C. E. SAGE.

TUNING PEG ADJUSTMENT FOR STRINGED MUSICAL INSTRUMENTS.

APPLICATION FILED NOV. 25, 1918.

1,309,658. Patented July 15, 1919.

FIG. 1

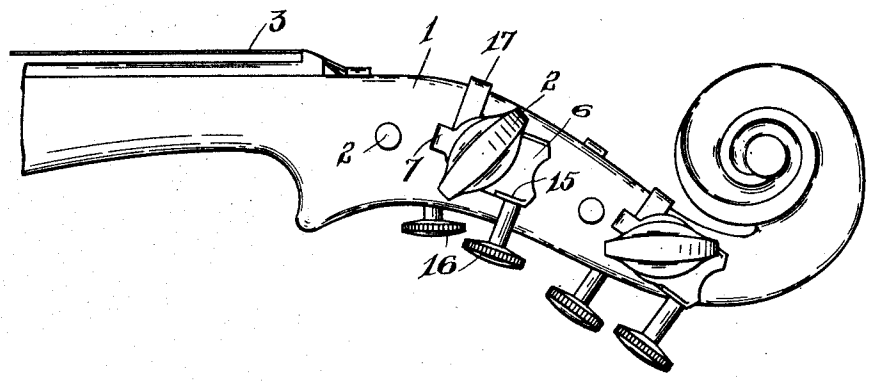


FIG. 2

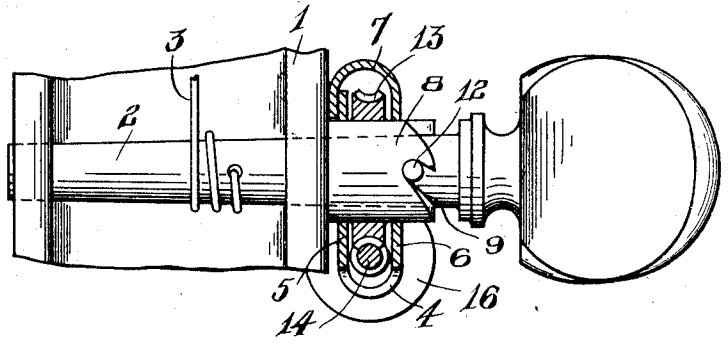
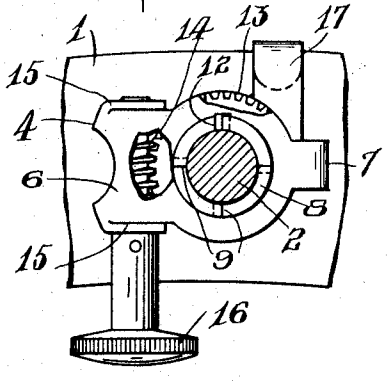


FIG. 4



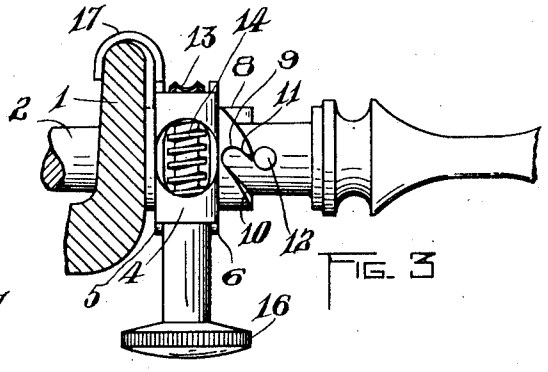


FIG. 3

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UNITED STATES PATENT OFFICE.

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TUNING-PEG ADJUSTMENT FOR STRINGED MUSICAL INSTRUMENTS.

1,309,658. Specification of Letters Patent. Patented July 15, 1919.

Application filed November 25, 1918. Serial No. 263,949.

To all whom it may concern:

Be it known that I, CHARLES E. SAGE, a citizen of the United States, and resident of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Tuning-Peg Adjustments for Stringed Musical Instruments, of which the following is a specification.

The present invention relates to a tuning peg adjustment for stringed musical instruments of the type in which a number of pegs are arranged in a head and have the strings connected thereto for the purpose of adjusting the tension on the strings, an object of this invention being to provide a device which may be associated with the ordinary head of a violin for the purpose of maintaining a string adjustment without making it necessary to injure the head by the use of screws, nails or similar fastening devices which would penetrate the head. Another object of the invention is to provide an adjusting means which will automatically move a tapered tuning peg axially into and out of binding engagement with the head upon the mere turning of the peg, while at the same time holding the peg in its adjusted position against accidental slipping.

To these and other ends, the invention consists of certain parts and combinations of parts all of which will be hereinafter described, the novel features being pointed out in the appended claims.

In the drawings:—

Figure 1 is a side view of the head of a violin with the present invention applied thereto;

Fig. 2 is an enlarged, fragmentary view of the head with one of the adjusting devices shown in partial section;

Fig. 3 is a fragmentary view of the head and a peg showing one of the adjusting devices in elevation; and

Fig. 4 is a fragmentary view of the head showing a tuning peg in cross-section and an adjusting device in side elevation at right angles to the view shown in Fig. 3.

Referring more particularly to the drawings, 1 indicates the head of the violin and 2 the tuning pegs which are turnable in said head, the pegs being tapered and movable axially into and out of binding engagement with the head 1, and the strings 3 being connected to the pegs in the usual manner.

The adjusting means embodies a frame which, in this instance, is made from a single piece of sheet metal bent at 4 to provide two parallel portions 5 and 6, one of said portions having an extension 7 bent to overlap the portion 5. The portions 5 and 6 are formed with alined openings, and in these openings a sleeve or collar 8 is received, this sleeve or collar having the tapered portion of the tuning peg 2 passed therethrough. The outer end of this sleeve or collar is formed with a series of notches 9, each of which is undercut to provide two inclined faces 10 and 11. On the tuning peg 2 a lateral projection 12 is provided, and this projection is adapted to enter successively undercut notches 9 in the rotary sleeve or collar 8 when the tuning peg 2 is turned relatively to the sleeve or collar in one direction. The inclined face 10 on each undercut notch or recess 9 facilitates the turning of the tuning peg in one direction, and at the same time produces an axial movement of the tuning peg out of binding engagement with the head 1, while the inclined face 11 of the undercut recess 9 prevents the turning of the peg 2 in the opposite direction, and at the same time acts on the projection 12 when the peg is released to the tension of its string to move said peg axially into binding engagement with the head 1. This turning of the peg 2 in the sleeve 8 provides for the rough adjustment of the peg.

To secure a fine adjustment after the rough adjustment has been obtained, the sleeve or collar 8 is provided with means for turning the same, and to this end it may be surrounded by a worm wheel 13 which lies between the portions 5 and 6 of the frame and is engaged by a worm 14 which is journaled at its ends in two ears 15 bent into parallel relation from the stock of the frame at the bend 4, and having a thumb piece 16 secured to one end beyond one of the ears 15.

The frame on which the rotary collar 8 is mounted to turn is secured to the head of the musical instrument preferably without the use of nails, screws or other fastening devices which would tend to injure the head, and which would also require a skilled workman to attach the same. This result is secured by providing the portion 5 of the frame with a lip or tongue 17 bent into hook form to overhang the head 1 at one side of the tuning peg.

For attaching the devices the ordinary tuning pegs of the instrument each have the pin 12 driven transversely therethrough near the inner end of its tapered portion, and the frame is then hooked upon the head 1 through the hook device 17, the tuning pin being introduced through the sleeve 8 and through the usual openings in the head. The pin 12 should not engage the bottom of the notch 9 in order that the inclined wall 11 may hold the tuning peg not only against turning, but in firm binding engagement with the head 1. To tighten the string, the tuning peg is first turned to obtain the rough adjustment, after which the worm 14 is turned to turn the collar or sleeve 8 in order to secure the fine adjustment.

From the foregoing it will be seen that there has been provided a tuning peg adjustment which may be attached by an unskilled workman to any instrument without the use of screws, nails or other fastening devices. This adjustment tends to move the tapered tuning peg out of binding engagement with the head upon the rotation of the peg in one direction, and upon the release of the peg to move the latter axially into binding engagement with the head. The frame of the adjusting means is of simple construction, and may be readily formed from a single piece of sheet metal.

What I claim as my invention and desire to secure by Letters Patent is:—

1. A tuning peg adjustment for stringed musical instruments comprising in combination with a head of a musical instrument and a tuning peg turning therein, said peg being provided with a lateral projection, a frame having a hook projecting therefrom and detachably engaging with the head, a sleeve turning in said frame and formed with a series of notches in one end, said sleeve receiving the tuning peg therethrough and the projection on the peg being received in one of the notches, and means for turning the sleeve in the frame.

2. A tuning peg adjustment for stringed musical instruments comprising, in combination with a head of a musical instrument and a tuning peg turning therein, a frame formed from sheet metal bent to provide two parallel portions, a sleeve through which the peg extends, turning in both parallel portions and provided with a surrounding worm wheel, a worm arranged between the two parallel portions at the bend and coöperating with the worm wheel, and coöperating means on the sleeve and the peg to cause the peg to turn with the sleeve while at the same time permitting the peg to turn in the sleeve in one direction but not in the other.

CHARLES E. SAGE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."