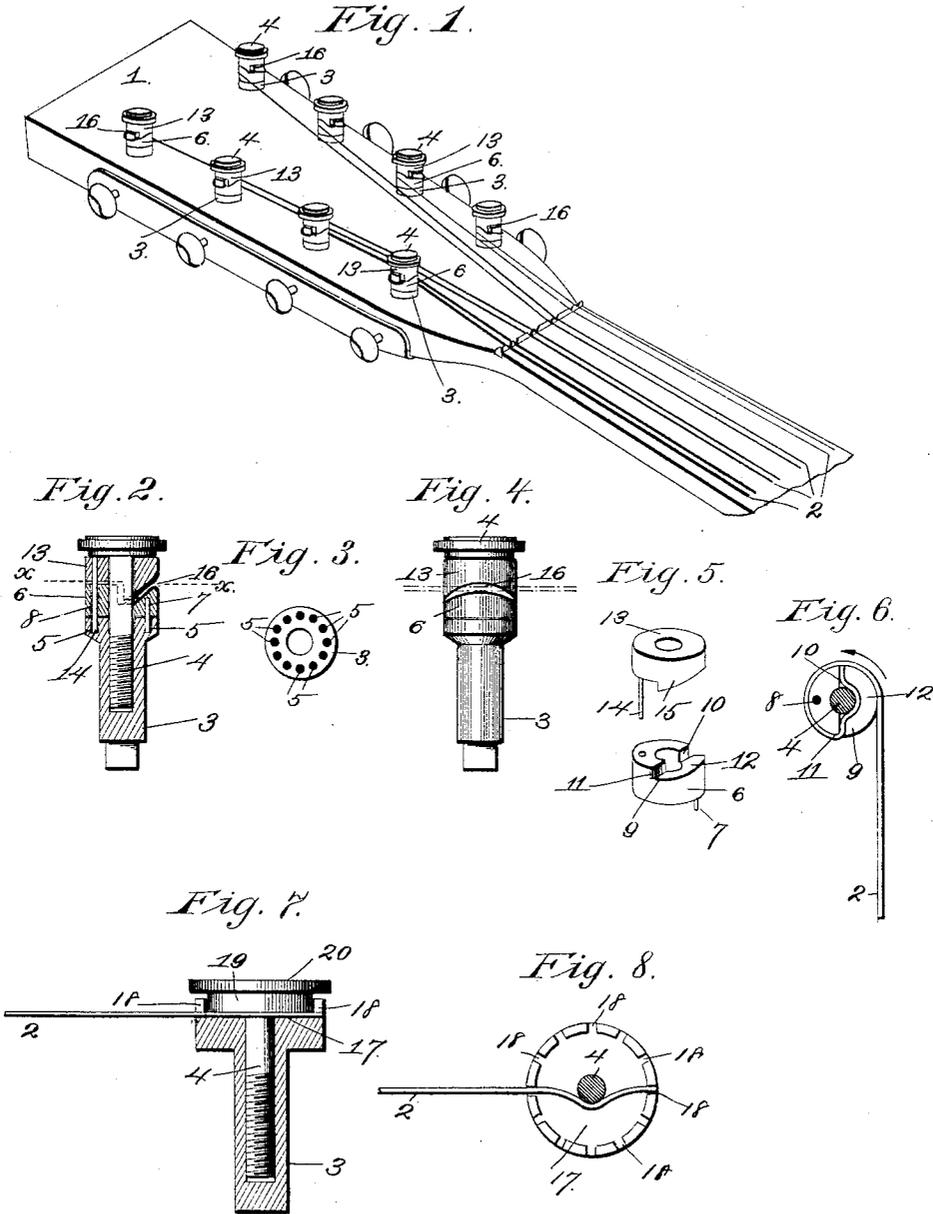


(No Model.)

H. W. HAUFER & J. O. LOVE.
STRING CLAMP FOR MUSICAL INSTRUMENTS.

No. 534,063.

Patented Feb 12, 1895.



Witnesses.

F. G. Fischer
Chas. Storpa.

Inventors:

H. W. Hauger
and J. O. Love

By *Higdon & Higdon* Attys.

UNITED STATES PATENT OFFICE.

HOWARD W. HAFER AND JESSE O. LOVE, OF FORT SCOTT, KANSAS.

STRING-CLAMP FOR MUSICAL INSTRUMENTS.

SPECIFICATION forming part of Letters Patent No. 534,063, dated February 12, 1895.

Application filed May 11, 1894. Serial No. 510,837. (No model.)

To all whom it may concern:

Be it known that we, HOWARD W. HAFER and JESSE O. LOVE, of Fort Scott, Bourbon county, Kansas, have invented certain new and useful Improvements in String-Clamps for Musical Instruments, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part thereof.

Our invention relates to string-clamps for musical instruments, and has for its objects to produce a clamp-post of such construction that the string may be secured thereto without the necessity of threading it by passing the end through an aperture; to produce a clamp-post which will effectually prevent any slipping or twisting of the string after it is once secured, and which is easy of manipulation, of attractive appearance, and simple, strong, durable, and inexpensive of construction.

With these objects in view, the invention consists in certain peculiar and novel features of construction and combinations of parts, as will be hereinafter described and claimed.

In order that the invention may be fully understood, we will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1. is a perspective view of a mandolin-head provided with clamp-posts embodying our invention. Fig. 2. is a vertical sectional view on an enlarged scale of one of said clamp-posts. Fig. 3. is a top plan view of the lower portion of said clamp-post. Fig. 4. is a side elevation of said clamp-post, to show clearly the mouth wherein the string is inserted when about to be secured to the post. Fig. 5. is a detail perspective view detached of the rotatable collars, forming a part of said clamp-post. Fig. 6. is a horizontal sectional view taken on the line $x-x$ of Fig. 2, and showing a string secured in operative position thereto. Fig. 7. is a vertical sectional view of a modified form of the clamp-post, and Fig. 8. is a horizontal sectional view of the same.

In the said drawings, 1 designates the head of a mandolin, and 2 the strings thereof.

3 designates the clamp-post, which is mounted in the head 1, and is adapted, through intermediate mechanism, which forms no part of our invention, to be rotated to tension the string of the instrument secured to the post, and this post 3 is internally screw-

threaded to receive the screw 4, and is also provided in its upper end with a series of vertical recesses or holes 5, which are arranged concentrically around said screw.

6 designates a collar, which is diametrically equal in size to the upper end of the post 3, and is mounted thereon, and also rotatably upon the non-threaded neck of the screw 4, and this collar is provided with a depending pin 7, which engages one or another of the recesses or holes 5, and diametrically opposite the pin 7, is provided with a vertical hole or aperture 8. The said collar is also provided with an approximately V-shaped notch 9, in its upper side, which is preferably formed above the depending pin 7; the inner side of said notch forming an abrupt shoulder 10, which at its near-end is rounded as shown at 11, and said shoulder extends diametrically of the collar, and the outer side of said notch preferably forms the inclined way 12.

A collar 13, diametrically of equal size to the collar 6, is provided with a vertically depending pin 14, which, extending through the hole or aperture 8, of the collar 6, engages the opening 5 in the post 3, registering with said hole or aperture 8, and this collar is provided with a depending and approximately V-shaped lug 15, which fits within the correspondingly-shaped notch 9 of the collar 6, and the upper end of the inclined way 12 of the lower collar, and the upper end of the inclined side forming the lug 15 of the upper collar, are preferably beveled or rounded to form the flaring mouth 16.

The operation is as follows: The post in its inoperative position has its flaring mouth arranged inwardly and extending longitudinally of the mandolin-head. The screw 4 is now operated to allow the upper collar 13 to be raised sufficiently to allow the string 2, near its end, to be moved laterally into the flaring mouth 16 and forced down the inclined way until it comes against the neck of the screw 4, and bends around the same at either side, and bears against the abrupt shoulder 10. The screw is now operated in the reverse direction, to force the upper collar firmly down upon the lower collar so that it shall be held rigidly in the position described. The post is now rotated in the direction of the arrow, Fig. 6, and the string tensioned until the desired pitch is obtained. In this operation, it will be seen, that the string bends around the

rounded end of the shoulder 10, and thereby abrasion with sharp or rough corners being avoided, the life of the string is lengthened. Should it be necessary to replace the string with another, it will not be necessary to rotate the entire post back to its original position, as by loosening the screw the collars may be raised vertically until the pins 7 and 14 become disengaged from the recesses 5, and then by rotating said collar in the reverse direction to that indicated by the arrow, Fig. 6, they may be moved back to their original position, or may be adjusted to any other position by allowing the pins to engage the required recesses of the concentric series 5.

Referring to Figs. 7 and 8, 3 designates a clamp-post, which is internally threaded to receive the screw 4, and this post 3 is recessed in its upper end at 17, and projecting from the upper end of said post is a series of projections which are a suitable distance apart, to form the radial notches or recesses 18, and fitting snugly into the recess 17, is the circular shoulder 19, which depends from the head 20 of said screw, and said head flanges over and closes the upper end of said notches when in operative position. To secure a string to this clamp-post, the screw is operated until the bottom of the shoulder is above the upper end of the recesses 18. The string is then inserted laterally below said collar, until it comes in contact with and bends around the neck of the screw, and is then moved vertically downward into the diametrically opposite recesses 18. The screw is now operated until the collar 19 moves down upon and tightly clamps the string in position, as shown clearly in Fig. 7.

From the above description, it will be apparent that we have produced a string clamp for musical instruments, which obviates the necessity of threading the end through an opening, as is done with posts of the ordinary construction, and which is difficult and tedious at times to do, because of the crookedness of the string itself, and because when the string is once secured over the bridge one cannot manipulate the free end of the string as freely as is desirable. It will furthermore be apparent that we have produced a string-clamp which may be manipulated easily and expeditiously, and to which the string may be secured either in light or semi-darkness, and which is simple, strong, durable, and inexpensive of construction.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a string clamp for musical instruments, the combination with a clamp-post, a collar carried thereby, and notched in its upper side, and a screw engaging internal threads formed in said post, of a second collar mounted upon said screw and first-mentioned collar and having a projection engaging the notch in the first-mentioned collar and clamping the string therein, substantially as set forth.

2. In a string clamp for musical instruments, the combination with a rotatable post which is internally threaded and provided with a circular series of recesses, and a screw engaging said internal threads, of a collar rotatably mounted upon said screw and upon said post, and having a vertical aperture and a recess in its upper side, and a collar also rotatably mounted upon said screw and said first-mentioned collar, and having a projection engaging the recess of said collar, and having a pin projecting through the aperture of said collar and engaging one of the recesses of the post, substantially as set forth.

3. In a string clamp for musical instruments, the combination with a rotatable post which is internally threaded and provided with a circular series of recesses, and a screw engaging said internal threads, of a collar rotatably mounted upon said screw and resting upon said post, a pin projecting from said collar and engaging one of the circular series of apertures, and a vertical aperture in said collar registering with another of the recesses of the post, and a notch formed in the upper side of the collar having an abrupt inner wall and an inclined outer wall, and a second collar rotatably mounted upon the screw and resting upon the first-mentioned collar, and having a projection engaging the correspondingly-shaped notch of the first-mentioned collar, the inclined surface of said projection, and the inclined wall of said notch being beveled at their outer ends to form a flaring mouth to receive the string, and a pin depending from the upper collar and projecting through the aperture of the first-mentioned collar and into the registering recess of the post, substantially as set forth.

4. In a string clamp for musical instruments, the combination with a rotatable post internally screw-threaded, and a pair of clutched collars mounted thereon, of a screw extending through said collars and engaging said internal threads, and having its head clamped tightly down upon said collars, substantially as set forth.

5. In a string-clamp for musical instruments, the combination with a rotatable post, a screw adjustably mounted therein, and a collar rotatably mounted upon the screw and resting upon the post, and having in its upper side an approximately V-shaped notch to form an inclined way and an abrupt shoulder, which is rounded at its near-end, and a second collar clamped down upon the first-mentioned collar, and having an approximately V-shaped projection fitting within said collar, substantially as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

HOWARD W. HAFFER.
JESSE O. LOVE.

Witnesses:

C. E. CORY,
W. T. SEAGRAVE.