

J. R. Brown,

Bolt Cutter.

No. 107,438.

Patented Sep. 20. 1870.

Fig. 1.



Fig. 2.

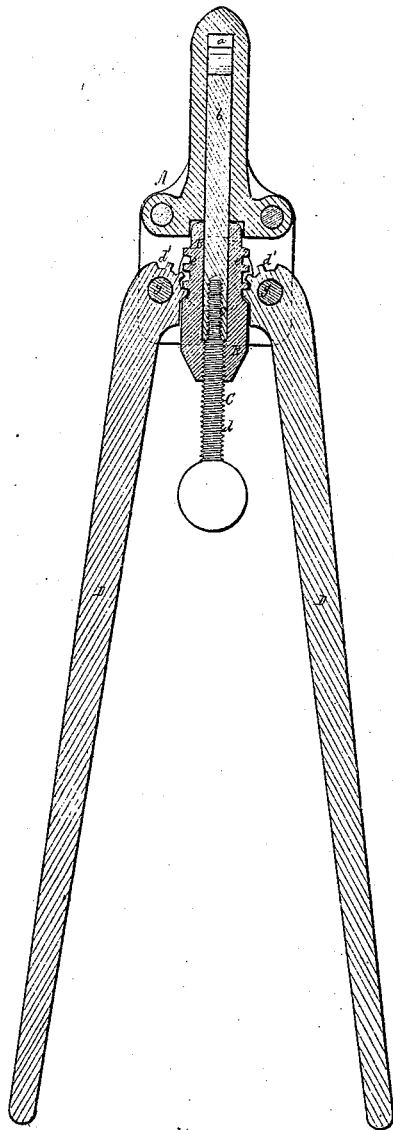
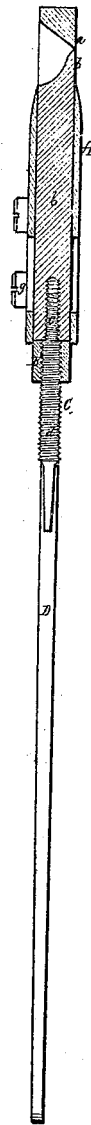


Fig. 3.



Witnesses.

S. H. Piper

E. N. Walker

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by his attorney

N. V. Brady

United States Patent Office.

JAMES R. BROWN, OF CAMBRIDGEPORT, MASSACHUSETTS.

Letters Patent No. 107,438, dated September 20, 1870.

IMPROVEMENT IN BOLT-CUTTERS.

The Schedule referred to in these Letters Patent and making part of the same

To all persons to whom these presents may come:

Be it known that I, JAMES R. BROWN, of Cambridgeport, of the county of Middlesex and State of Massachusetts, have invented a new and useful or improved Bolt-Cutter; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figure 1 is a side elevation, and

Figures 2 and 3 are longitudinal sections of the said bolt-cutter.

In such drawing—

A denotes a cutter-head or yoke, provided with a stationary knife or cutter, *a*, and a movable or sliding one, *b*, the said head, with its cutter, being shaped and arranged in manner as represented.

The movable cutter is fixed in a carrier or slides, lengthwise therein, and is held thereto by a double screw, C, or two screws, *c d*, of different diameters and pitches, that is, they are differential screws. The larger screw screws into the carrier, and the smaller one into the movable cutter, the whole being so that, by revolving the double screw C in one direction, the cutter *b* may be moved toward the cutter *a*. The purpose of the screw is to advance the cutter in proportion as it or the stationary cutter may become worn.

Two toothed racks or ranges, *e e*, of teeth are disposed in opposite sides of the carrier B, and engage with sectoral gears, arcs, or ranges of teeth, *d' d'*, formed on the ends of two levers, D D, which are pivoted to the head A, the pivots or fulcra of such levers being shown at *g g*.

By moving the longer arms of the levers apart, the cutter *b* will be retracted, and, by forcing the said arms toward each other, the said cutter will be advanced or moved toward the cutter *a*.

By applying the machine to a bolt, by inserting the bolt between the cutters, and forcing the movable one up to the stationary one, the bolt may be cut off close up to its nut, after the latter may have been screwed up.

By moving the levers apart far enough to disengage the toothed sectors and racks, the cutter-carrier B, with its cutter, may be readily drawn out of the frame A, for the purpose of being sharpened.

I am aware of the bolt-cutter of Johnson, as described in the United States Patent No. 65,391. I am also aware of the bolt-cutter of Mendham, as represented in the United States Patent No. 102,026. My bolt-cutter differs from each of these latter, in being so constructed as to enable its part B, with the cutter *b*, to be readily withdrawn from the frame A, when the levers D D are moved apart, so as to disengage the toothed sectors and racks, such being very important, as it saves the necessity of first disengaging either or both the levers from the frame, preparatory to a withdrawal of the cutter and its carrier therefrom, for the purpose of sharpening the latter, as occasion may require.

The upper part of the carrier B, or that part projecting beyond the racks, is made of a width no greater than the distance between the bases of the teeth of the opposite racks, there being beyond the two racks no projection from the part B to so come in contact with the levers, when thrown up, to disengage the sectors and racks, as to prevent the withdrawal of the part B from between the levers, and from the frame A.

Furthermore, my bolt-cutter differs from that of Mendham in having the combined screws C *c* to connect the parts B and *b*, whereby the part or cutter *b* may be adjusted or moved back and forth by the two screws, the adjusting-screw of Mendham's bolt-cutter operating to move the cutter in one direction only, and requiring a clamp-screw to hold the cutter to its carrier.

I therefore claim—

1. The particular construction, and the arrangement relative to one another, of the toothed sectors *d'* and cutter-carrier B, in virtue of which the said carrier, together with the cutter, may be readily withdrawn from the frame A, on turning the handles D D around far enough to disengage the teeth of the sectors from those of the carrier, as set forth.

2. In such bolt-cutter, the combination of the cutter *b*, and its carrier B, with the two screws *c d*, applied to one shank or rod, as set forth.

JAMES R. BROWN.

Witnesses:

R. H. EDDY,

J. R. SNOW.