument, comprising a bar having a vibrating center and adapted to be struck at a point between its ends, and dead metal adhered to the bar at one end whereby the bar and the dead metal act as a unit.

2. A vibratile musical instrument, comprising a bar having a vibrating center and adapted to be struck at a point between its ends, and dead metal adhered to the bar at both ends whereby the bar and the dead metal act as a unit.

GEORGE EVERETTE KING.