

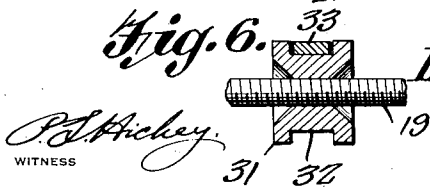
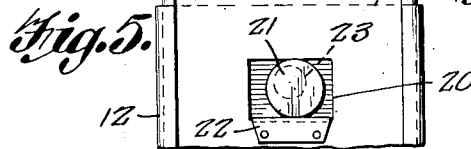
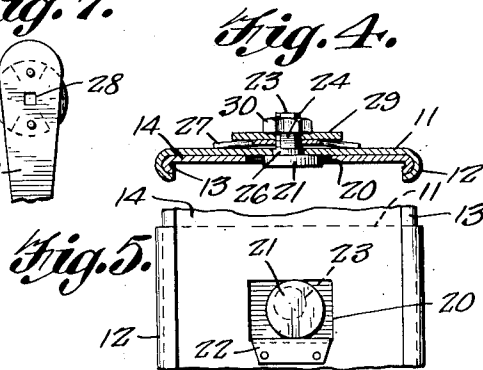
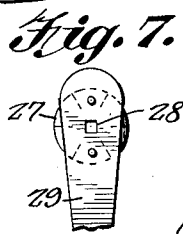
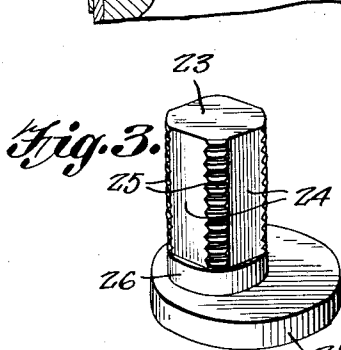
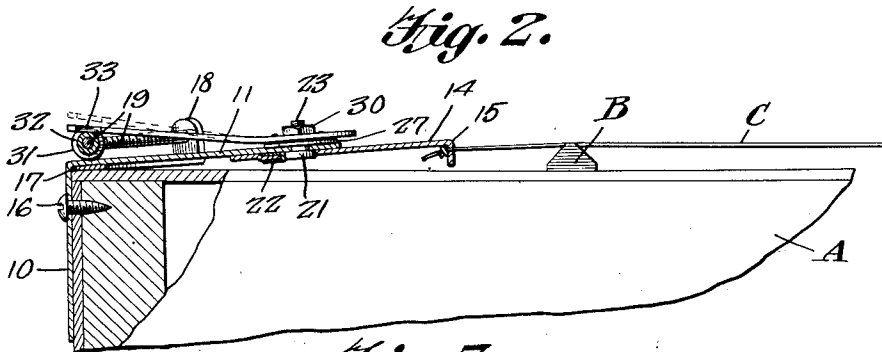
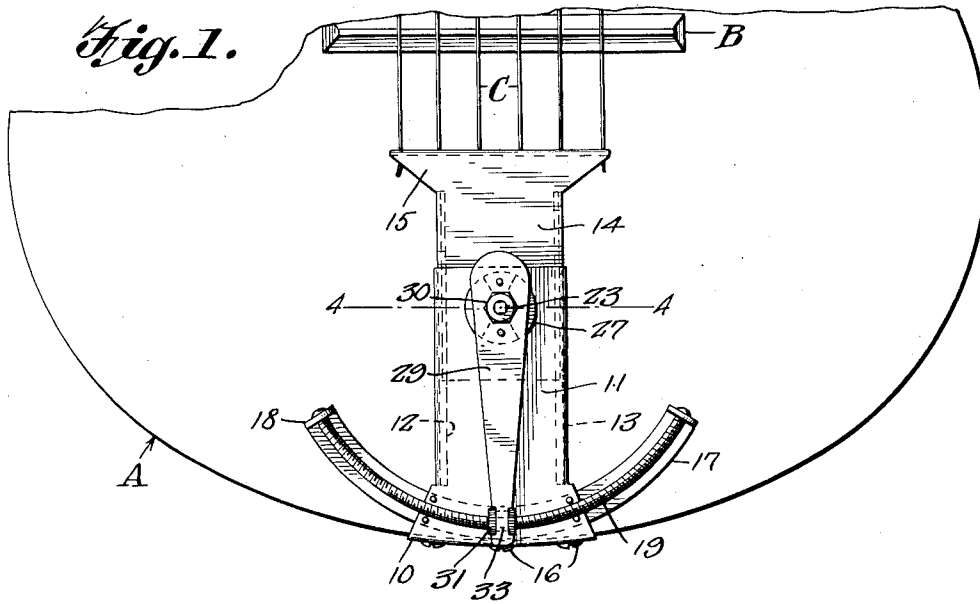
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L. E. PITSENBARGER

2,097,103

MUSICAL INSTRUMENT TAIL PIECE

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UNITED STATES PATENT OFFICE

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MUSICAL INSTRUMENT TAIL PIECE

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4 Claims. (Cl. 84-299)

The invention relates to a musical instrument tail piece and more especially to an adjustable tail piece support for musical instruments.

The primary object of the invention is the provision of a device of this character, wherein the same when applied to a stringed instrument will enable the tightening of the strings of such instrument or the loosening of the same without in any manner damaging the sound body and assuring a quick change of musical notes for the playing of music in one or more keys and without inconvenience to the player of the instrument.

Another object of the invention is the provision of a device of this character, wherein the tail piece is adjustably supported upon a stringed instrument and thereby the strings of the instrument can be tightened or slackened at the option of the player of the instrument.

A further object of the invention is the provision of a device of this character, which is simple in its construction, readily and easily applied to a stringed musical instrument, thoroughly reliable and efficient in its operation, readily and easily adjusted, and inexpensive to manufacture and install.

With these and other objects in view, the invention consists in the features of construction, combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawing, which discloses the preferred embodiment of the invention and pointed out in the claims hereunto appended.

In the accompanying drawing:

Figure 1 is a fragmentary plan view of a musical instrument of the string type showing the device constructed in accordance with the invention applied thereto.

Figure 2 is a fragmentary side elevation partly in section.

Figure 3 is a perspective view of the cam member of the device.

Figure 4 is a vertical transverse sectional view on the line 4-4 of Figure 1.

Figure 5 is a fragmentary bottom plan view of the device.

Figure 6 is an enlarged sectional view through the adjusting nut.

Figure 7 is a fragmentary plan view of the turning lever of the device.

Similar reference characters indicate corresponding parts throughout the several views in the drawing.

Referring to the drawing in detail, A designates generally a portion of a musical instrument, that is to say, the sound body thereof, B the bridge

and C the strings of such instrument. These strings C are connected with a tail piece constituting the present invention and hereinafter fully described.

The tail piece comprises a bracket 10 forming a plate-like extension 11 having the opposite side edges inwardly curled to provide guide flanges 12 having interfitted therewith the inwardly curled edges 13 of an extension plate 14, it having a head-like rack 15 in which are fastened the series of strings C of the musical instrument. This extension plate 14 constitutes a slide and is telescopically interfitted with the plate extension 11 of the bracket 10. The bracket 10 is fastened to the instrument A by suitable fasteners 16 to be fixed thereon and overhangs the top of the sound box or body of said instrument.

Riveted to or otherwise fixed on the plate extension 11 of the bracket 10 are laterally directed curved arms 17 having out-turned outer terminal ears 18 in which is fixed a bowed threaded rod 19, the bow being similar to the curvature of the arms 17 and this rod is made fast in said ears 18.

Formed in the extension plate 14 constituting the slide is a substantially rectangular shaped opening 20 for accommodating a cam 21, the latter contacting with a track 22 built upon one edge of the opening 20. The cam is formed with a turning stud 23 having flat faces 24 and corner threads 25, respectively. In other words, this stud 23 carries the mutilated threads 25 arranged between the flat faces 24, the latter being oppositely disposed. These faces 24 and threads 25 terminate inwardly at a circular shoulder 26 provided on said stud 23 next to the cam 21 and the purpose of the shoulder is to space a friction washer 27 with relation to the cam and for the working of the same against the top face extension plate 11, the said washer being cupped for the frictional engagement of the peripheral portion of said washer with said extension plate 11. The washer 27 is formed with a square center hole matching the flat faces 24 of the stud 23 so that the washer will be held against rotation on said stud and will turn therewith. This stud 23 is passed through a squared opening 28 formed in a lever 29 and uppermost with relation to the extension plate 11. The lever with the washer on the stud 23 is made fast by a nut 30 tapped with the threads 25 on the stud 23 so that these parts can be separated from the cam and the cam 21 removed from the opening 20 when the occasion requires.

Adjustable on the rod 19 is a turning nut 31,

it having an external annular groove 32 accommodating a reduced portion 33 of the lever 29 thus when the nut 31 is adjusted through threaded engagement with the rod 19 thereon the lever 29 will be swung arcuately thus actuating the cam 21. On the shifting of the cam the slide 14 will be moved thereby for the purpose of slackening or tightening the strings C of the instrument A and in this manner such strings can be tuned for the playing of a piece of music in different keys. The purpose of the washer 27 is to frictionally hold the lever 29 under adjustment when actuating the nut 31.

What is claimed is:

1. A tail piece for a musical instrument involving a sound body and strings for connection with said piece comprising a bracket fixed with the body and having an extension plate, a slide for connection with said strings fitting said extension plate, a cam carried by the extension plate and operative upon the slide for moving the same in a direction for tuning the strings, and means carried by the extension plate for operating the cam.
2. A tail piece for a musical instrument involving a sound body and strings for connection with said piece comprising a bracket fixed with the body and having an extension plate, a slide for connection with said strings fitting said extension plate and having an opening, a cam within said opening and having a stud rotatably fitting the extension plate, a lever fitted to said stud, curved arms at opposite sides of the extension

plate, a threaded rod carried by said arms, and an adjusting nut on said threaded rod and engageable with the lever for shifting the same.

3. A tail piece for a musical instrument involving a sound body and strings for connection with said piece comprising a bracket fixed with the body and having an extension plate, a slide for connection with said strings fitting said extension plate and having an opening, a cam within said opening and having a stud rotatably fitting the extension plate, a lever fitted to said stud, curved arms at opposite sides of the extension plate, a threaded rod carried by said arms, an adjusting nut on said threaded rod and engageable with the lever for shifting the same, and a friction washer carried by the stud and acting upon the extension plate.

4. A tail piece for a musical instrument involving a sound body and strings for connection with said piece comprising a bracket fixed with the body and having an extension plate, a slide for connection with said strings fitting said extension plate and having an opening, a cam within said opening and having a stud rotatably fitting the extension plate, a lever fitted to said stud, curved arms at opposite sides of the extension plate, a threaded rod carried by said arms, an adjusting nut on said threaded rod and engageable with the lever for shifting the same, a friction washer carried by the stud and acting upon the extension plate, and a string rack on said slide.

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