Feb. 18, 1930. R. T. SAWYER 1,747,650

STRINGED MUSICAL INSTRUMENT

Filed Oct. 25, 1926

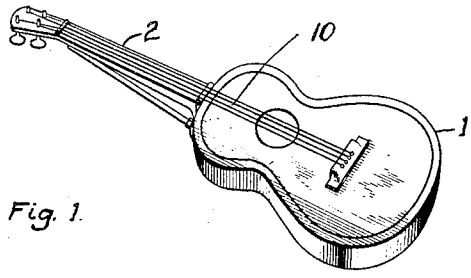


Fig. 1.

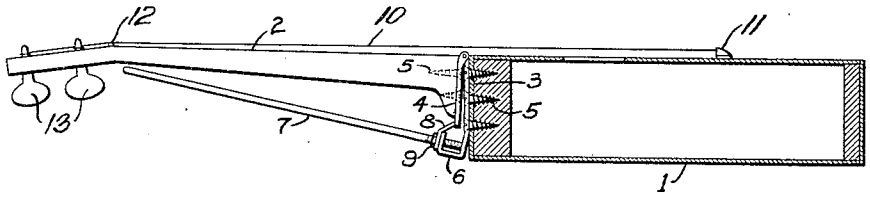


Fig. 2.

Witnesses.
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UNITED STATES PATENT OFFICE

ROBERT TOM SAWYER, OF COLUMBUS, OHIO

STRINGED MUSICAL INSTRUMENT

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My invention relates to stringed musical instruments of the type wherein the strings are stopped by pressure of the fingers of the operator.

My invention consists of certain improvements in stringed musical instruments using a sounding board by which the tone thereof is improved and of a certain construction particularly applicable to ukeleles, guitars, mandolins, and other similar instruments of this general class, but which may also be used in connection with any stringed musical instrument using two nuts to support the strings, the construction making it possible to readily produce a waving, swaying, vibrating, or tremulous tone.

The object of this invention is to provide means in connection with a stringed instrument which will enable the player to vary simultaneously the tension of all the strings while playing the instrument. Varying the tension of the strings produces a harmonious sound having the effect of swaying, crooning, or jazzing, depending upon the rapidity of this variation of the tension of the strings by the player.

This variation of the tension of the strings may be accomplished in at least three ways; first, by building the instrument for this particular purpose as by making one or more parts of the instrument flexible either mechanically or by the composition or structure of the material of these parts thus allowing them to be moved as desired by the player; second, by adding a separate fixture to the instrument which will accomplish the desired results, and; third, a device may be used which will vary the tension of the strings, yet not be attached in any visible way to the instrument.

For example; the first method may be accomplished by having part or all of the neck of the instrument made of elastic material. It may also be accomplished by placing a hinge or flexible connection between the neck and the body of the instrument, or between any part of either the neck or body. The second method may be obtained by clamping a separate device onto the instrument which can be operated by the player.

In the preferred form of my invention the tension of the strings is varied by relative movement of the nuts, e. g., by movement of the neck in relation to the body. Due to the angularity between the neck and the body, relative movement of the two will vary the distance between the nuts which in turn varies the tension of the strings.

The invention is fully described in the following specification and while, in its broader aspect, it is capable of embodiment in numerous forms, a preferred embodiment thereof is illustrated in the accompanying drawing, in which;

Figure 1 is a view in perspective of a stringed instrument embodying the invention and Figure 2 is a side view partly in section.

The instrument described is of the general form of a ukelele having a sounding box 1 with a neck member 2 pivotally connected thereto by means of a hinge having leaves 3 and 4 which are secured to the sounding box and the neck respectively by suitable screws 5. Leaf 3 of the hinge is extended and bent into a U-shaped section 6. The legs of this U-shaped section are drilled and tapped to receive the threaded end of a rod 7 on which is a washer 8 firmly held in place by a lock nut 9. Washer 8 is bent in such a manner as to engage an extended portion of leaf 4 of the hinge thereby limiting the movement of the neck 2 with respect to the body 1. Rod 7 is extended the length of the neck member to provide a rest for the hand doing the fingering and also to enable the player to more easily move the neck with respect to the body. The strings 10 are fastened at one end to the nut 11 secured to the sounding box 1, pass over the nut 12 secured to the neck 2, and are fastened at the other end to the usual tuning pegs 13.

When the instrument is tuned in the usual manner the tension of the strings will pull the neck so that the leaf 4 of the hinge will rest against the washer 8 on the rod 7. To increase the tension of the strings the neck is moved with respect to the body, i. e., the neck is moved toward the rod, by a squeeze of the hand.

Any person having an ear for music will

soon learn when to increase the tension of the strings in order to produce the most pleasing effects.

The invention is illustrated and described in connection with a ukelele, but it is to be understood that it may be carried out in connection with other instruments of the same general type without departing from the spirit or scope of the invention.

In accordance with the provisions of the patent statutes the principle of the invention has been described, together with the construction which is now considered to represent the best embodiment thereof, but it is desired to have it understood that the construction shown is merely illustrative, and that the invention may be carried out in other equivalent ways.

The invention having been described, what is claimed and desired to be secured by Letters Patent of the United States, is:

1. A stringed musical instrument comprising a sounding box, a neck, and means connecting said box and said neck by which the angular position of the neck with respect to the sounding box may be varied while the instrument is being played.

2. In a stringed musical instrument comprising a sounding box and a neck member, each having a nut secured thereto, means connecting said box and said neck by which the distance between the nuts may be freely varied during a playing operation and means for limiting the extent of variations.

3. In a stringed musical instrument comprising a sounding box and a neck member, each having a nut secured thereto, means connecting said box and said neck, said neck being freely adjustable during a playing operation to vary the distance between the nuts and means for limiting the extent of the adjustments.

4. A stringed musical instrument having a sounding box and an angularly movable neck connected thereto, said neck being freely adjustable during a playing operation to vary the tone of the instrument and means for limiting the adjustments.

5. In a stringed musical instrument, a sound box, a neck connected thereto, strings secured to the box and neck, and means by which free relative adjustment may be obtained between the box and neck during a playing operation.

6. In a stringed musical instrument, a sound box, a neck connected thereto, strings secured to the box and neck, means by which free relative adjustment may be obtained between the box and neck during a playing operation to vary the tension of all the strings, and means for limiting said relative adjustment.

7. In a stringed musical instrument, in combination, a body member, a neck member, a hinge connecting the neck member to the body member by means of which free angular movement may be obtained between said members during a playing operation, and an adjustable stop rigidly mounted on the body member and adapted to engage with said neck member to limit the movement thereof with respect to the body member.

8. A stringed musical instrument having a body and a neck, a hinge connecting said body and said neck, freely movable during a playing operation and so mounted that the tension of the strings tends to move the leaves of the hinge to open position, and a member rigidly mounted on the body and in cooperative relation with the neck and so adjusted to limit the opening of said leaves due to the tension of said strings to a predetermined amount.

9. In a stringed musical instrument, in combination, a sound box, a neck member pivotally disposed relative thereto and adapted to be freely rocked with respect to said sounding box during a playing operation and means for limiting said rocking movement.

10. A stringed musical instrument comprising a body and a neck connected together by a hinge, means by which free movement of the leaves of the hinge may be obtained within predetermined limits, and a rod rigidly attached to said body extending longitudinally along and below said neck and cooperating therewith to facilitate said movement of the leaves.

In testimony whereof I have affixed my signature.

ROBERT TOM SAWYER.