

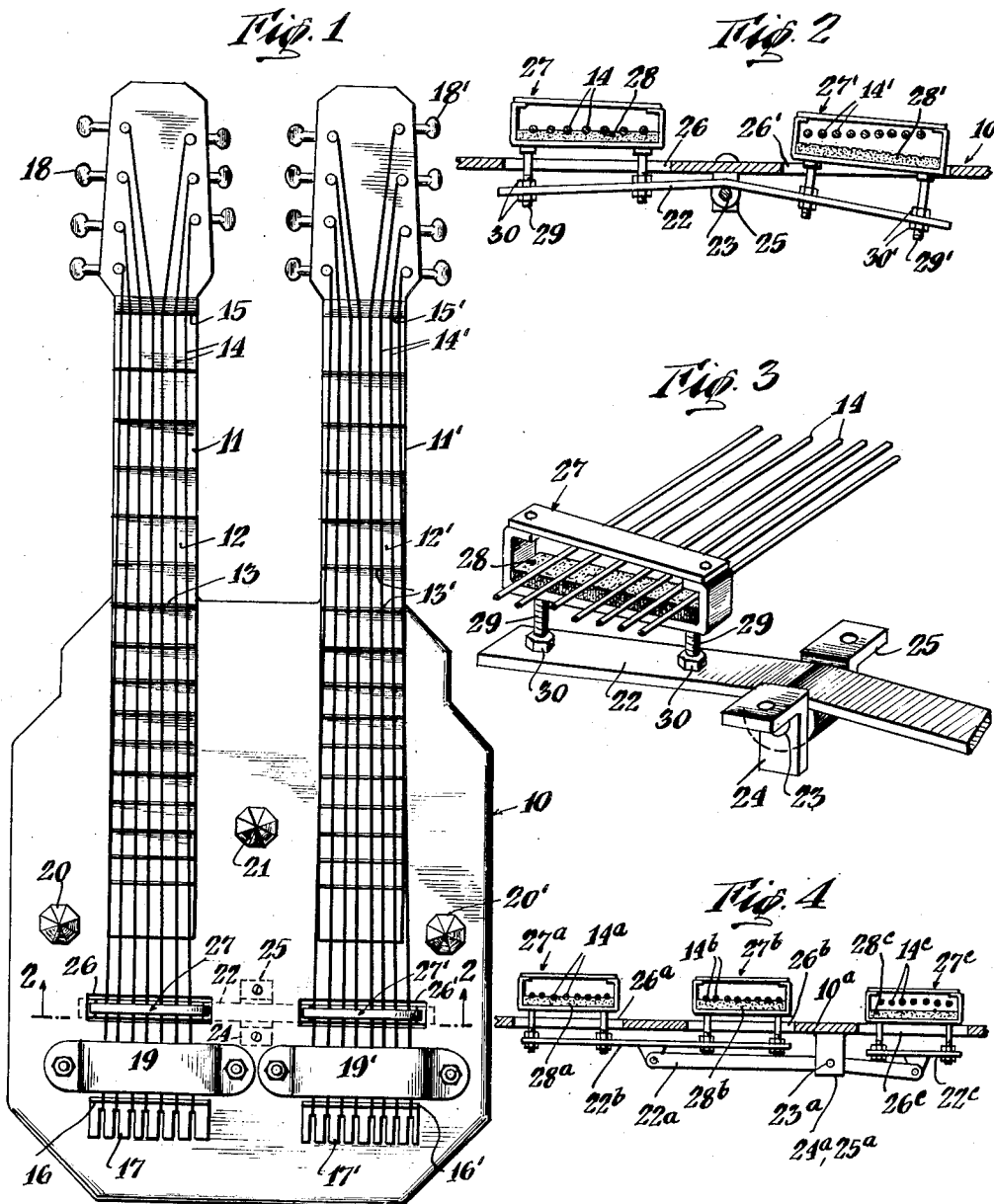
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MULTIPLE NECK STRINGED MUSICAL INSTRUMENT

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MULTIPLE NECK STRINGED MUSICAL
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The present invention relates to multiple neck stringed musical instruments and particularly to electrical instruments of this type and character, wherein the musical tones produced by the vibrations of the strings are translated and reproduced in amplified form.

The multiple neck stringed instrument is essentially a combination of two or more stringed instruments of similar nature and character contained in a single embodiment. The instrument comprises generally a single body and a plurality of necks over each of which there is tensioned a bank of vibratory strings. Each bank of strings is generally tuned in a different key to provide for a variety of phrasing in the execution of a musical accompaniment. Each bank of strings is played individually and the player is required at intervals to shift his manipulations from one neck to another. While the player is engaged in manipulating one bank of strings it is essential that the sustained tones of the other strings be eliminated and that the induction of sympathetic vibrations in the other strings be prevented in order to avoid interference with and to obtain clarity and distinctness of the desired tones. In the non-electrical instrument the sustained and sympathetic vibrations of the strings of the idle necks do not ordinarily produce audible tones, but in the electrical instrument the slightest vibration of a string may produce a tone which is greatly amplified in volume, and it is therefore of utmost importance in the latter type of instrument to eliminate interfering tones. Heretofore in order to accomplish the elimination of interfering tones, it has been the practice of the player of the electrical instrument to cut off all sound amplification from the idle necks by means of the volume controls which are usually provided for each neck of the instrument. This practice however requires the player to employ his hands for actuating the volume controls and necessarily interferes with his playing of the instrument. The present invention therefore contemplates to provide means for overcoming the aforementioned difficulties in a manner which will permit the hands of the player to be employed exclusively for manipulating the strings of the instrument.

The principal object of the present invention is to provide in an electrical multiple neck instrument, improved means for eliminating interfering tones produced by string vibrations of the necks not in use, which may be easily and conveniently operated by the player without interfering with his playing of the instrument.

Another object of the invention is to provide in a multiple neck stringed instrument damper means operable by the player which is designed and adapted to engage the strings of the idle necks of the instrument and retain them against vibration. A further object of the invention is to provide means of the character described and for the aforesaid purposes which is simple in construction, economical to manufacture, efficient in use, and which may be readily embodied within the instrument. Other objects and advantages of the present invention will in part be pointed out hereinafter and will in part be apparent to those skilled in the art to which the present invention relates.

With the above and other objects in view, the present invention consists of the novel features of construction, combination of elements and operative arrangements of parts hereinafter specifically described and illustrated in the accompanying drawing wherein there is shown a preferred embodiment of the invention.

In the accompanying drawing which forms an integral part of this specification,

Fig. 1 is a top plan view of a double neck electrical guitar showing an embodiment of my present invention;

Fig. 2 is a transverse sectional view taken on line 2—2 of Fig. 1;

Fig. 3 is an enlarged perspective view of a portion of the damper means constructed in accordance with my invention, showing one of the damper members in operative relation with a bank of strings.

Referring now in detail to the drawing wherein like reference characters indicate corresponding parts throughout the several views, the double neck electrical guitar illustrated in Fig. 1 comprises generally a hollow body 10 and a pair of necks 11 and 11' which extend from the body in spaced parallel relation. The upper sides of the necks 11 and 11' form fingerboards 12 and 12' which are provided respectively with spaced frets 13 and 13'. Two banks of strings 14 and 14' extend across the upper side of the body 10 and over their respective fingerboards 12 and 12'. The strings 14 are tensioned over bridges 15 and 15' and are secured at one end to a tailpiece 17 and at the other end are engaged by suitable tensioning keys 18. Similarly, the strings 14' are tensioned over bridges 15' and 16' and are secured at one end to a tailpiece 17' and at the other end are engaged by suitable tensioning keys 18'. Suitable pick-up means, not shown in the drawing, are provided for each

bank of strings. The pick-up units are usually mounted within the body of the instrument and are adapted to convert the string vibrations into electrical impulses having the characteristics of the string vibrations. Guards 19 and 19' are provided on the upper side of the body 10 and are adapted to cover the string portions adjacent to their respective pick-up units. Suitable volume controls for each pick-up unit are generally provided within the body of the instrument and are adapted to be regulated by respective control knobs 20 and 20' projecting through the upper side of the body 10. There is also generally provided within the body of the instrument, suitable tone control means which is adapted to be regulated by a control knob 21.

The damper mechanism, illustrated particularly in Figs. 2 and 3, comprise in my preferred embodiment thereof, a lever-bar 22 which is positioned within the body of the instrument and extends transversely of the strings 14 and 14'. The lever-bar 22 is pivotally mounted intermediate its ends on a shaft 23 which is supported by suitable supporting brackets 24 and 25 secured to the upper side of the body 10. Mounted on the end portions of the lever-bar 22 and projecting upwardly through openings 26 and 26' formed in the upper side of the body 10, are suitable damper members 27 and 27' which are preferably adapted to encircle the strings 14 and 14' respectively. Inner lining strips 28 and 28', of flexible material such as felt, are preferably provided on the portions of the damper members respectively underlying the strings. The damper members 27 and 27' are also preferably provided with depending posts 29 and 29' respectively which extend through openings in the lever-bar 22, and adjusting nuts 30 and 30' are threaded on the outer ends of the posts on opposite sides of the lever-bar, whereby the damper members are securely connected to the lever-bar and are adapted to be conveniently adjusted in relation to the strings.

The operative relation of the damper members to the strings of the instrument is such that upon downward movement of either damper member the strings passing therethrough are left unrestrained and are free to vibrate, whereas upon upward movement of the damper member the strings passing therethrough become engaged by the underlying portion of the damper member and are restrained thereby against vibration. By reason of the arrangement and construction of the damper mechanism, as hereinafter described, a downward pressure on one of the damper members would cause the other damper member to move upwardly, and in view of the operative relation of the damper members to the strings, it will be apparent that when one bank of strings is released to vibrate freely, the other bank of strings is retained against vibration.

In Fig. 1 of the drawing it will be observed that the damper mechanism is situated on the instrument adjacent to the inner ends of the strings in a position where it is easily accessible to the string manipulating hand of the player. While the player is therefore engaged in manipulating the strings of one of the necks of the instrument he may conveniently press down on the corresponding damper member with the palm of his hand or wrist. In so doing this damper member is disengaged from the strings and simultaneously the other damper member engages its corresponding strings against vibration. In shifting from one bank of strings to the other, the player is thus enabled to cut off the string vibrations

from the idle neck of the instrument and eliminate the interfering tones produced thereby, without any interference with his playing.

The principle of my present invention may be extended and adapted in its application to a multiple neck stringed instrument of any number of necks and banks of strings.

I desire it to be understood that the foregoing description of the embodiment of my invention is merely by way of illustration, and I do not desire to limit myself to the specific construction hereinabove described and illustrated, for I am aware that changes may be made in the details of construction which would nevertheless come within the scope and spirit of my invention as defined in the appended claims.

Having thus described and illustrated my invention, what I claim as new and desire to secure by Letters Patent is:

1. A damping mechanism for use with a stringed musical instrument having a plurality of strings arranged in separate groups, said mechanism including means connected to said elements for selectively damping all the strings of one group while permitting all the strings of another group to be available for playing and vice versa, comprising separate damping elements, and manually actuated means to simultaneously shift the same whereby to bring said damping elements alternately into and out of engagement with the strings of the respective groups.

2. A damping mechanism for use with a stringed musical instrument having a plurality of strings arranged in separate groups, said mechanism including means for selectively damping all the strings of one group while permitting all the strings of another group to be available for playing and vice versa, comprising a lever pivotally mounted intermediate its ends, and separate damping elements mounted at the opposite sides of the pivot of said lever, said lever being adapted to be tilted manually whereby to bring said damping elements alternately into and out of engagement with the strings of the respective groups.

3. A damping mechanism for use with a stringed musical instrument having a plurality of strings arranged in separate groups, said mechanism including means for selectively damping all the strings of one group while permitting all the strings of another group to be available for playing and vice versa, comprising a lever pivotally mounted intermediate its ends, a plurality of frames mounted at opposite sides of the pivot of said lever and adapted to be traversed by the strings of the respective groups, and damper elements carried by said frames, each of said frames comprising a hand rest for tilting the lever whereby to bring said damping elements alternately into and out of engagement with the strings of the respective groups.

4. In a stringed musical instrument having a plurality of strings arranged in separate groups, a damping mechanism for selectively damping all the strings of one group while permitting all the strings of another group to be available for playing and vice versa, comprising separate damping elements and means interconnecting said damping elements, said means being manually actuated to simultaneously shift said damping elements whereby to bring same alternately into and out of engagement with the strings of the respective groups.

5. In a stringed musical instrument having a plurality of strings arranged in separate groups,

a damping mechanism for selectively damping all the strings of one group while permitting all the strings of another group to be available for playing and vice versa, comprising a member extending transversely of the strings, and separate damping elements carried by said member and adapted to engage respective groups of strings, said member being manually actuated to simultaneously shift said damping elements whereby to bring same alternately into and out of engagement with the strings of the respective groups.

6. In a stringed musical instrument having a plurality of strings arranged in separate groups, a damping mechanism for selectively damping all the strings of one group while permitting all the strings of another group to be available for playing and vice versa, comprising a centrally pivoted lever extending transversely of the strings, separate damping elements mounted on opposite sides of the pivot of said lever and adapted to engage respective groups of strings, said lever being manually tilted to simultaneously shift said damping elements whereby to bring same alternately into and out of engagement with the strings of the respective groups.

7. In a stringed musical instrument having a plurality of strings arranged in separate groups, a damping mechanism for selectively damping all the strings of one group while permitting all the strings of another group to be available for playing and vice versa, comprising a centrally piv-

oted lever extending transversely of the strings, separate upright frames mounted on opposite sides of the pivot of said lever, and adapted to embrace respective groups of strings with adequate clearance to permit vibration thereof, and flexible damper pads carried on the inner surfaces of said frames, the upper portions of said frames constituting operative hand rests for tilting the lever to simultaneously shift the damper pads whereby to bring same alternately into and out of engagement with the strings of the respective groups.

8. In a stringed musical instrument having a plurality of strings arranged in separate groups, a damping mechanism for selectively damping all the strings of one group while permitting all the strings of another group to be available for playing and vice versa, comprising a centrally pivoted lever extending transversely of the strings, separate upright frames adjustably mounted on opposite sides of the pivot of said lever and adapted to embrace respective groups of strings with adequate clearance to permit vibration thereof, and flexible damper pads on the inner surfaces of said frames positioned underneath the strings, the upper portions of said frames constituting operative hand rests for tilting the lever to simultaneously shift the damper pads whereby to bring same alternately into and out of engagement with the strings of the respective groups.

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