

April 15, 1941.

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2,238,241

DAMPING DEVICE FOR MUSICAL INSTRUMENTS

Filed May 7, 1938

2 Sheets-Sheet 1

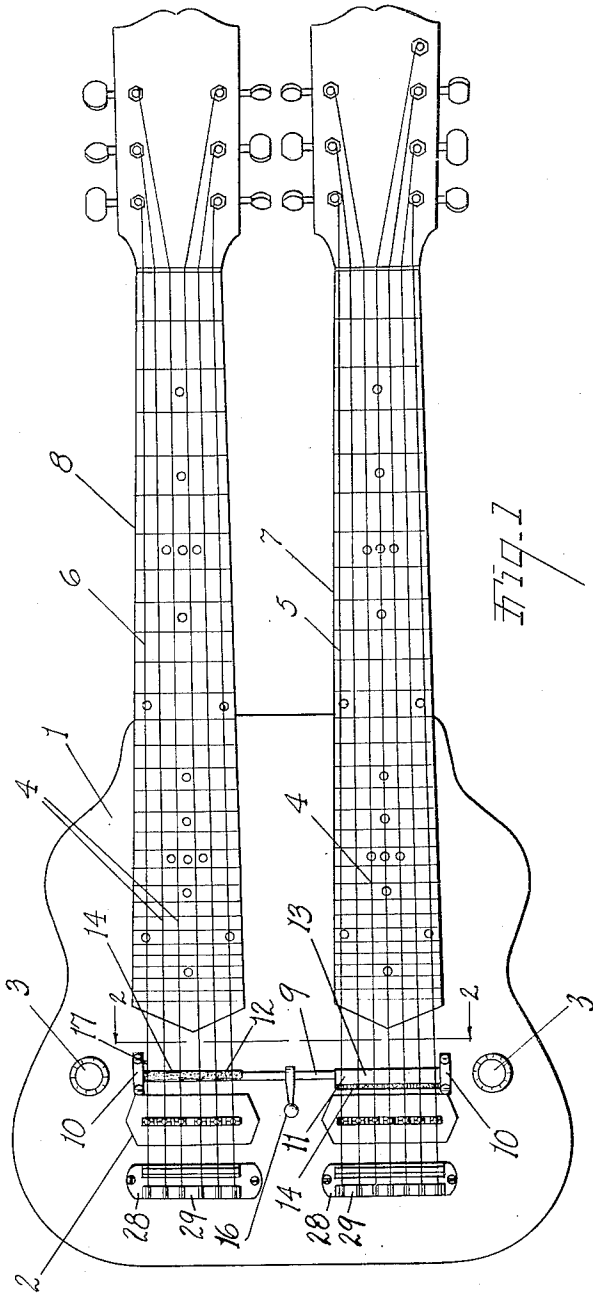


Fig. 1

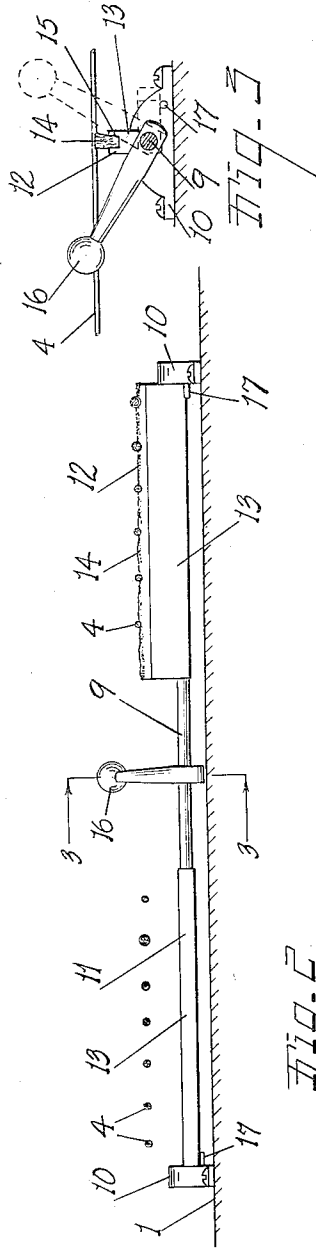


Fig. 2

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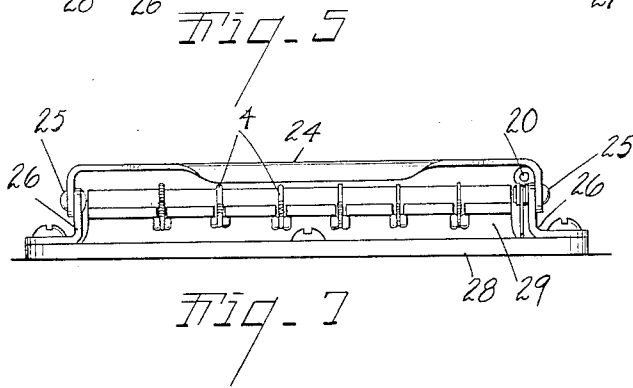
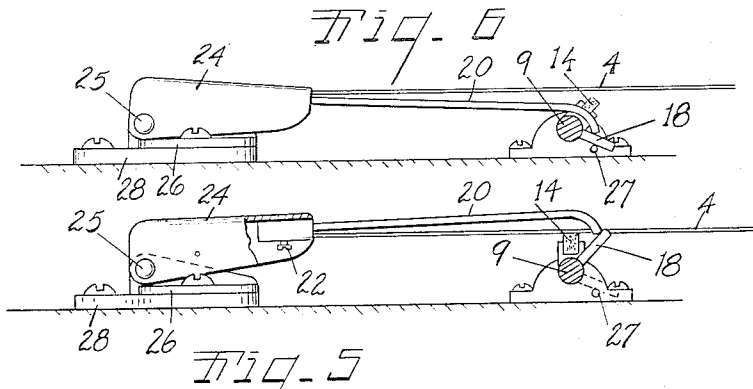
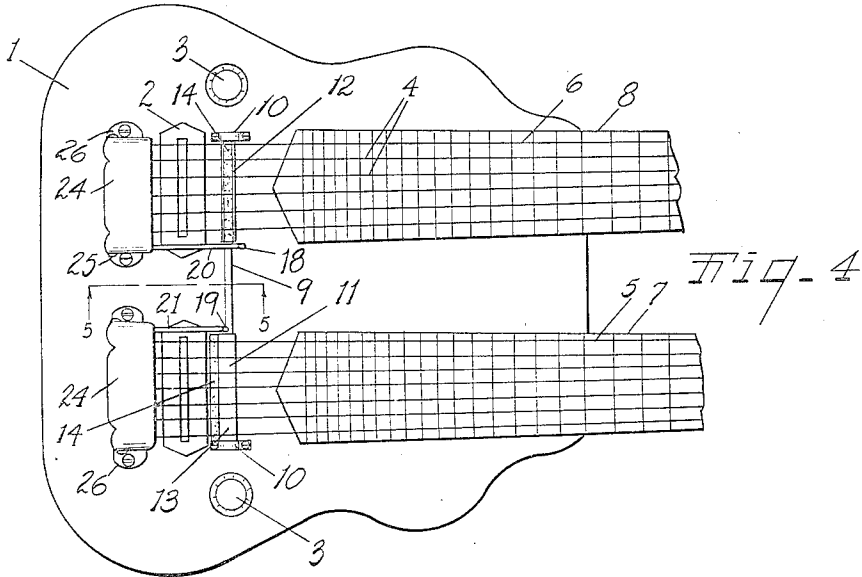
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2 Sheets-Sheet 2



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2,238,241

DAMPING DEVICE FOR MUSICAL INSTRUMENTS

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7 Claims. (Cl. 84-267)

The main objects of my invention are:

First, to provide a stringed musical instrument having means for selectively damping the strings thereof.

Second, to provide a musical instrument of the guitar type having a plurality of sets of strings and means for selectively damping said sets while playing.

Third, to provide a double necked guitar or similar instrument having a pair of sets of strings and selective means which is readily actuated by the operator while playing to damp one set of strings and free the other set or vice versa.

Fourth, to provide a stringed musical instrument provided with a plurality of strings and damping means for damping one or more of said strings while freeing one or more of said strings and vice versa.

Further objects relating to details and economies of my invention will definitely appear from the description to follow. The invention is defined in the claims.

A structure embodying the features of my invention is illustrated in the accompanying drawings, wherein:

Fig. 1 is a top view of an instrument of the Hawaiian guitar type equipped with the provision of my invention.

Fig. 2 is an enlarged fragmentary view in section on line 2-2 of Fig. 1.

Fig. 3 is a fragmentary view in section on line 3-3 of Fig. 2.

Fig. 4 is a fragmentary view similar to Fig. 1 illustrating a modified form of my invention.

Fig. 5 is a view in section on line 5-5 of Fig. 4, being still further broken away and in section to illustrate the constructional detail thereof.

Fig. 6 is a view similar to Fig. 5, illustrating the parts in another position.

Fig. 7 is an end view illustrating details of my invention.

In the playing of a stringed musical instrument, more particularly a double necked instrument, one set of strings is apt to pick up a sympathetic vibration when the other set is played, and it is therefore the primary purpose of my invention to provide means for damping one set during the playing of the other. However, the invention has a broader aspect in that it may be applied to an instrument having only a single set of strings wherein certain of these strings may be selectively damped.

Referring to the drawings, the reference numeral 1 indicates a double necked stringed instrument of the Hawaiian guitar type. In the

illustrated embodiment, this instrument is equipped with an electrical pickup generally indicated 2 and controls 3 therefor; however, my invention is not limited to such an application and these elements may be omitted if desired. In practice, when the electrical pickup is employed, the body of the instrument illustrated may be made of brass or steel, however here also my invention is not particularly limited in scope, inasmuch as the said body may be of a wooden or other suitable construction.

The strings 4 in the embodiment illustrated are mounted in conventional manner not necessary to be particularly described, there being two sets 5, 6 of such strings arranged on the respective necks 7, 8.

The damping structure which constitutes the invention of the present application consists of a transverse rockshaft or rod 9 extending transversely of and beneath both sets of strings 5, 6 and rockably journaled in suitable end bearings 10. This rockshaft 9 has a pair of damping members 11, 12 fixedly secured thereto at right angles to one another, the said members being made up of a metallic longitudinally grooved elongated holder block or bar 13 secured to the rockshaft and a string engaging damping cushion or pad 14 of felt, rubber or other suitable material. This strip or pad 14 is inserted in the groove 15 in holder member 13.

Being arranged at approximately a right angle to one another as illustrated in Figs. 1 and 2, the damping members 11, 12 are adapted to alternately dampingly engage their respective sets of strings 5, 6 when the rockshaft 9 is oscillated in one direction or the other. To effect this oscillation, I provide a finger piece 16 secured to the rockshaft at a central or other conveniently positioned point and the said finger piece extends at an angle of approximately 45° relative to both the damping members 11, 12.

The manner of operating the device is obvious. By reference to Fig. 3, it is seen that when the finger piece 16 is oscillated from solid line to dotted line position, the damping member 12 disengages the set of strings 6. A stop 17 is preferably provided for limiting this movement. It will be understood that simultaneously with the disengagement of member 12, the damping member 11 is raised from the collapsed position into damping position with the set of strings 5.

Referring to Figs. 4 to 7, inclusive, the modified form of my invention illustrated therein is generally similar to that illustrated in Figs. 1, 2, and 3, with the exception that rockshaft 9 is

provided with a pair of lugs or tappets 18, 19 angularly positioned relative to one another for actuating engagement by arms 20, 21 respectively. These arms are fixedly secured by set screws 22 to the plate-like operating members 24 which are pivoted at 25 to opposed angled brackets 26 secured to the body of the instrument. Stops 27 are provided for coaction with lugs 18, 19 to limit movement of the rockshaft.

The lugs 18, 19 are arranged on the rockshaft at an angle corresponding in general to the angle between the damping members 11, 12 and it follows that collapsing of one damping member caused by movement of one lug results in positioning the other member in operative damping relation to the strings. The relative positions of the damping members in respective operative and inoperative position are illustrated in Figs. 5 and 6.

It will be noted that the brackets 26 of the operating members 24 are mounted on the base 28 of the tail-piece 29. With this arrangement the instrument has a very neat appearance, that is there are no objectionably noticeable additions thereto and the operating or actuating members 24 are positioned so that they may be very conveniently manipulated by the hand or arm of the operator.

From the foregoing it is apparent that in instruments embodying either form of my invention the player by a simple manipulation may selectively damp vibrations of one or the other set of strings of a double necked instrument. Although developed primarily for a double necked instrument, the present invention is not restricted in that respect. The device may readily be modified for an instrument having a single set of strings for the purpose of damping one or more of the strings while leaving the other strings free for playing or vice versa.

I have illustrated and described my improvements in an embodiment which is very practical. I have not attempted to illustrate or describe other embodiments or adaptations as it is believed this disclosure will enable those skilled in the art to embody or adapt my improvements as may be desired.

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

1. In a stringed instrument having a plurality of sets of strings, all the strings of each set being grouped together, means for alternately damping one of said sets while freeing the other for playing without interference from said one set and vice versa, comprising a pair of damping members, a rockshaft extending transversely of the sets of strings, said damping members being mounted on said rockshaft at an angle to one another, means for mounting said rockshaft for rocking movement, and an actuating element secured to said rockshaft and disposed angularly and axially on the rockshaft between said damping members.

2. In a stringed instrument having a pair of sets of strings, all the strings of each set being grouped together, means for alternately damping one of said sets while freeing the other for playing without interference from said one set, comprising a pair of damping members disposed beneath said sets respectively, a rockshaft on the body of said instrument, said members being mounted on said rockshaft at an angle to one another, and an actuating element secured to

said rockshaft and disposed on the rockshaft angularly between said damping members.

3. In a stringed musical instrument having a pair of sets of strings, all the strings of each set being grouped together, a damping element for each set, and oscillatable means for actuating said elements in unison to alternately damp one set while freeing the other set for playing without interference from said one set and vice versa, comprising a rockshaft, and means on said rockshaft disposed angularly of the rockshaft between the radial planes of said elements for actuating the same.

4. A damping mechanism for use with a stringed instrument having a plurality of sets of strings arranged in separate groups, said mechanism including means for selectively damping one of said sets while freeing the other for vibration and vice versa, comprising a rockshaft rotatably mounted on said instrument and having a pair of damping members thereon operatively disposed relative to the sets, said damping members being arranged at an angle to one another on said rockshaft, and means for actuating said rockshaft comprising lugs disposed on said rockshaft at an angle relative to one another, an actuating arm for engagement with each of said lugs, and means for pivotally mounting said arms, said pivotally mounted means being adapted to be manipulated by the player to actuate the rockshaft as desired.

5. A damping mechanism for use with a stringed instrument having a plurality of sets of strings arranged in separate groups, said mechanism including means for selectively damping one of said sets while freeing the other for vibration, comprising a rockshaft rotatably mounted on said instrument and having a pair of damping members thereon operatively disposed relative to the sets, said damping members being arranged at an angle to one another on said rockshaft, and means for actuating said rockshaft comprising lugs disposed on said rockshaft at an angle relative to one another, and means manipulated by the player to actuate the lugs as desired.

6. A damping mechanism for use with a stringed musical instrument having a plurality of sets of strings provided with anchoring tail-pieces, all the strings of each set being grouped together, said mechanism comprising a rockshaft disposed transversely below the sets of strings and adjacent the tail-pieces, damping members for the sets of strings disposed on said rockshaft in angular relation to each other so that when the rockshaft is actuated to bring the damping member of one set of strings to operative position the other damping member is moved to inoperative position, and plate-like actuating members pivotally mounted above said tail-pieces and operatively associated with said rockshaft so that the damping members are swung to inoperative position by the actuation of the actuating member associated with its set of strings, the damping member for the other set of strings being simultaneously moved to damping position and the operating member therefor returned to its initial position.

7. A damping mechanism for use with a stringed musical instrument having a plurality of sets of strings, all the strings of each set being grouped together, said mechanism comprising a rockshaft disposed transversely below the sets of strings, damping members for the sets of strings disposed on said rockshaft in angular relation

to each other so that when the rockshaft is actuated to bring the damping member of one set of strings to operative position the other damping member is moved to inoperative position, and pivotally mounted actuating members operatively associated with said rockshaft so that the damping members are swung to inoperative po-

sition by the actuation of the actuating member associated with its set of strings, the damping member for the other set of strings being simultaneously moved to damping position and the operating member therefor returned to its initial position.

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