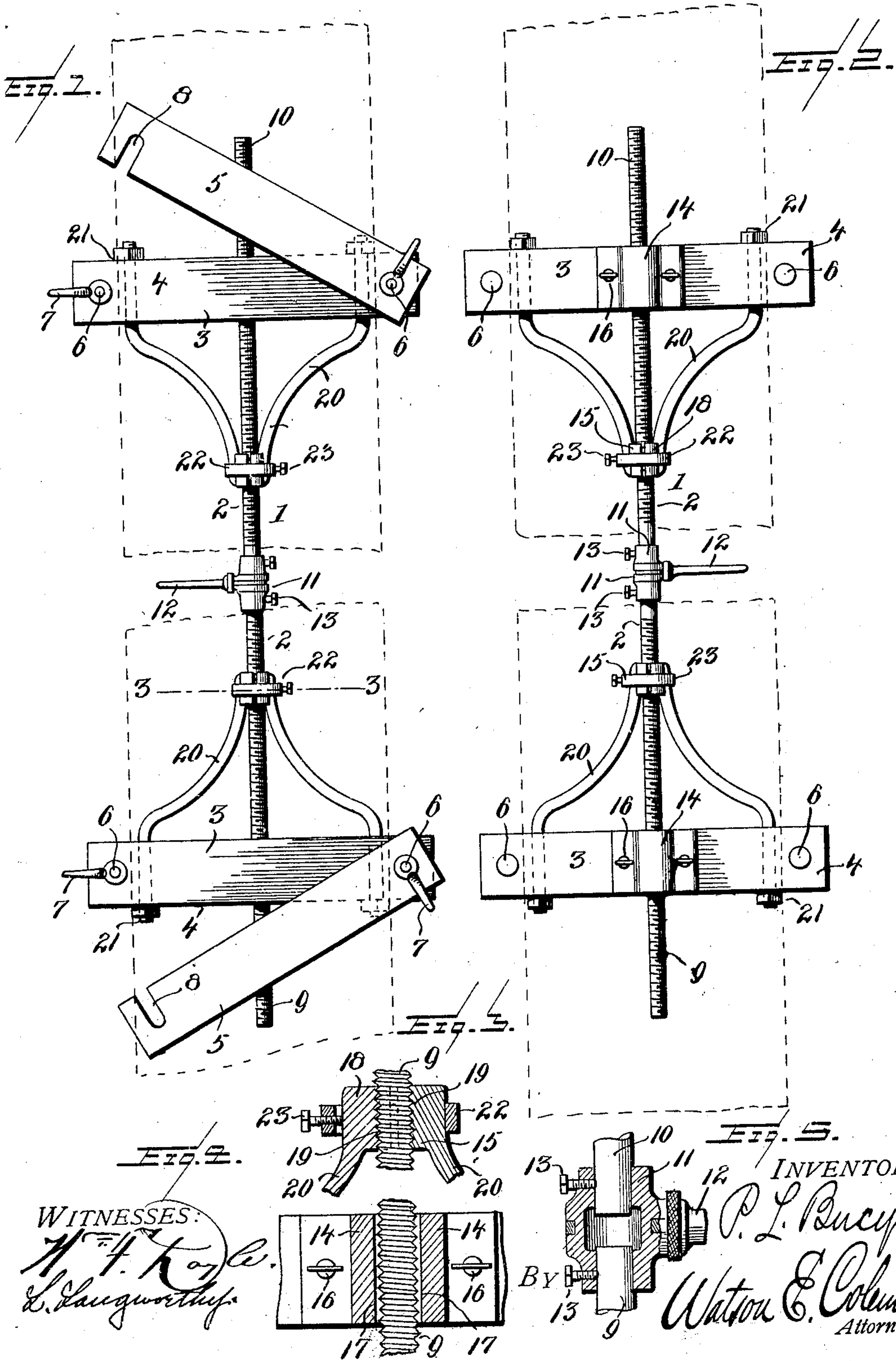


No. 836,918.

PATENTED NOV. 27, 1906.

P. L. BUCY.  
BELT TIGHTENER.

APPLICATION FILED MAR. 12, 1906.





# UNITED STATES PATENT OFFICE.

PERL L. BUCY, OF BARTLESVILLE, INDIAN TERRITORY.

## BELT-TIGHTENER.

No. 836,918.

Specification of Letters Patent.

Patented Nov. 27, 1906.

Application filed March 12, 1906. Serial No. 305,709.

*To all whom it may concern:*

Be it known that I, PERL L. BUCY, a citizen of the United States, residing at Bartlesville, in District 3, Indian Territory, have invented certain new and useful Improvements in Belt-Tighteners, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to devices for stretching belts and the like to permit their ends to be laced together or otherwise united and for other purposes.

One object of the invention is to provide a device of this character which will be of simple, durable, and comparatively inexpensive construction and by means of which a belt may be quickly stretched.

Another object of the invention is to provide a device of this character which may be quickly and easily applied to and removed from a belt of any size without the use of a wrench or other tools and which when not in use may be readily taken apart to permit it to be placed in a small tool-chest or the like.

Other objects and advantages of my invention, as well as the structural features by means of which these objects are attained, will be made clear by an examination of the specification, taken in connection with the accompanying drawings, in which the same reference-numerals indicate corresponding parts throughout the several views, and in which—

Figure 1 is a side view of my improved belt-stretcher, showing its clamps open to receive the ends of a belt. Fig. 2 is a similar view of the opposite side of the belt-stretcher and showing the clamps closed. Fig. 3 is a detail transverse sectional view taken on the plane indicated by the line 3 3 in Fig. 1. Figs. 4 and 5 are details of parts.

Referring to the drawings by numerals, 1 denotes my improved belt-stretcher, which comprises a right-and-left screw 2, having upon its opposite ends belt-engaging clamps 3. Each of the latter consists of two members 4 5, between which one end of the belt (indicated in dotted lines,) is clamped. While these members may be of any desired form and construction, according to the character of the belt or the like which they engage, I preferably make them as shown and clamp them upon the belt by screw-bolts 6, which have wing-nuts 7 upon their threaded ends. One of the bolts 6 of each clamp passes through a slot 8 in the member 5, so that the

latter is pivoted upon the other bolt 6 and may be swung at any angle with respect to the member 4 to permit of the ready insertion of the belt between them. At the same time the wing-nuts 7 permit them to be quickly separated or adjusted toward and from each other to receive a belt of any thickness or shape between them. The right-and-left screw 2 is preferably composed of two rods 9 10, which have their inner ends detachably secured in a head or union 11, carrying an operating-lever 12, and their outer ends oppositely screw-threaded and carrying the clamps 3. As shown, the head 11 and lever 12 are in the form of an integral casting, which is bored or formed with pockets to receive the inner ends of the screw-rods 9 10, the latter being removably secured therein by set-screws 13. This construction rigidly connects the two screw-rods to permit them to be rotated to draw the clamps, and hence the ends of the belt, toward each other and at the same time permits them to be separated, so that the device may be placed in a small tool-chest or the like. Each of the screw-rods 9 10 extends through a guide 14 and a nut 15. The guide 14 is secured by set-screws 16 upon the center of one side of the clamp member 4 and is formed with a bore or opening 17, through which one of the screw-rods is adapted to freely slide. The nut 15 is composed of two half-sections 18, which are internally screw-threaded, as at 19, to engage the screw-threads on one of the rods 9 10 and which are secured to or formed upon the outer ends of spring-arms 20. The latter are curved and have their opposite ends secured in the clamp member 4, as shown at 21. The resiliency of the arms 20 causes the nut-sections 18 to spring apart and out of engagement with the threads on the screw-rods, so that the latter may be slid freely through them and quickly adjusted and in order to retain them in engagement with the threads on the screw-rods, so that the latter when rotated will move the clamps toward or from each other, I provide a surrounding ring or band 22, in which is arranged a set-screw 23.

It will be seen upon reference to Fig. 3 of the drawings that when the set-screw 23 is loosened the jaws or nut-sections 18 will spring apart and disengage the threads on the screw-rod, and when it is tightened it will move them together and into mesh with the threads on said rod, so that when the latter



is rotated the nut, and hence the clamp, will move longitudinally upon it. The nuts 15 and the guides 14 hold the screw 2 spaced from the outer faces of the members 4 of the clamps, so that the screw will not interfere with the lacing or uniting of the ends of the belt.

The construction, use, and advantages of the invention will be readily understood from the foregoing description, taken in connection with the accompanying drawings. By loosening the wing-nuts 7 the clamp members 5 may be swung open to receive the ends of the belt, and the latter may be then quickly clamped between the members 4 5. When the device is thus attached to the ends of the belt and the lever 12 is rotated in the proper direction, the nuts 15 will travel inwardly on the rods 9 10 or toward each other to stretch the belt, as will be readily understood. The provision of the guides 14 and the disposition of the nuts 15 on the curved arms 20 hold the clamp members at right angles to the screw and prevents the belt from slipping and creeping. The provision of the various detachable connections permits the parts to be readily separated, so that they may be placed in a very small space.

Various changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described my said invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A belt-stretcher comprising a right-and-left screw, belt-clamps, guides upon the latter for the ends of said screw, and nuts engaged with the ends of said screw and secured to and spaced from said clamps for the purpose set forth.

2. A belt-stretcher comprising a right-and-left screw, belt-clamps, and sectional nuts upon said clamps to receive the ends of said screw.

3. A belt-stretcher comprising a right-and-left screw, belt-clamps, arms upon said clamps, nut-sections upon said arms, and means for holding the sections of said nuts in engagement with the ends of said screw.

4. A belt-stretcher comprising a right-and-left screw, belt-clamps, guides upon the latter for the ends of said screw, resilient arms upon said clamps, nut-sections carried by the ends of said arms, and means for holding said nut-sections in engagement with the ends of said screw.

5. A belt-stretcher comprising right-and-left screw, belt-clamps, guides upon the latter for the ends of said screw, resilient arms upon said clamps, nut-sections carried by the ends of said arms, clamping-bands surrounding the nut-sections on each end of said screw, and set-screws in said bands.

6. A belt-stretcher comprising a lever having a head formed with oppositely-disposed sockets, oppositely-screw-threaded rods removably secured in said sockets, and belt-clamps upon said rods.

7. A device of the character described comprising a screw, a clamp consisting of adjustable, pivotally-connected members, a guide upon one of said members for said screw, resilient arms upon said member, nut-sections upon said arms, and means for holding said nut-sections in engagement with the threads of said screw.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

PERL L. BUCY.

Witnesses:

HARVEY A. BEASLEY,  
HENRY H. MONTGOMERY.