(No Model.)

J. S. MURPHY.

BOLT CUTTER.

No. 551,686. Patented Dec. 17, 1895.

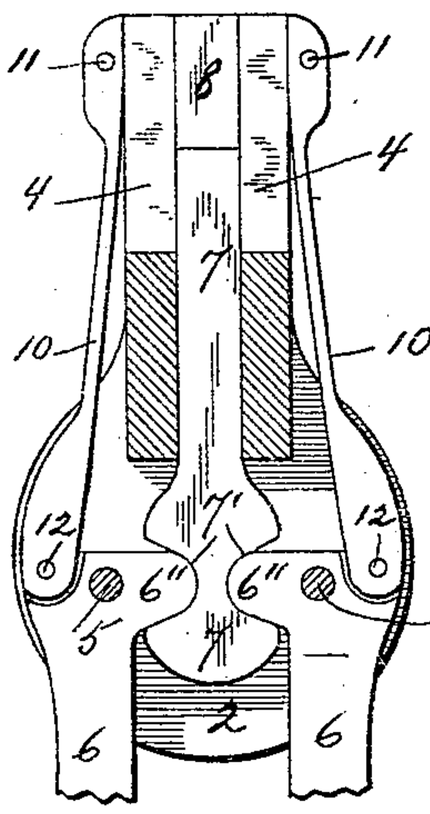
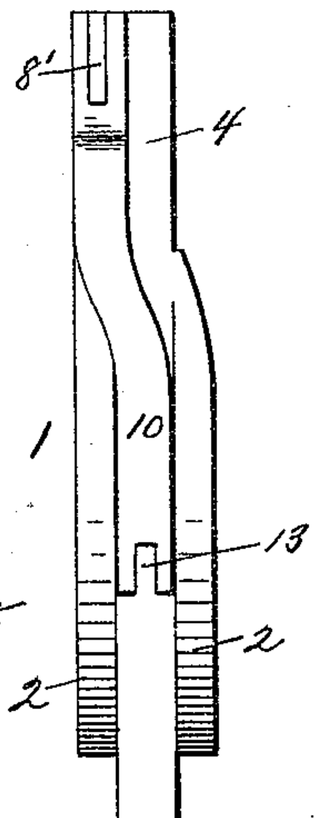
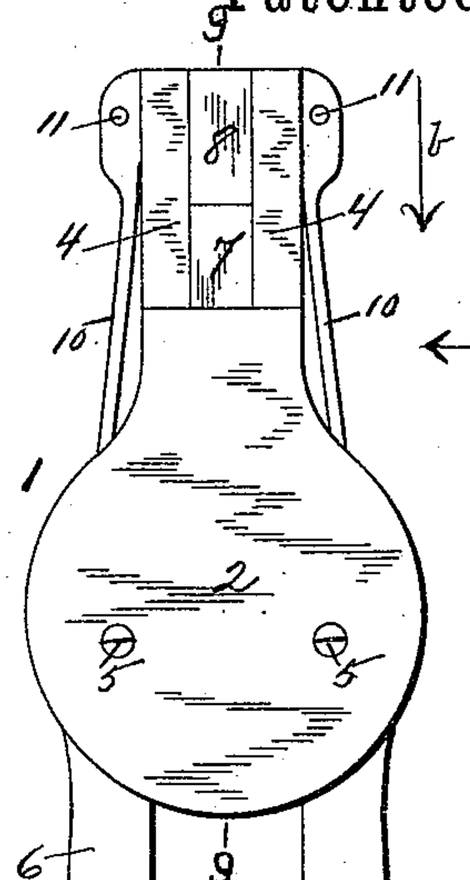


Fig. 4.





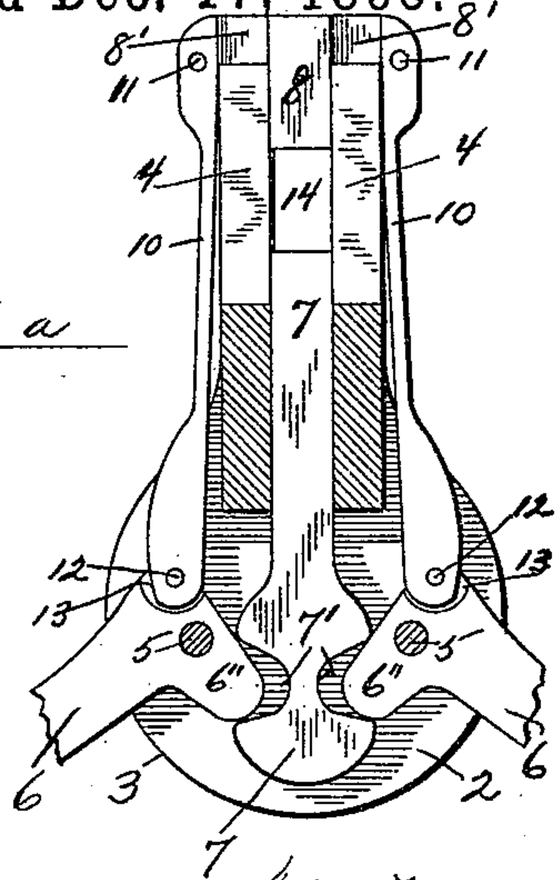


Fig. 5.

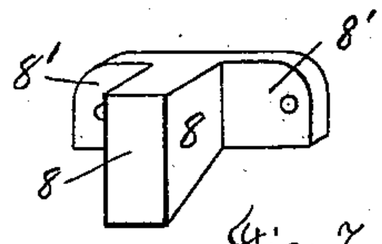


Fig. 7.

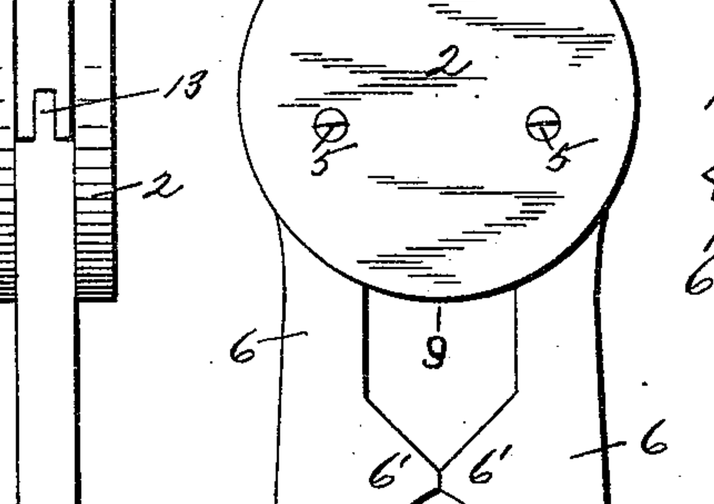


Fig. 1.

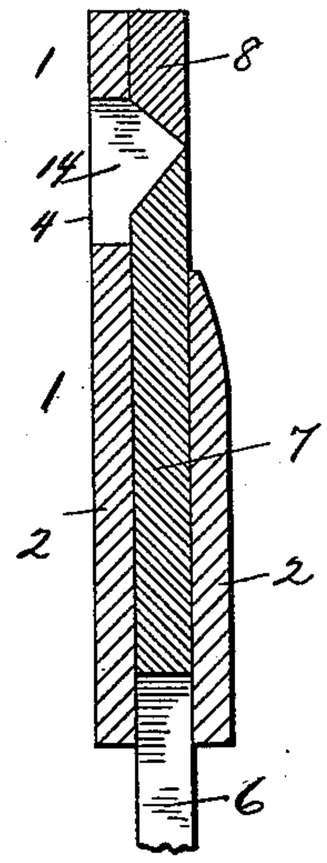


Fig. 9.

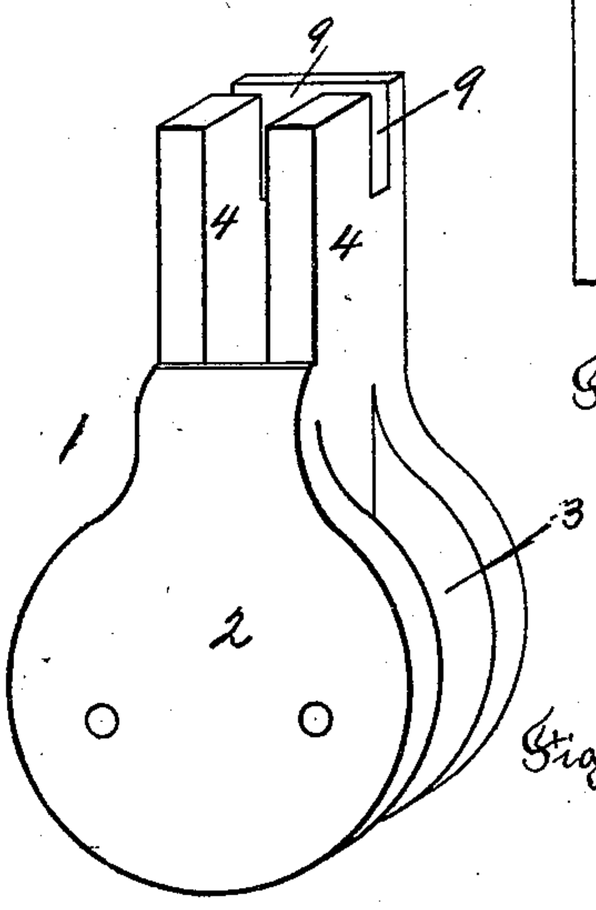


Fig. 6

Fig. 2

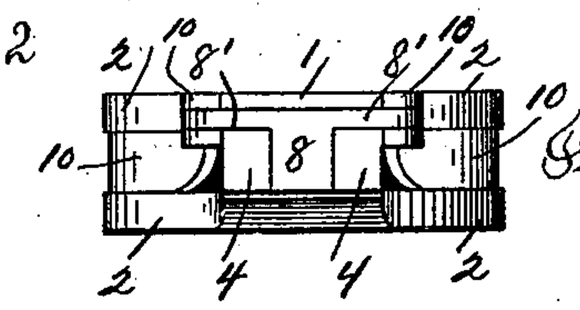


Fig. 3.

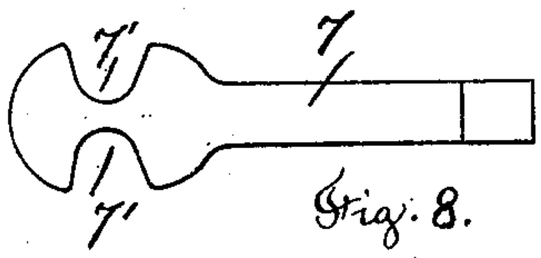


Fig. 8.

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By his Attorney
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UNITED STATES PATENT OFFICE.

JASPER S. MURPHY, OF BARRE, ASSIGNOR OF ONE-HALF TO GEORGE A. HYLAND, OF LEICESTER, MASSACHUSETTS.

BOLT-CUTTER.

SPECIFICATION forming part of Letters Patent No. 551,686, dated December 17, 1895.

Application filed April 10, 1895. Serial No. 545,131. (No model.)

To all whom it may concern:

Be it known that I, JASPER S. MURPHY, a citizen of the United States, residing at Barre, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Bolt-Cutters, of which the following is a specification.

My invention relates to bolt-cutters, and the object of my invention is to improve upon the construction of bolt-cutters, as now ordinarily made, and to provide a bolt-cutter in which both cutters are movable.

My invention consists in certain novel features of construction of a bolt-cutter provided with two movable cutters, as will be hereinafter fully described, and the nature thereof indicated by the claims.

Referring to the drawings, Figure 1 is a plan view of my bolt-cutter, showing the cutters closed. Fig. 2 is an edge view looking in the direction of arrow *a*, Fig. 1. Fig. 3 is an end view looking in the direction of arrow *b*, Fig. 1. Fig. 4 is a plan view corresponding to Fig. 1 with the handles broken off and a portion of the casing removed. Fig. 5 corresponds to Fig. 4, but shows the cutters moved apart preparatory to cutting the bolt. Fig. 6 is an isometric view of the casing of the cutter detached. Fig. 7 is an isometric view of one of the cutters detached. Fig. 8 is a plan view of the other cutter detached; and Fig. 9 is a central longitudinal section on line 9 9, Fig. 1, looking in the direction of arrow *a*, same figure.

In the accompanying drawings, 1 is the casing, preferably made of metal in one part, and consists of the body 2, preferably of circular shape, and cut out or slotted laterally, as shown at 3 in the drawings, to receive the operating parts of the cutter. Extending out from the circular portion 2 of the casing 1 are the two straight portions 4, which act as guides for the cutters. Within the slotted portion 3 of the casing 1 are pivoted, on pins or screws 5, the inner ends of the handles 6, which are adapted to be moved toward and away from each other, in the ordinary way. The handles 6 are provided in this instance with inwardly-extending projections 6′, which are adapted to come in contact to limit the inward motion of said handles.

The pivoted ends of the handles 6 are provided with inwardly-extending rounded projections 6″, which are adapted to extend into lateral notched or grooved portions 7′ in the inner end of the removable cutter 7. Said cutter 7 is adapted to have a reciprocating motion within the casing 1 and between the guides 4.

In connection with the cutter 7 I employ a second movable cutter 8, which is made T-shaped, as shown in Fig. 7, with the side extensions or wings 8′ adapted to extend into and slide in a transverse slot 9 in the end of the casing, as shown in Fig. 6.

In order to move the cutter 8 simultaneously with the cutter 7, I provide links or connectors 10, which are slotted transversely at their outer ends, as shown in Figs. 1 and 3, and are pivotally connected, by pins or screws 11, with the wings 8′ of the cutter 8, which extend into the slots in the ends of said connectors 10, as shown. The opposite ends of the links or connectors 10 are pivotally connected, by pins or screws 12, with the pivoted ends of the handles 6 on the outside of their pivot-point, in this instance by means of ears or lugs 13 on the handles 6 extending into transverse slots in the inner ends of the connectors 10.

The extension of the central portion 2 of the casing 1 between the two guides 4 is cut through, or provided with an opening 14, as shown in Fig. 9, so that the end of the bolt that is cut off will drop out through said opening 14.

From the above description, in connection with the drawings, the operation of my bolt-cutter will be readily understood by those skilled in the art.

It will be seen by moving the handles 6 apart, as shown in Fig. 5, that the projection 6″ thereon, engaging with the lateral notches 7′ in the cutter 7, will move said cutter and draw it back preparatory to cutting. At the same time, the cutter 8, through the links 10, pivotally attached to said cutter and to the ends of the handles 6, on the opposite side

of their pivot-point from the projection 6″, will be moved outwardly or away from the cutter 7, so that the cutters 7 and 8 will be in the position shown in Fig. 5, preparatory to cutting the bolt. The cutter is now applied to the end of the bolt, so that the end to be cut will extend between the edges of the cutters 7 and 8 and into the opening 14 in the casing 1, and the handles 6 are then moved toward each other, and the cutters 7 and 8 are also simultaneously moved toward each other, to cut the bolt, into the position shown in Fig. 4. It will thus be seen that I provide a bolt-cutter in which both cutters have a reciprocating motion, and are simultaneously moved toward and away from each other by the movement of the handles, and as both cutters have a simultaneous reciprocating motion, it is only necessary that each cutter should have one-half of the motion which would be necessary in case one of the cutters was stationary.

In order to remove the cutter 7 to sharpen the edge, &c., it is only necessary to open the handles 6 wide enough to allow the cutter 7 to drop out of the rear end of the casing, between the projection 6″ on the ends of the handles. The cutter 8 can be removed by simply withdrawing the pins or screws 11 which connect said cutter with the links or connectors 10.

It will be understood that the details of construction of my bolt-cutter may be varied if desired.

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

1. In a bolt cutter, the combination with the casing, provided with slots or guides for two movable cutters, of two movable cutters, adapted to have a reciprocating motion in said slots or guides, and means for simultaneously moving said cutters toward and away from each other, consisting of two handles pivoted in said casing and connected directly with one cutter, and through links or connectors with the other cutter, to operate the same, substantially as set forth.

2. In a bolt cutter, the combination with a movable cutter having a reciprocating motion between guides at the end of the casing, and a second movable cutter having a reciprocating motion between guides in the casing, and having lateral notches therein, of means for simultaneously moving said cutters toward and away from each other, said means consisting of two handles pivoted at their inner ends within the casing, and provided with projections extending into the lateral notches in one cutter, and links or connectors pivoted at one end to the ends of the handles, and at their other ends pivoted to the other cutter, substantially as set forth.

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