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MULTISTRINGED MUSICAL INSTRUMENT

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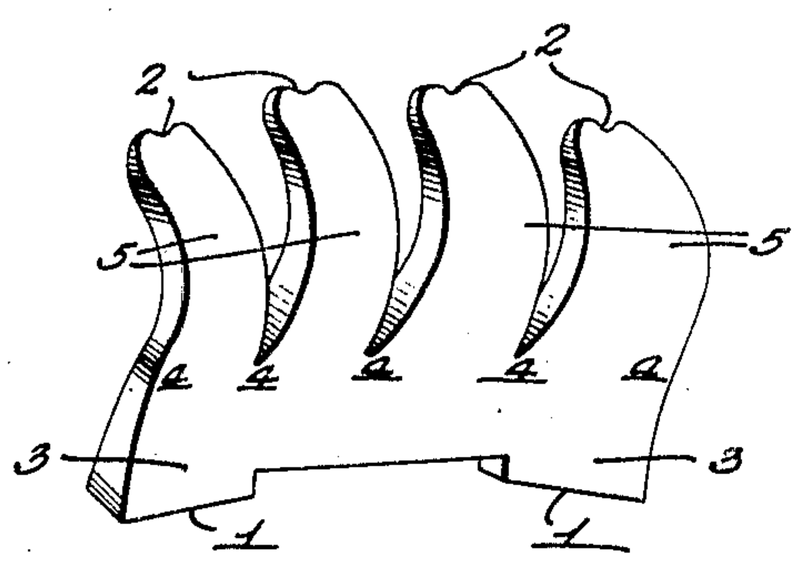


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## MULTISTRINGED MUSICAL INSTRUMENT

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Application February 25, 1943, Serial No. 477,046

1 Claim. (Cl. 84—309)

The invention relates to improvement in multi-stringed musical instrument bridges, in which a wedge-shaped bridge, which branches at enough distance from the base (which rests upon the sounding board of the instrument) to form a manifold and then curves into separate tapering columns to a notch in their ends—where each meets one of the strings of the multi-stringed musical instrument separately.

The objects of the improvements are:

First, to provide a more nearly correct amount of taper through which the vibrations from each of the differently tuned strings pass so that they are not over expanded and absorbed by the bridge, nor under expanded and thrown into the air from the sounding board in sounds not pleasing to the human ear (such as squeals). In my experiments I find that the high notes, such as the E string on the standard violin, require more taper than the lower ones, such as G and D, which I think is because the G and D are closer to the reception of the human ear.

Second, the curved column allows latitude in the direction in which the string can be struck to provide the vibrations, as a straight column struck a minimum measured blow straight down will nearly all be absorbed in the column, whereas the same blow struck on the top of a curved column will start good vibrations.

Third, to provide a slim column whose top will oscillate or tremble and impart quaver to the string tone vibrations and the musical sound.

One form of the invention is illustrated in the accompanying drawing, in which the single figure is a vertical drawing of the entire bridge built for the standard violin.

*The figure—The entire bridge for the standard violin*

The base 1—1 rests upon the sounding board. The notches at top 2—2—2—2 contact the strings. The manifold 3—3 holds the curved tapered columns. The bases of the columns of different sizes at 4—4 4—4 4—4 and 4—4 from left to right contact the strings through columns 5—5—5—5 and bring the vibration back through the columns at ever increasing size which expands them to the suitable amount to take them through the manifold base to the sounding board and throw them into the air to be received at fuller value by the human ear. In use the bridge rests at right angles between the sounding board and the strings with the base of the bridge on the sounding board and the notches in contact with the strings of the multi-stringed musical instrument for which it is made, with the columns turned in the right direction to meet the strings, for which they are also made. These bridges are cut or molded from wood, metal or plastic.

I am aware that, prior to my invention, multi-stringed musical instrument bridges have been made for multi-stringed musical instruments in the shape of a wedge, with two-sided taper, with width and taper to meet the average tone vibration expansion requirements of all the different tones of the strings collectively. I, therefore, do not claim such a combination broadly, but I claim:

A stringed musical instrument bridge comprising a base having upwardly extending notched columns, said columns having a straight thickness taper outwardly from the base and also a decreasing width taper, the base side of each column being concave and the treble side thereof being convex.

JOHN ISAAC McDONALD.