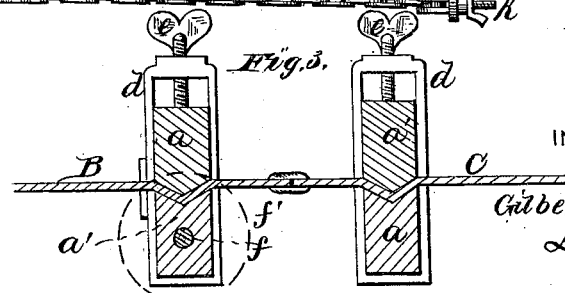
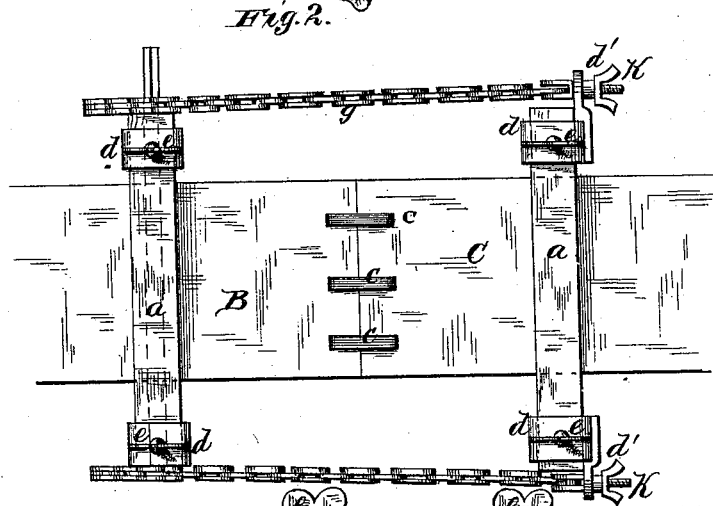
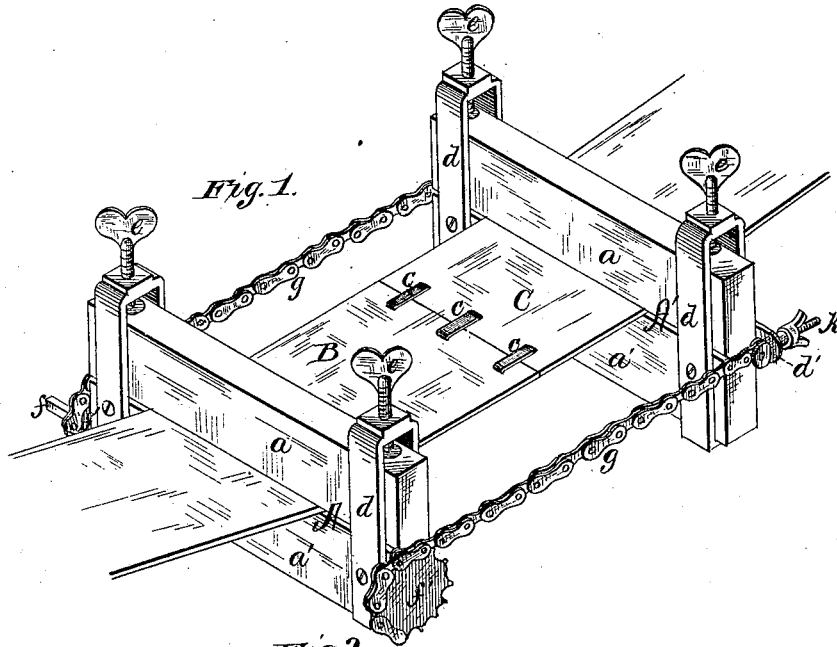


G. GREENE.  
Belt-Tightener.

No. 196,222.

Patented Oct. 16. 1877.



WITNESSES  
Frank L. Curaud  
P. M. Nettle.

INVENTOR  
Gilbert Greene.  
L. Deane  
ATTORNEY.

# UNITED STATES PATENT OFFICE.

GILBERT GREENE, OF NEW LOTS, NEW YORK.

## IMPROVEMENT IN BELT-TIGHTENERS.

Specification forming part of Letters Patent No. **196,222**, dated October 16, 1877; application filed October 1, 1877.

*To all whom it may concern:*

Be it known that I, GILBERT GREENE, of New Lots, in the county of Kings and State of New York, have invented certain new and useful Improvements in Belt-Tighteners, of which the following is a specification:

Figure 1 is a perspective view, showing this device as applied in use upon belting. Fig. 2 is a top-plan view of the device shown in Fig. 1. Fig. 3 is a vertical cross-section of the two clamps, showing also the belt between the bars of each; also the shaft on which the sprocket-wheels are fixed.

The object of the present invention is to produce an improvement in those devices used for holding or clamping the ends of bands or belting in fitting or repairing the same; and it consists, more particularly, in the peculiar construction of each clamp through which an end of the belt is designed to pass, whereby any slipping or other displacement can be easily prevented, and in the means adopted for holding said parts together, and for tightening or loosening the same, and in the devices used for connecting together the clamps when placed for use on the ends of the belting, whereby they can be drawn evenly, firmly, and strongly toward each other, all as will now be more in detail set out and explained.

In the accompanying drawings, A and A' denote clamps, the one of which, A, is applied on the end or near the end of the band or belt B, while the other, A', is in like manner applied on the belt or band C. These belt ends, as now shown, abut each other, and are secured by thong *c*. Each of said clamps is composed of an upper bar, *a*, and an under bar, *a'*. The tongued lower edge of the upper is adapted to fit into the grooved upper edge of the under bar. The bars of each clamp are held in frames or straps *d*. These are securely fastened, one at each end upon the under bar *a'*, which bar is thereby held rigidly in the frame, while the ends of the bar *a* can move up or down in the frame, according as the set-screws *e*, which pass down through the top part of the frame, are screwed in or out. By these motions of the screws, since their ends fit in or upon the upper surface of the bars *a*, the said bars can be pressed tightly upon *a* in each clamp, and thus securely bind the ends

of the bands or belts B and C at any desired point, and prevent any slipping or displacement of the same.

Through the bar *a'* of the clamp A' passes the shaft *f*, having at each end a sprocket-wheel, *f'*; but the shaft may be outside of the bar *a*, and, also, each sprocket-wheel may have an independent shaft, so as to be worked separately from the other. Upon the periphery of these wheels are fitted the ends of the link chains *g g*, the opposite ends being secured to the frame or strap *d* in the clamp A, so as to be easily attached or detached—now shown as accomplished by means of the screw end *k* of the chain, which passes through the eye *d'*, extending out from the frame, and carrying the set-screw *k* on its thread. If desired at any time, either or both of said chains can easily be let out or drawn in to a little extent by operating the one or the other or both of said set-screws.

The end of the shaft *f* is fitted to take a key, wrench, wheel, or any convenient device for turning it, and, being so turned, will operate to draw together the two clamps, and the ends of the belting likewise, by means of said link-chain, or by reverse motion will allow them to be drawn apart.

The inner faces of the tongue and groove above described may be corrugated or roughened, if desired, and the wrench or means used for tightening can be varied at will.

As thus made and operated, the uses and advantages of the said invention will be readily understood. By this device is afforded a strong, simple, and secure means for holding the ends of belts, bands, and all like or analogous articles when fitting or repairing or otherwise working on them, be they new or old. This device will not in any way endanger or damage the band or belting, as aforesaid, nor can it escape from the clamp when the clamp has been once properly adjusted or secured upon the same, except by loosening the screws.

Having thus described my invention, what I consider new, and desire to be protected by Letters Patent, is—

1. The clamp herein described, composed of an upper bar, *a*, having a tongued or rounded lower edge, and bar *a'*, having a grooved up-

per edge, and both fitted and operated in frame *d*, substantially as and for the purposes set forth.

2. The combination of the clamp A, composed of frame *d*, with means for attaching at one end chains *g*, and carrying bars *a* and *a'*, and operating as described, with clamp A', similarly constructed, and shaft *f* and sprocket-wheels *f'*, to which the opposite ends of said chains may be fixed, substantially as described.

In testimony that I do claim the foregoing as my own I do affix my signature in presence of two witnesses.

GILBERT GREENE.

Witnesses:

LILLIAN CARTER,

GEORGE F. BOND.