H. SCHLEMMER.

TUNING DEVICE FOR STRINGED INSTRUMENTS.

APPLICATION FILED SEPT. 30, 1909.

974,095.

Patented Oct. 25, 1910.

2 SHEETS—SHEET 1.

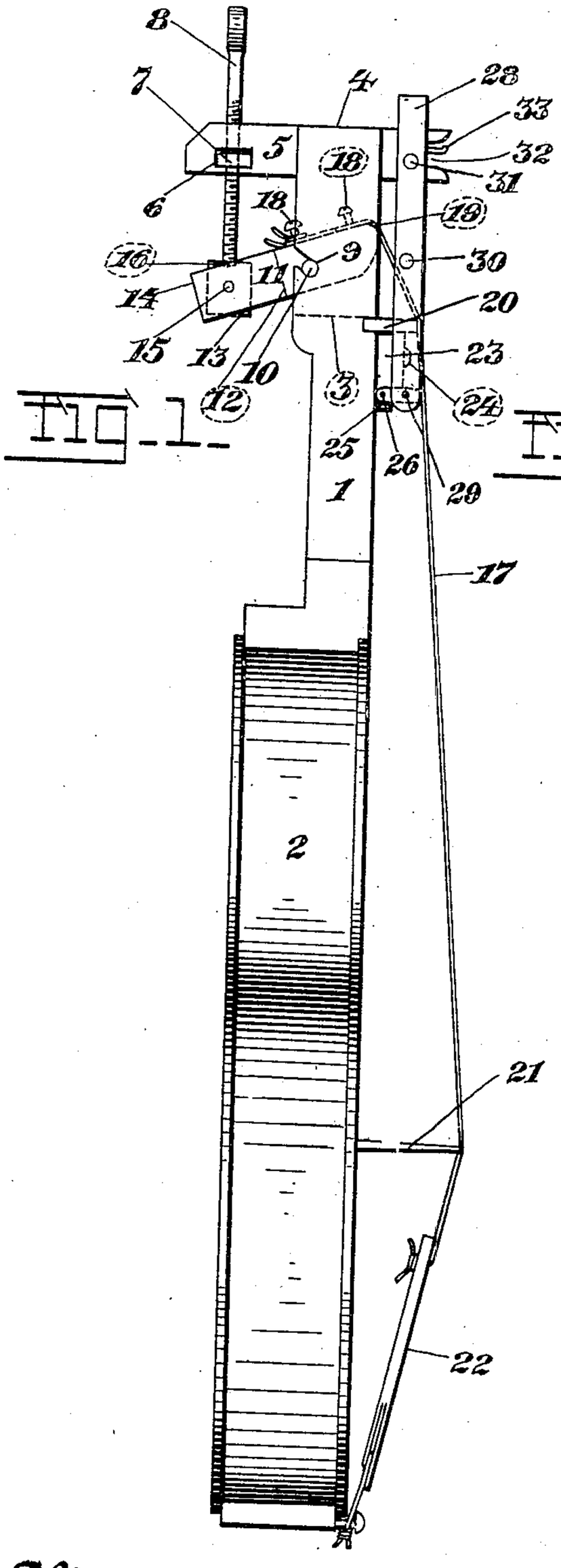

FIG. 1.

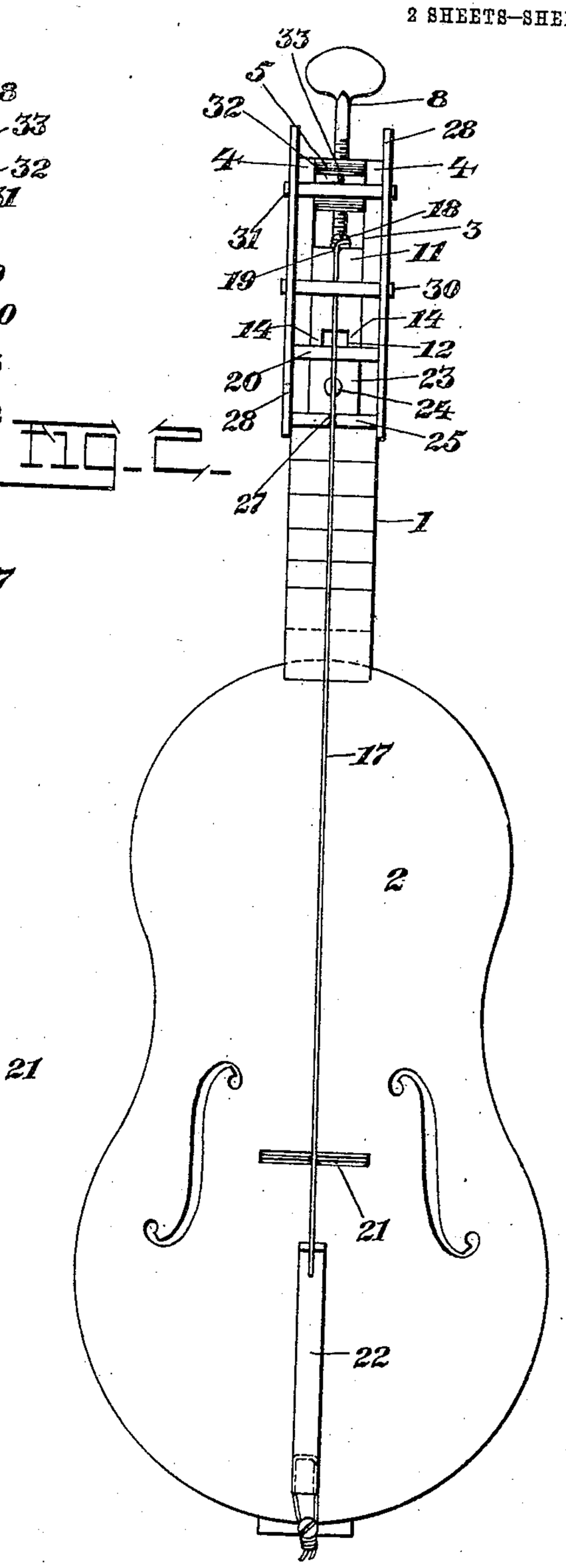

FIG. 2.

Witnesses:
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George G. Anderson.

Inventor:
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By Hugh V. Wagner,
His Attorney.

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2 SHEETS—SHEET 2.

FIG. 3.

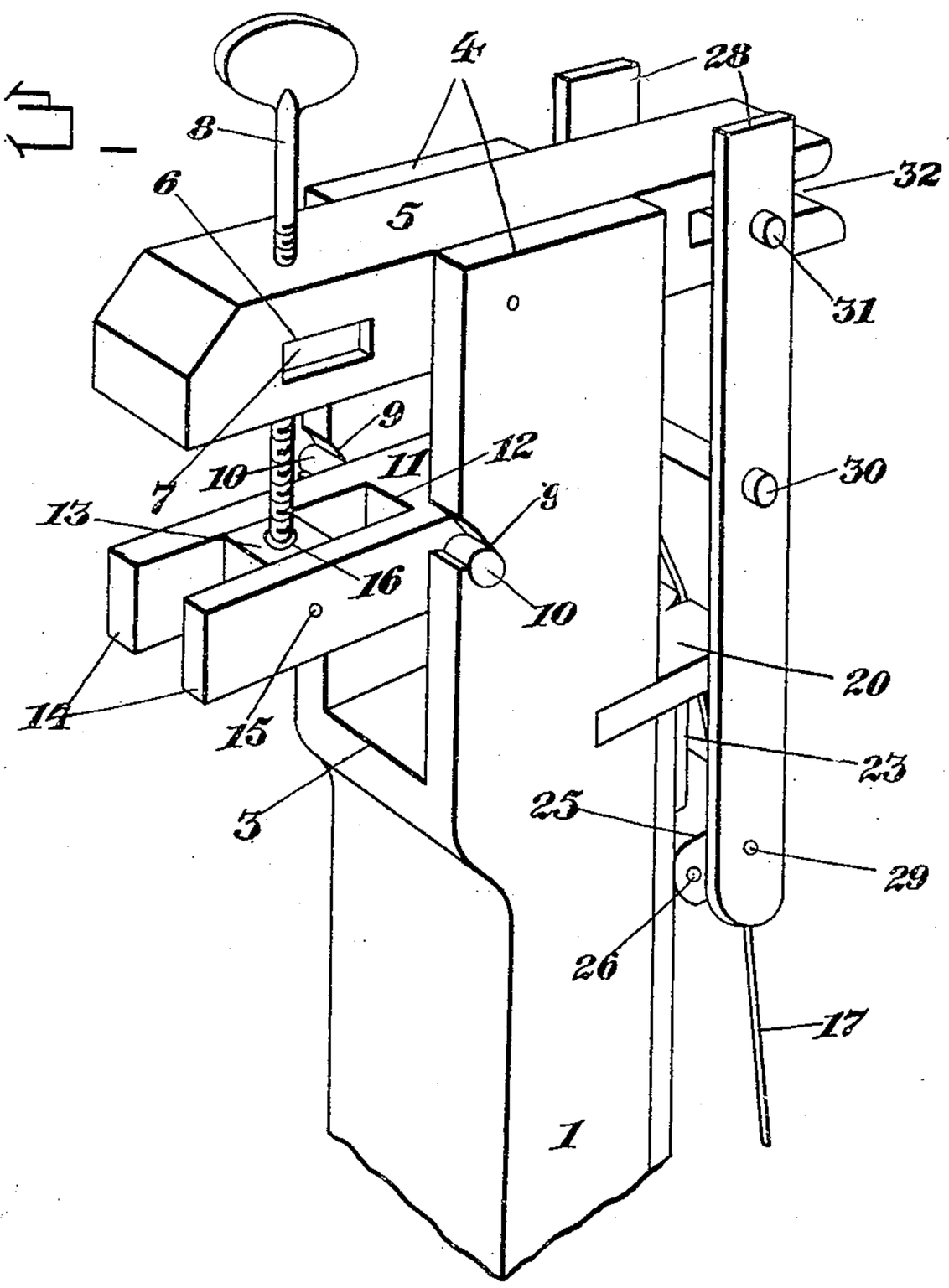
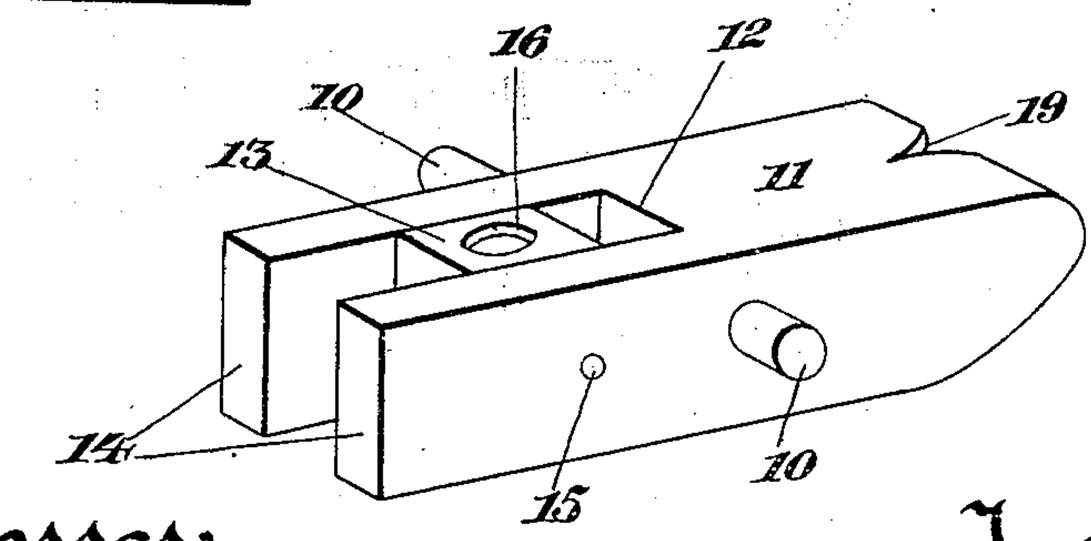


FIG. 4.



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UNITED STATES PATENT OFFICE.

HENRY SCHLEMMER, OF EFFINGHAM, ILLINOIS.

TUNING DEVICE FOR STRINGED INSTRUMENTS.

974,095. Specification of Letters Patent. Patented Oct. 25, 1910.

Application filed September 30, 1909. Serial No. 520,269.

To all whom it may concern:

Be it known that I, HENRY SCHLEMMER, a citizen of the United States, residing at the city of Effingham, in the county of Effingham and State of Illinois, have invented certain new and useful Improvements in Tuning Devices for Stringed Instruments, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention consists of a tuning device for stringed instruments, and has for its object to provide means which render the tuning of an instrument, to which same is attached, easier and more effective.

With this device the tension of the string or strings can be increased or decreased more gradually and the necessary tension on the string to produce the desired tone can be maintained longer than in instruments which are tuned in the ordinary way, *i. e.*, by adjusting the tension of the strings by means of tuning-pins or pegs.

While this device is particularly intended for use on the class of instruments used in the musical instrument constituting the subject-matter of my copending application, Serial No. 401,387, filed Nov. 9, 1907, it can be advantageously used in pianos and on harps, mandolins, etc.

In the drawings forming part of this specification, in which like numbers of reference denote like parts wherever they occur, Figure 1 is a side elevation of the device attached to a violin; Fig. 2 is a front elevation of same; Fig. 3 is a perspective view of the device; and Fig. 4 is a perspective view of the tuning-lever.

For the purpose of illustration the device has been shown in the drawings as being attached to an instrument having a single string, but *mutatis mutandis* it can be attached to an instrument having a plurality of strings. When the device is attached to a violin the neck with which the ordinary violin is equipped is modified, the usual scroll, pegs, and peg-box are omitted entirely, and the form shown in the drawings substituted therefor.

The neck 1 is secured in any ordinary manner to the violin-body 2 and the upper end of said neck is slotted at 3 between the sides 4. Member 5 is rigidly secured in said slot to the sides 4 by any suitable means. In said member 5 is an opening 6 in which fits a nut 7, which nut is screw-threaded and through which thumb-screw 8 passes, said thumb-screw, also, extending through said member. Each side 4 is notched at 9, which forms a bearing for a projection 10 on the tuning-lever 11. Said tuning-lever is provided with a slot 12 in which the block 13 is fastened to the sides 14 by the pin 15. The depression 16 in said block 13 forms a seat for the end of thumb-screw 8. The string 17 is fastened at its upper end to the tuning-lever 11 by the screws 18, or other suitable means, and passes through notch 19 in the end of said tuning-lever, thence over the upper bridge 20 and the lower bridge 21, and is attached at its lower end to the tail-piece 22.

To regulate the tone of the string by raising the pitch a half tone, a tone regulator is fastened to the neck 1. Said tone regulator comprises the block 23, which is fastened to neck 1 by the screw 24 and to which the member 25 is pivotally attached by the pin 26. Said member is provided with a notch 27 in which string 17 rests when said member occupies the position depicted in Figs. 1, 2, and 3 and with a pair of arms 28 attached thereto by pin 29. Said arms are connected by the spacing-rod 30 and by the spacing-rod 31, the latter rod being adapted to enter slot 32 in member 5 and to be held therein by a spring 33. When rod 31 is held in slot 32 member 25 engages string 17, which passes through notch 27, but when said rod is moved out of said slot member 25 can be rotated on pin 26, thereby causing said member 25 to move out of engagement with said string.

In tuning an instrument to which this device is attached the tension of the string can be regulated by turning the thumb-screw 8 in one direction or another to increase or decrease the tension. For example, when the thumb-screw 8 is turned so as to advance toward the tuning-lever 11 the block 13 and the end of said tuning-lever to which said block is attached is forced downwardly and, due to the fact that said tuning-lever is fulcrumed in notches 9, the front end of said tuning-lever is caused to be raised which increases the tension on string 17 and raises the tone of said string, but when thumb-screw 8 is turned in the opposite direction the back end of tuning-lever 11 moves upwardly with said thumb-screw and

the tension of string 17 is thereby decreased which lowers the tone of said string.

If it is desired to raise the pitch of the string a half tone higher, the member 25 is moved to engage string 17 and held in engagement therewith by the arms 28 when rod 31 is moved into slot 32 where it is held by spring 33, *i. e.*, if the string is to be tuned to play *d*-sharp, member 25 would be moved out of engagement with string 17 and the thumb-screw 8 would be turned to cause the string to play *d*, then member 25 would be raised to engage said string, thereby raising the tone to *d*-sharp.

I claim:

1. The combination, with a slotted support; of a tuning lever pivoted intermediate its ends in said slot for rocking movement and having one end thereof bifurcated; a string fastened to the opposite end of said lever; means for securing the opposite end of said string; a block pivoted in the bifurcation in said lever for movement relative to the latter, said block having a seat formed in its upper face; a member rigidly secured in said slot above said lever and having one end overhanging the bifurcated end of the lever, and a thumb screw threaded through the overhanging end of said member and having its lower end received in said seat, for rocking said lever to tension said string.

2. The combination, with a support formed with a slot and having the side walls of said slot formed with alining notches, of a rocking tuning lever extending through said slot and provided at opposite sides with centrally located pivot pins removably received in said notches to permit the withdrawal of the lever, said lever having one end thereof bifurcated; a string fastened to the opposite end of said lever; means for securing the opposite end of said string; a block pivoted in the bifurcation in said lever for movement relative to the latter, said block having a seat formed in its upper face, a member rigidly secured in said slot above said lever and having one end overhanging the bifurcated end of the lever; and a thumb screw threaded through the overhanging end of said member and having its lower end removably engaged in said seat.

In testimony whereof I have affixed my signature in presence of two witnesses.

HENRY SCHLEMMER.

Witnesses:

CHAS. FEUERBORN,

A. J. WORMAN.