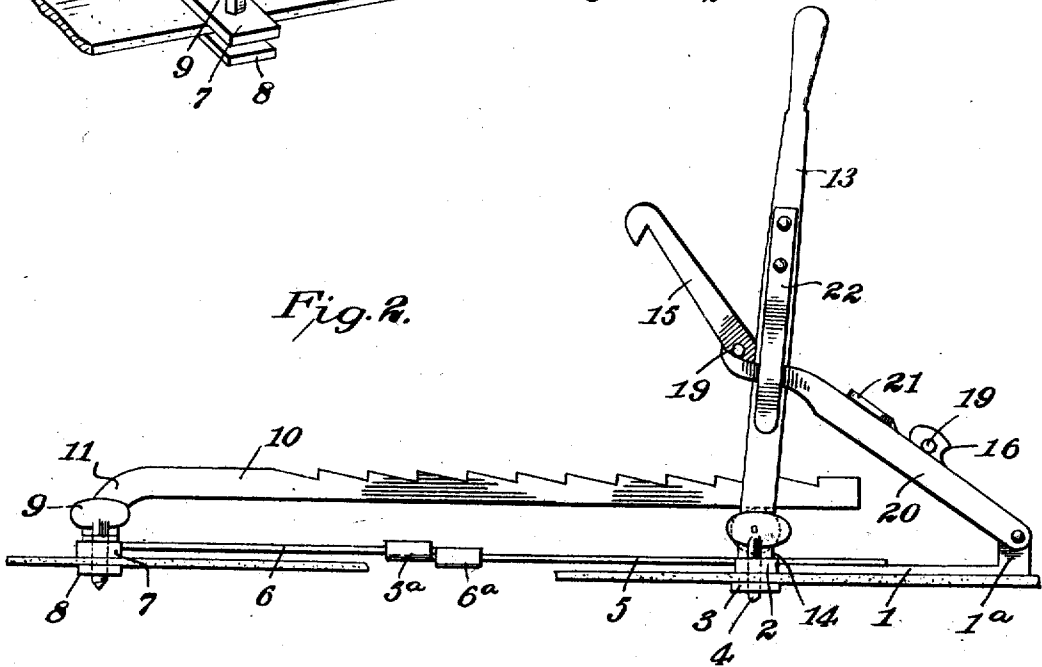
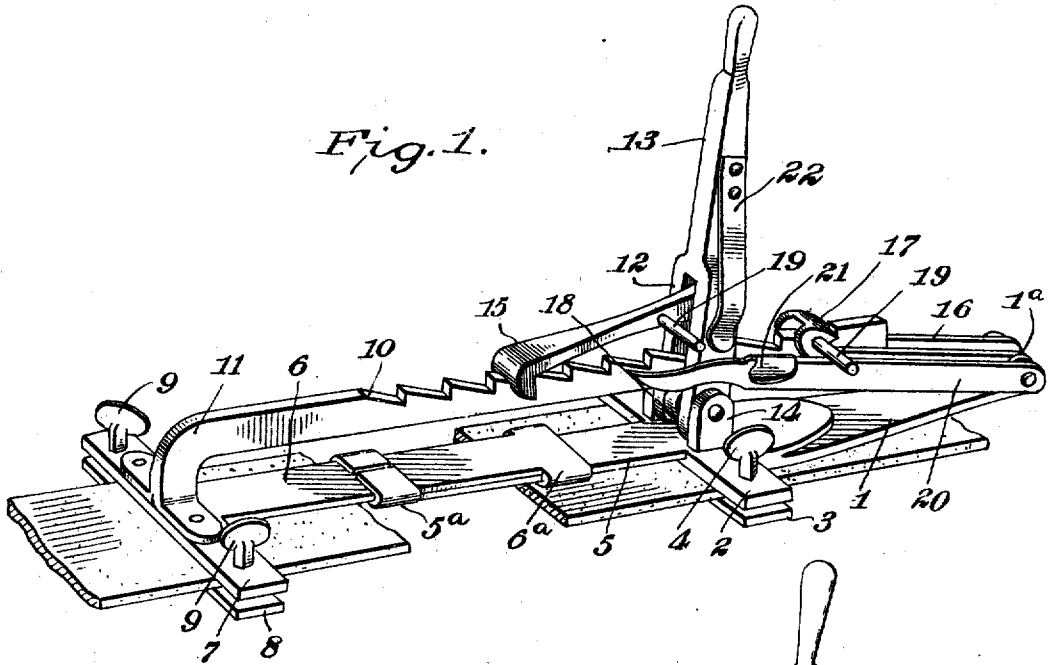


M. J. STAUFFER.
BELT TIGHTENING DEVICE.
APPLICATION FILED MAR. 29, 1909.

948,078.

Patented Feb. 1, 1910.



Inventor
M. J. Stauffer,

Witnesses
W. R. Woodson.
J. M. Fullin

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Attorneys.

UNITED STATES PATENT OFFICE.

MILTON J. STAUFFER, OF RINGTOWN, PENNSYLVANIA.

BELT-TIGHTENING DEVICE.

948,078.

Specification of Letters Patent.

Patented Feb. 1, 1910.

Application filed March 29, 1909. Serial No. 486,380.

To all whom it may concern:

Be it known that I, MILTON J. STAUFFER, citizen of the United States, residing at Ringtown, in the county of Schuylkill and State of Pennsylvania, have invented certain new and useful Improvements in Belt-Tightening Devices, of which the following is a specification.

The object of this invention is an improved construction of tightening device for driving belts or bands which is composed of comparatively few and simple parts that may be easily assembled and which will be efficient in operation to quickly draw together the ends of the belt and hold them until they are fastened, and the invention consists in certain constructions, arrangements and combinations of the parts that I shall hereinafter fully describe and claim.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings in which:

Figure 1 is a perspective view of a belt tightening device constructed in accordance with my invention; and, Fig. 2 is a side elevation thereof with the parts extended.

Corresponding and like parts are referred to in the following description and indicated in all the views of the accompanying drawings by the same reference characters.

The base plate 1 of my improved tightening device is laterally widened at one end to form one member of a relatively stationary clamp 2 with which a clamping bar 3 coacts, and clamping screws 4 work through these parts so as to tightly secure the device to one end of a belt. The base plate 1 is extended beyond the clamp member 2 to form a longitudinally extending tongue 5 which is formed at its extremities with side flanges 5^a taking around the side edges of a companion tongue 6, the latter in turn being formed with flanges 6^a engaging the tongue 5 so as to hold the two flanges together for a sliding movement of one relative to the other. The tongue 6 is formed at one end with a relatively movable clamp member 7 with which a clamping bar 8 coacts, screws 9 working through these last named parts so as to engage the other end of the belt preparatory to tightening. The screws 4 and 9 are preferably thumb screws as shown and are preferably formed with square or other many sided heads so that

wrenches or similar tools may be applied to the screws to tighten them.

A notched bar 10 is curved at one end as indicated at 11 and is secured at such end to the clamp member 7, the free end of the tightening bar 10 passing through the bifurcated end 12 of a hand lever 13 which is fulcrumed on and between the upstanding ears 14 formed on the clamp member 2. The hand lever 13 carries a preferably gravity actuated drag pawl 15 which is formed at one end to straddle and engage the notched edge of the tightening bar 10.

16 designates a detent which is formed of two members spaced from each other as shown, and arranged parallel, and pivoted between the ears 1^a that are formed on the outer extremity of the base plate 1. The cross bar 17 of the detent 16 is designed to engage the notches of the bar 10 so as to hold the same at any degree of adjustment. Preferably a roller 18 is journaled in the pivoted end of the hand lever 13, the notched bar riding upon the roller.

The drag pawl 15 and detent 16 are both formed with lateral projections or pins 19 extending parallel to each other, and in the same direction, said pins being designed for engagement by a releasing arm 20 which is pivoted to one of the ears 1^a of the base plate 1. This releasing arm is formed with a laterally extending finger piece 21 by which it may be moved. When the releasing arm is moved it will push upwardly on the pins and release both the drag pawl and detent from the notched bar 10, and in order to hold the parts in released position, the hand lever 13 carries a spring catch 22 which extends downwardly therefrom and which is designed to engage the releasing arm 20 when the latter is pushed upwardly between the spring catch and the adjacent side of the hand lever.

In the practical use of my improved belt tightening device, the hand lever 13 is raised to assume a perpendicular position on the base plate 1, and the releasing arm 20 is then swung upwardly to disengage the pawl and detent from the notched bar 10, the parts being held in this position while the notched bar is free so that the device may be extended. The clamps are then secured to the ends of the belt and the releasing arm is swung toward the base plate so as to permit the drag pawl and detent to engage the

notched bar 10, whereupon it is obvious that a back and forth or oscillating movement of the hand lever will effect an intermittent movement to the notched bar and there-
 5 by remove the relatively movable clamp toward the other clamp and draw the two ends of the belt together until the latter is sufficiently taut, whereupon the ends are laced, and my improved device is detached
 10 from the belt.

It is evident that the device may be easily manufactured, and that it will be durable in construction as well as efficient in operation, the notched bar being guided in its move-
 15 ment by both the hand lever 13 and the detent 16 which straddle the bar. The roller 18 serves to make the operation easy, and the spring catch 22 as it holds the releasing arm in a position to maintain the pawl and
 20 detent out of engagement with the notched bar so long as desired, assists in rendering the extending movement of the device one that may be very easily accomplished.

Having thus described the invention, what
 25 is claimed as new is:—

1. A belt tightening device comprising a base plate, a clamp secured to said base plate, the base plate being formed with a tongue
 30 extending beyond the clamp, another clamp having a tongue, the two tongues having a movable connection with each other, a notched bar carried by one of the clamps, a lever fulcrumed on the other clamp, and
 35 a pawl carried by said lever and engaging said bar.

2. A belt tightening device comprising a base plate, a clamp secured to said base plate, the base plate being extended beyond the clamp to form a longitudinally extend-
 40 ing tongue, another tongue, a clamp secured to said last named tongue, each tongue being provided with flanges extending around the other tongue whereby to connect the two tongues together for a sliding movement of
 45 one relative to the other, a notched bar carried by one of said clamps, a lever carried by the other clamp and a pawl carried by said lever and engaging said bar.

3. A belt tightening device comprising
 50 clamps, a movable connection between said clamps, a tightening bar connected to one of said clamps, a lever fulcrumed on the

other clamp, a drag pawl carried by said lever and engaging the bar to draw one clamp toward the other, and a releasing
 55 arm designed to engage the pawl and carry it out of engagement with the tightening bar.

4. A belt tightening device comprising clamps, a movable connection between said
 60 clamps, a notched bar connected to one of said clamps, a lever fulcrumed on the other clamp, a pawl carried by said lever and designed to engage said notched bar, a detent also arranged to engage said bar and a re-
 65 leasing arm designed to move said pawl and detent out of engagement with said bar.

5. A belt tightening device, comprising clamps, a notched bar connected to one of
 70 said clamps, a lever carried by the other clamp, a pawl carried by said lever and designed to engage the bar, a detent also arranged to engage the bar, the detent and the pawl both being provided with a pin,
 75 and a releasing arm arranged to engage said pins to release the pawl and detent from the bar.

6. A belt tightening device comprising clamps, a bar connected with one of said
 80 clamps, a lever fulcrumed on the other clamp, a pawl carried by said lever and arranged to engage said bar, a releasing arm adapted to move said pawl out of engage-
 85 ment with the bar, and a catch carried by said lever and arranged to engage said releasing arm and hold the pawl in released position.

7. A belt tightening device comprising a base plate, a clamp secured to said base plate, another clamp, a movable connection
 90 with said clamps, a tightening bar secured to said last named clamp, a lever fulcrumed on the other clamp, a pawl carried by said lever and engaging said bar, said lever being formed with a bifurcated portion
 95 through which said lever extends, and a detent carried by said base plate and engaging the bar.

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

MILTON J. STAUFFER. [L. S.]

Witnesses:

A. J. MILLICHAP,
 JOHN DUNLAP.