

Bolt and Rod-Cutters.

No. 148,954.

Patented March 24, 1874.

Fig. 1.

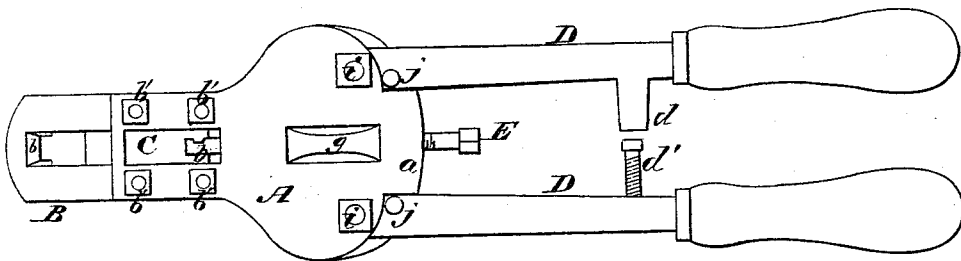


Fig. 2.

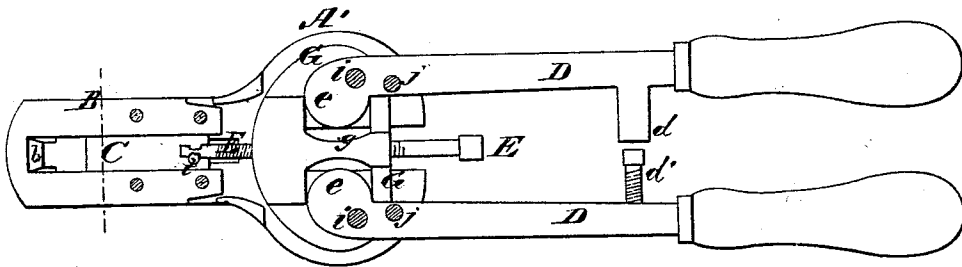


Fig. 3.

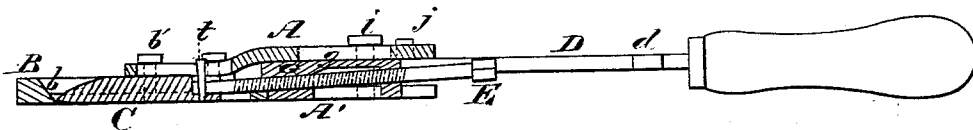


Fig. 4.



WITNESSES

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IMPROVEMENT IN BOLT AND ROD CUTTERS.

Specification forming part of Letters Patent No. 148,954, dated March 24, 1874; application filed November 1, 1873.

To all whom it may concern:

Be it known that I, JOHN GEORGE HIRZEL, of the city of Wilmington, in the county of New Castle and State of Delaware, have invented a new and valuable Improvement in Bolt-Cutters; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a plan view of my bolt-cutter. Fig. 2 is a horizontal section of the same. Fig. 3 is a vertical longitudinal section of the same.

This invention has relation to portable hand bolt-cutters; and it consists in the construction and arrangement of the parts as will be hereinafter more fully described and claimed.

The following is a description of my improved cutter.

The stock or frame of the cutter is composed of two plates, A A', secured together by bolts and nuts, and slotted, as shown in the drawings. B represents a V-shaped cutter-plate, which is constructed with parallel sides, and with a beveled cutting-edge, *b*. This cutter-plate is rigidly secured between the contracted ends of the stock-plates A A', by means of bolts and nuts *b'*, and when so secured its bottom side is flush with the bottom of the plate A'. C represents a reciprocating cutter, which is adjusted between the inner parallel edges of the cutter-plate B, and fitted thereto, as shown by the sectional view, Fig. 4. The bottom of this cutter C is flush with the bottom of the frame B, for the purpose of allowing the end of a bolt or rivet to be cut close to the surface of the object through which it passes. G represents an elliptical yoke, which is applied between the enlarged portions of the plates A A', and constructed with a central connecting-bridge, *g*, through which a screw, E, is tapped. This screw is received loosely into a recess made in the rear end of the cutter C, and is attached to this cutter by means of a pin or screw, *t*, entering an annular groove in the screw, or by any other suitable means. D D designate two lever-handles, having cams or eccentrics *e e* formed on their ends, which

are received between the plates A A' and into the yoke G on opposite sides of the connecting bridge of this yoke. These lever-handles D D are connected to plates A A' by pivots *i i*, and they are constructed with stop-pins, a rigid tongue, *d*, and an adjustable screw or abutment, *d'*.

By opening and closing the handles D D the yoke G and the cutter C receive a reciprocating motion.

The screw E allows the cutter C to be adjusted so that the handles D D when closed, as shown in the drawings, will just bring the cutting-edge of this cutter up to the cutting-edge *b*, which condition of things can be maintained however much of the cutter C be ground away. By removing the bolts and nuts and the pin or screw *t* the two cutters can be detached from their stock and sharpened.

It will be seen from the above description that the cutter C can be moved with considerable force, that it can be readily adjusted for wearing away of its edge by grinding, and that a very close and clean cut can be made by it and the cutter *b* acting on both sides of a bolt or rivet at one time.

The studs *j j* abut against the edges of an extension, *a*, of plate A, before the handles D D are brought too close, and the screw *d'* allows the handles to be adjusted as above described, to prevent injury to the cutting-edges when they are brought quickly together.

What I claim as new, and desire to secure by Letters Patent, is—

1. The elliptical yoke G, constructed with the central connecting-bridge *g*, in combination with the adjusting-screw E and cutter C, as specified.

2. The yoke G, receiving through it the screw E, for adjusting the cutter C, in combination with the lever-handles D D, eccentrics *e e* thereon, and the plates A A' forming the stock of the tool, as and for the purposes set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOHN GEORGE HIRZEL.

Witnesses:

JAMES McCABE,
WASHINGTON MASON.