July 21, 1925.

1,546,804

M. A. STOVER

AUXILIARY TUNING DEVICE FOR VIOLINS

Filed March 20, 1923

Fig. 1.

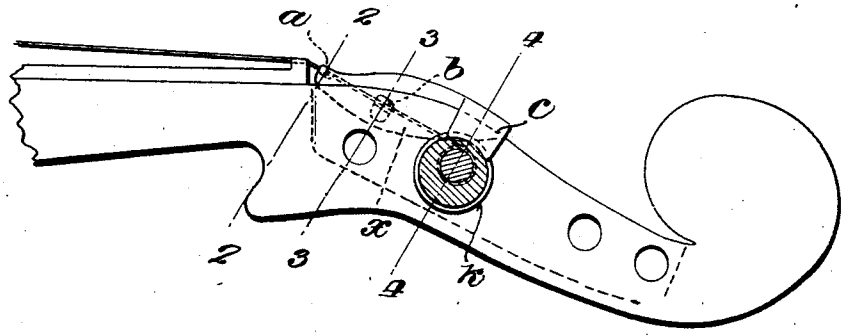


Fig. 2.

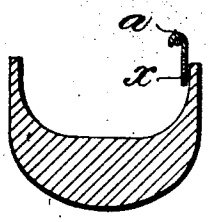


Fig. 3.

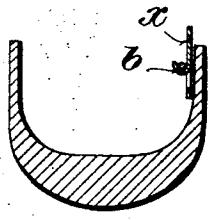


Fig. 5.

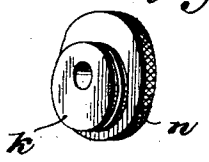


Fig. 4.

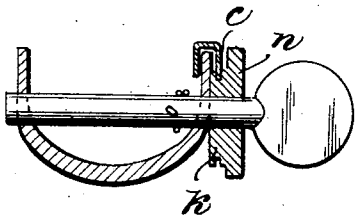
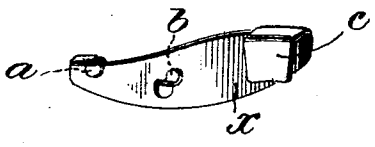


Fig. 6.



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Patented July 21, 1925. 1,546,804

UNITED STATES PATENT OFFICE.

MURRAY A. STOVER, OF RIALTO, CALIFORNIA.

AUXILIARY TUNING DEVICE FOR VIOLINS.

Application filed March 20, 1923. Serial No. 626,388.

To all whom it may concern:

Be it known that I, MURRAY A. STOVER, a citizen of the United States, residing at Rialto, in the county of San Bernardino and State of California, have invented certain new and useful Improvements in Auxiliary Tuning Devices for Violins, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to auxiliary tuning devices for string instruments and more especially to auxiliary tuners for the violin E-string.

The steel string has almost universally superseded the gut for the E-string on violins. It is difficult to tune it with the ordinary wooden peg. Violinists are loath to use machine pegs or to in any way alter their violins. The object of the present invention is to provide a means for accurately tuning the string after it has been roughly brought to tune by the ordinary peg, without altering the violin, or detracting from its classic appearance.

Other objects of the invention will be apparent from a perusal of the following specification and the drawings accompanying the same.

In the drawings:

Fig. 1 is a side view of a violin peg box with my invention applied to the E-string peg, the thumb piece and peg head being cut away for the sake of clearness;

Fig. 2 is a section through the line 2—2 of Fig. 1;

Fig. 3 is a section on the line 3—3 of Fig. 1;

Fig. 4 is a section on the line 4—4 of Fig. 1;

Fig. 5 is a perspective view of the cam and thumb piece.

Fig. 6 is a perspective view of the lever which cooperates with the thumb piece, detached therefrom.

The thumb piece n and the cam k are preferably integral. They may be of brass, or cast of such material as bakelite. The hole through them is centrally located with respect to the thumb piece, but eccentric with respect to the cam. It is of such diameter as just to fit over the E-string peg outside of the peg-box. A groove is cut in the peripheral surface of the cam to receive the projection c of the lever x as later described.

The lever x is preferably of sheet metal, such as brass, of sufficient thickness to provide the necessary stiffness. It is so disposed within the peg box of the violin as to lie principally between the E-string and the side of the box toward the head of the E peg. It is provided at its forward end with a hook a, which lies over the E-string just beyond the neck of the violin. The hook b engages the under side of the E-string at a point intermediate the neck and the E peg. The projection c is at the other end of the lever x and is so formed as to reach up over the top of the wall of the peg box adjacent to the head of the E peg, and then down outside that wall so that its lower edge will lie within the groove of the cam k.

The method of operation is obvious. Rough tune is acquired in the ordinary way. Then the thumb piece n is turned, which by means of the eccentric of the cam raises or lowers the outer end of the lever x. It is clear that raising this end of this lever will raise the pitch of the string by deflecting it between the nut and the peg. The amount of this deflection may be made so slight as to afford a very delicate method of tuning.

Devices for auxiliary tuning are in common use, but so far as I know none of them act between the nut and the peg. All of them, so far as known, are applied to the tailpiece of the instrument, with the obvious disadvantages of inaccessibility and liability to slightly alter the tone of the instrument.

As the device in the embodiment herein disclosed consists simply of the two elements, the cam and thumb piece supported on the existing peg, and the deflecting lever supported partly by the wire and partly by the cam upon which it bears under tension of the wire, it can be readily applied to the instrument without altering or marring the same, and as the cam and thumb-piece are inconspicuously situated and can be made of wood or a substance resembling the same weight, color and texture, the classic appearance of the instrument is preserved, which is an element of commercial value in the art.

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

1. An auxiliary tuner for string instru-

ments, violins and the like controlled by a hand operated control piece journaled on the peg shank of the string operated upon.

2. An auxiliary tuner for string instruments, violins and the like comprising means for deflecting a string at a point between the neck and its tuning peg and an operating cam for said deflecting means mounted on the shank of the peg.

3. An auxiliary tuner for string instruments, violins and the like comprising a deflecting lever arranged at one end to engage a string at two points between the neck and the tuning peg, an operating cam mounted eccentrically on the peg shank between the peg box and the head of the peg, and an operating thumb-nut connected with the cam and mounted concentrically on the peg shank between the cam and the head.

4. An auxiliary tuner for string instruments, violins and the like, comprising a deflecting lever having at one end a pair of hooks engaging a string at two points between the neck and the tuning peg, and at the other end a cam engaging projection extending over the side of the peg box, a rotary cam and thumb-nut therefor journaled on the shank of the tuning peg between the peg box and the head of the peg in operative engagement with said projection.

5. An auxiliary tuner for string instruments, violins and the like, comprising a cam and operating thumb-nut therefor rotatably mounted on the shank of the tuning peg of the string to be operated upon, and a lever having one end in operative engagement with the cam and the other end provided with a pair of hooks engaging the wire on opposite sides at points between the neck and the peg whereby the cam engaging end is held against the cam under tension of the wire and operation of the cam to rock the lever tends to crimp the wire between said wire engaging points.

6. An auxiliary tuner for string instruments, violins and the like, comprising a rotating cam mounted on the shank of the tuning peg of the wire to be tuned, and a lever having one end in operative engagement with the cam and the other end connected to the wire at two points spaced along the wire between the nut and the peg whereby rocking of the lever by the cam effects a flexure of the wire around the said two points.

7. In a tuning device for string instruments the combination of a primary tuner with an auxiliary tuner mounted thereon, comprising means for deflecting a string at a point between the string support and the primary tuner.

8. In a tuning device for string instruments the combination of a primary tuner with an auxiliary tuner mounted thereon comprising a lever adapted to deflect the string at a point between the string support and the primary tuner.

9. An auxiliary tuner for string instruments in which the string is secured to a peg and passes thence over a nut, comprising means for deflecting the string between the peg and the nut, operated by a cam mounted on said peg.

In testimony whereof I hereunto affix my signature.

MURRAY A. STOVER.