(No Model.)

J. H. GARDNER.

VIOLIN TUNING PEG.

No. 361,500. Patented Apr. 19, 1887.

Fig. 1

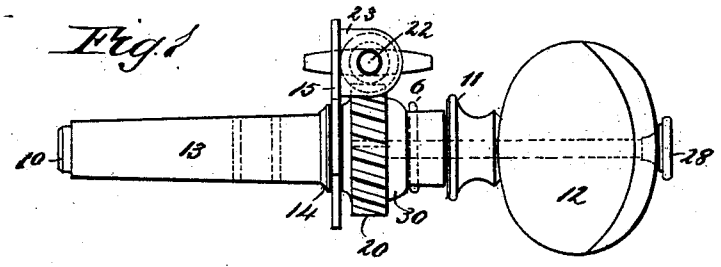


Fig. 2.

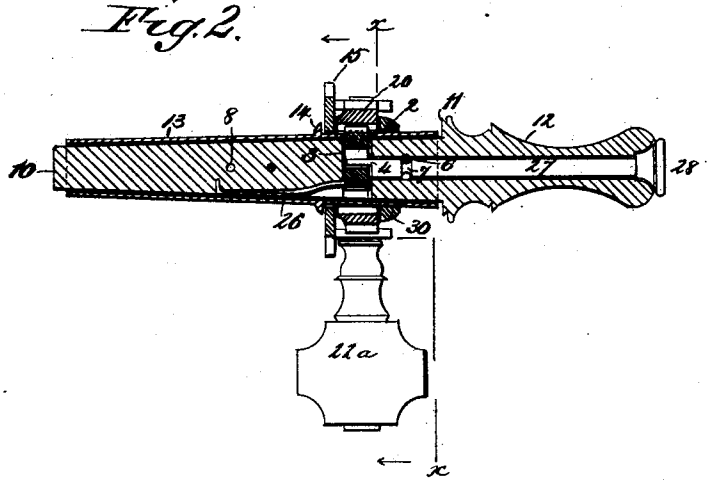
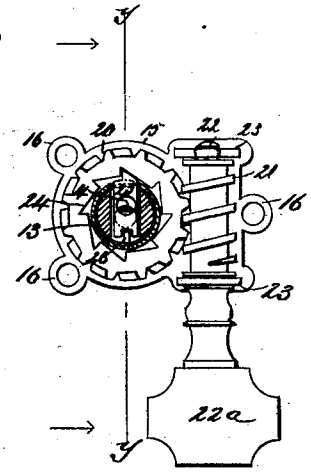


Fig. 3



WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES HERMAN GARDNER, OF ELKHART, INDIANA.

VIOLIN TUNING-PEG.

SPECIFICATION forming part of Letters Patent No. 361,500, dated April 19, 1887.

Application filed March 14, 1887. Serial No. 230,842. (No model.)

To all whom it may concern:

Be it known that I, JAMES HERMAN GARDNER, of Elkhart, in the county of Elkhart and State of Indiana, have invented a new and Improved Violin-Peg, of which the following is a full, clear, and exact description.

This invention relates to stringed-instrument pegs, the object of the invention being to provide a peg wherein the barrel may be turned to take up any undue amount of slack that there is in the string connected to the peg, and wherein, after said undue amount of slack has been taken up, the necessary fine adjustment may be obtained by turning the barrel through the medium of a worm-gear, the parts being so connected that when it is desired to strip the string from the barrel said barrel may be released, so that it will turn freely, all as will be hereinafter more fully described, and specifically pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of my improved form of peg, representing the same as it appears when removed from the instrument-head. Fig. 2 is a sectional view taken on a line corresponding with the line *y y* of Fig. 3, and Fig. 3 is a cross-sectional view taken on a line corresponding with the line *x x* of Fig. 2.

In constructing such a peg as the one illustrated in the drawings above referred to, I provide a wooden core, 10, that is formed with a shoulder, 11, and a thumb-piece or head, 12, the end of this core being tapered to receive a metallic sleeve, 13, that is formed with an annular flange, 14, against which there fits a plate, 15, that is formed with a number of apertured ears, 16, the peg being connected to the instrument-head by screws or rivets that are passed through the apertures in said ears.

Against the face of the plate 15, I place an angular-toothed gear, 20, the teeth of which are engaged by a worm, 21, that is carried by a short vertical shaft, 22, said shaft being supported in bearings 23, that extend outward from the plate 15. This gear 20 is formed with an internal ratchet, 24, and the teeth of this ratchet 24 are engaged by a pawl, 25, that is mounted in a transverse recess formed in the core 10, the catch-tooth of the pawl extending outward through a slit or aperture, 2, that is formed in the sleeve 13, the pawl being normally held in engagement with the ratchet-teeth by a spring, 26, that is housed, as clearly shown in Fig. 2; but in order that the pawl may be withdrawn from engagement with the teeth of the ratchet 24, I form said pawl with an aperture, 3, that is entered by an eccentric projection, 4, formed upon a pin or bar, 27, that is fitted within a central bore formed in the core 10, the bar 27 being held in position by a pin, 6, that enters a groove, 7, formed in the peripheral face of the bar. To the end of the bar 27 there is fitted a head, 28. The gear 20 is held against displacement by a collar, 30, which bears against its outer face, said collar being held in position by the pin 6.

Such being the general construction of my improved form of peg, the operation is as follows: The end of the string in connection with which the peg is to be employed is passed through an aperture, 8, which extends through the core 10 and through the sleeve 13, surrounding the core, and the end having been so inserted, the excess of slack in the string may be removed by turning the key toward the shaft 22, the pawl 25 being pressed inward against the tension of its spring 26. When a tension approaching that required for a proper tuning of the instrument has been imparted to the string, the required accurate tension may be obtained by turning the shaft 22, which is provided with a thumb-piece, 22^a; and if by accident the string should break it may be stripped from the peg by turning the bar 27, when its eccentric projection 4 will act to force the pawl 26 inward against the tension of its spring; and when the pawl has been so forced inward and out of engagement with the teeth of the ratchet 24 the string may be grasped and pulled from the barrel of the peg, the parts at this time being free to turn in either direction desired.

Although I have described my peg as being formed from a wooden core that is faced with a metallic sleeve, it will of course be understood that the peg could be made from a single piece of metal, which would constitute the barrel and the thumb-piece of the peg.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with the main body of a stringed-instrument peg, of a gear carried thereby, a worm arranged to engage said gear, and a pawl arranged to engage an internal ratchet formed on the gear, substantially as described.

2. The combination, with the main body of a stringed-instrument peg, of a gear carried thereby, a worm arranged to engage said gear, an internal ratchet formed upon the gear, a pawl arranged to engage the ratchet, and a means, substantially as described, for throwing the pawl out of engagement with the ratchet, as and for the purpose stated.

3. The combination, with the main body of a stringed-instrument key, of a gear, 20, formed with an internal ratchet, a worm engaging said gear, a pawl engaging the ratchet, a pin provided with an eccentric finger that enters an aperture formed in the pawl, and a spring arranged in connection with the pawl, substantially as described.

4. The combination, with a core, of a sleeve surrounding said core and formed with a flange, 14, of a plate carrying a worm, 21, a gear carried by the sleeve 13 and formed with an internal ratchet, a pawl mounted within a recess formed in the core and arranged to engage with the ratchet, a spring arranged in connection with the pawl, a pin, 27, formed with a finger, 4, and a groove, 7, and a retaining-pin, 6, substantially as described.

JAMES HERMAN GARDNER.

Witnesses:

JOS. PUTERBAUGH,

PORTER TURNER.