

R. BUCKINGHAM.
BELT CUTTER.
APPLICATION FILED JULY 10, 1919.

1,344,169.

Patented June 22, 1920.
2 SHEETS—SHEET 1.

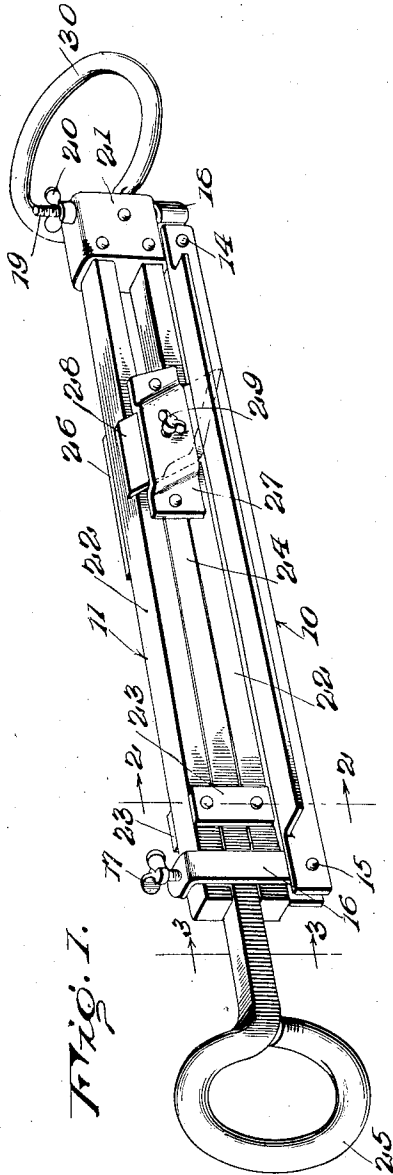


Fig. 1.

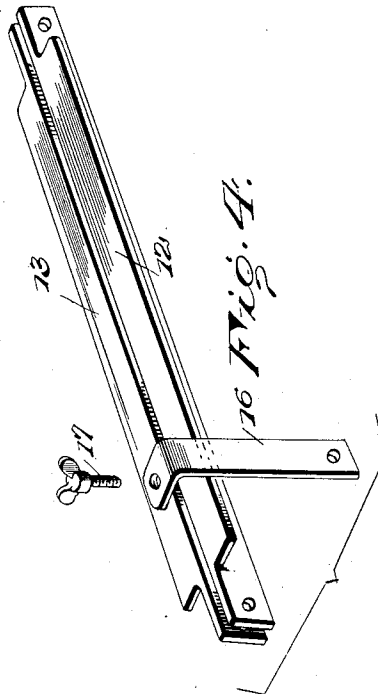


Fig. 2.

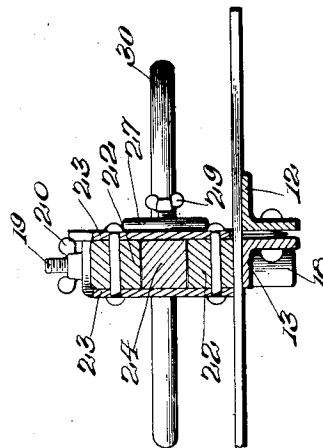
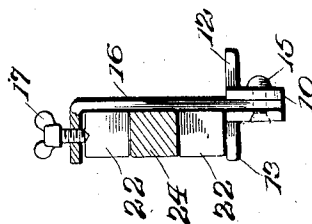


Fig. 3.

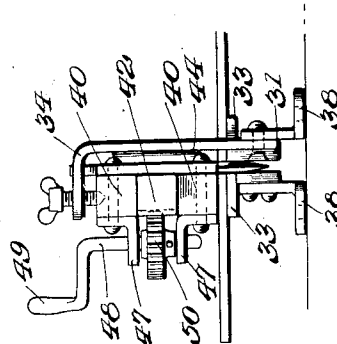
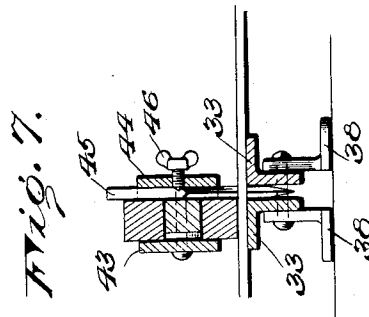
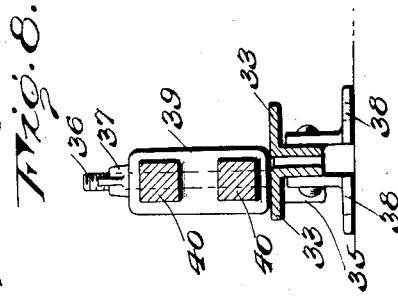
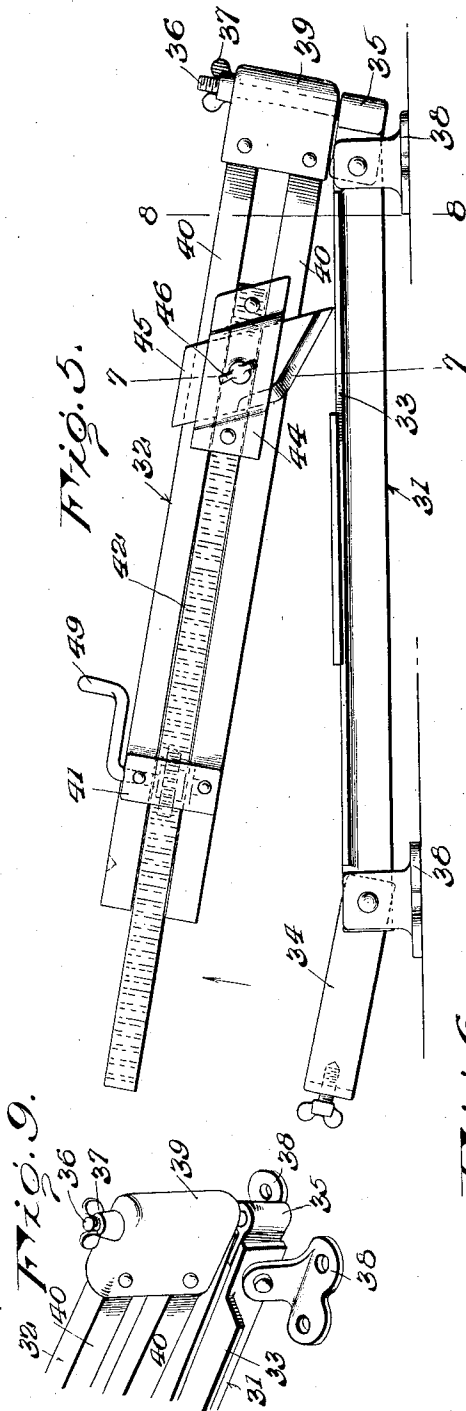


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UNITED STATES PATENT OFFICE.

ROBERT BUCKINGHAM, OF HUNTINGTON, INDIANA.

BELT-CUTTER.

1,344,169.

Specification of Letters Patent.

Patented June 22, 1920.

Application filed July 10, 1919. Serial No. 309,960.

To all whom it may concern:

Be it known that I, ROBERT BUCKINGHAM, a citizen of the United States, residing at Huntington, in the county of Huntington and State of Indiana, have invented certain new and useful Improvements in Belt-Cutters, of which the following is a specification.

This invention relates to an improved belt cutter and has as its primary object to provide a device of this character for squaring the ends of a broken belt, severing a belt so that it may be shortened, and the like.

The invention has as a further object to provide a device of this character employing coacting pivotally connected cutter frame elements one of which will receive and support the work and the other of which will slidably carry the cutting knife employed so that said elements may be swung together for clamping a belt therebetween when the knife may then be slidably moved upon its supporting element for severing the belt.

And the invention has a still further object to provide a construction wherein the frame elements may be rigidly locked together so that separation of the elements will be prevented while the cutting knife is being slidably shifted.

Other and incidental objects will appear hereinafter. In the drawings:

Figure 1 is a perspective view of my improved cutter,

Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1 and looking in the direction of the arrows,

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 1,

Fig. 4 is a perspective view showing the angle bars of one of the frame elements of the cutter in detail as well as the clamp employed for locking the coacting frame elements in abutting relation,

Fig. 5 is a side elevation showing a modified form of the invention,

Fig. 6 is an end elevation of the modified structure,

Fig. 7 is a transverse sectional view taken on the line 7—7 of Fig. 5,

Fig. 8 is a view similar to Fig. 7 taken on the line 8—8 of Fig. 5, and

Fig. 9 is a fragmentary perspective view showing the pivotal connection between the coacting frame elements of the cutter as em-

ployed in the preferred form of the invention as well as the modified structure.

In its preferred construction, as shown in Figs. 1 to 4 inclusive of the drawings, my improved belt cutter includes coacting pivotally connected cutter frame elements indicated as a whole by the reference numerals 10 and 11 respectively. The frame element 10 is, as shown in detail in Fig. 4, formed of coacting angle plates 12 and 13 respectively. These angle plates are arranged with corresponding flanges thereof disposed in spaced parallel relation while opposite corresponding flanges of said plates project laterally and horizontally from the first mentioned flanges in opposite directions, the horizontal flanges being cut away at their ends. Connecting the plates at the forward ends thereof is a pivot bolt or other suitable fastening device 14. At their rear ends the plates are connected by a fastening upon which is pivotally mounted between the plates an arm 16 provided at its upper end with a laterally directed portion carrying a clamp screw 17. Pivotaly mounted upon the bolt 14 between the angle plates is a hinge member 18 with which is integrally formed an upstanding post 19 carrying a thumb nut 20.

The frame element 11 is swingingly connected with the element 10 by means of the hinge member 18. This frame element includes a head 21 provided in its rear end with spaced sockets in which are fitted parallel guide bars 22 secured within the sockets by spaced rivets or other suitable fastening devices. The head is further formed with an opening extending vertically therethrough and this opening freely receives the post 19 while the thumb nut 20 coacts with the head for adjustably connecting the frame element with the post. Secured to opposite sides of the guide bars adjacent their rear ends are spacing strips 23. Slidable between the guide bars is a knife bar 24 the rear end of which is formed with a handle 25. Connected to the inner end of said bar at one side thereof is a stop plate 26 while a keeper 27 is suitably connected to the opposite side of said bar, the plate and keeper coacting with the side faces of the guide bars 22 for directing the forward end portion of the knife bar between the guide bars. Removably fitted within the keeper 27 is a knife 28 held in adjusted po-

sition by a set-screw 29 threaded through the keeper to impinge against the knife. As particularly shown in Fig. 1, the knife is preferably provided with an inclined lower edge and the lower end portion of the knife is, as also shown in this figure, normally received between the angle bars 12 and 13. The angle bar 13 will thus provide a straight edge to coact with the knife. Suitably connected with the head 21 is a stirrup 30. As will now be readily understood, the clamp screw 17 may be released and the frame elements swung apart so that the belt material may, as suggested in Fig. 2, be inserted between the frame elements lying against the horizontal flanges of the element 10. The elements are then again swung together when the clamp screw 17 and thumb nut 20 are operated to firmly bind the belt between the elements. Consequently, a foot of the operator may then be engaged through the stirrup 30 when the handle 25 of the knife bar may be grasped and the knife bar pulled outwardly for causing the knife to sever the belt with a shearing cut. I accordingly provide a device which may be operated with ease and wherein a belt may, owing to the fact that the belt will be firmly clamped between the elements of the device, be severed with a square cut.

In Figs. 5 to 9 I have shown a slightly modified form of the invention particularly designed for heavy work. In this modification coacting frame elements 31 and 32 are employed. The frame elements comprise, as in the preferred construction, coacting angle bars 33 between the rear ends of which is swingingly mounted a clamp 34. Pivoted between the forward ends of the angle bars is a hinge member 35 corresponding to the hinge member 18 of the preferred construction and this hinge member 35 carries an upstanding integral post 36 upon which is threaded a thumb nut 37. Secured to the frame elements at the ends of the angle bars are brackets 38 designed to receive fastening devices by which the device may be secured upon a work bench. The frame element 32 comprises a head 39 as in the preferred construction and this head carries parallel guide bars 40 spaced apart adjacent their rear ends by a plate 41. The post 36 is loosely fitted through the head, as in the preferred construction, and the thumb nut 37 coacts with the head for adjustably connecting the pivoted element with the fixed element. Slidable between the guide bars is a knife bar 42, which, at its forward end, carries a stop plate 43 at one side thereof and a keeper 44 at its opposite side. Adjustable within the keeper is a knife 45 held by a set-screw 46 as in the preferred construction. Mounted upon the sides of the guide

bars 14 opposite the plate 41 are angle plates 47 through which is journaled a shaft 48 upon the upper end of which is formed a crank 49. Fixed to the shaft is a pinion 50 coacting with a suitable rack upon the adjacent side of the knife bar. Thus it will be seen that a belt may be placed between the frame elements when the screw of the clamp 34 and thumb nut 37 may be operated for securely binding the element 32 against the belt. The crank 49 may then be turned for shifting the knife bar to sever the belt.

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

1. A device of the character described including coacting frame elements pivotally connected to each other at one end to form work holding means, knife supporting means slidable longitudinally upon one of said elements, a knife carried by said means, and a clamp carried by one of said frame elements at the end remote from the pivot and swinging into engagement with the other element to secure the work in position, and a clamping screw for firmly fixing the clamp in position.

2. A device of the character described including coacting pivotally connected frame elements forming work holding means, one of said elements being formed of spaced parallel members, a knife bar slidable longitudinally upon the other of said elements and a knife carried by said bar and movable longitudinally between said members, a clamp carried by one of said frame elements and swinging into engagement with the other to secure the two together, and a clamping screw in said clamp to force the one element toward the other to securely lock the work therebetween.

3. A device of the character described including a frame formed of coacting pivotally connected frame elements, a stirrup connected with one end of the frame, a knife bar slidable longitudinally upon one of said elements and provided with a handle at the other end of the device from said stirrup whereby the direction of pull is away from said stirrup, and a knife carried by said bar.

4. A device of the character described including coacting frame elements, a hinge member swingingly connected to one end portion of one of said elements, means carried by said hinge member and supporting the other of said elements, means adjustable upon said first-mentioned means for clamping the elements together, a knife bar slidable longitudinally upon the latter element, and a knife carried by said bar.

5. A device of the character described including coacting pivotally connected frame elements forming work holding means, a

knife bar slidable longitudinally upon one of said elements, a knife carried by said bar, and rack and pinion means for moving said knife.

- 5 6. A device of the character described including coacting pivotally connected frame elements forming work holding means, a knife bar slidable longitudinally upon one of said elements, a knife carried by said
10 bar, rack and pinion means for moving said

knife, and a clamp carried by one of said frame elements and swinging into engagement with the other to lock the work in position.

In testimony whereof I affix my signature. 15

ROBERT BUCKINGHAM. [L. s.]

Witnesses:

W. A. ZELLER,
JOHN R. DAY.