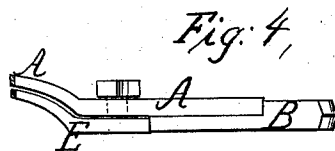
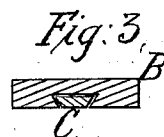
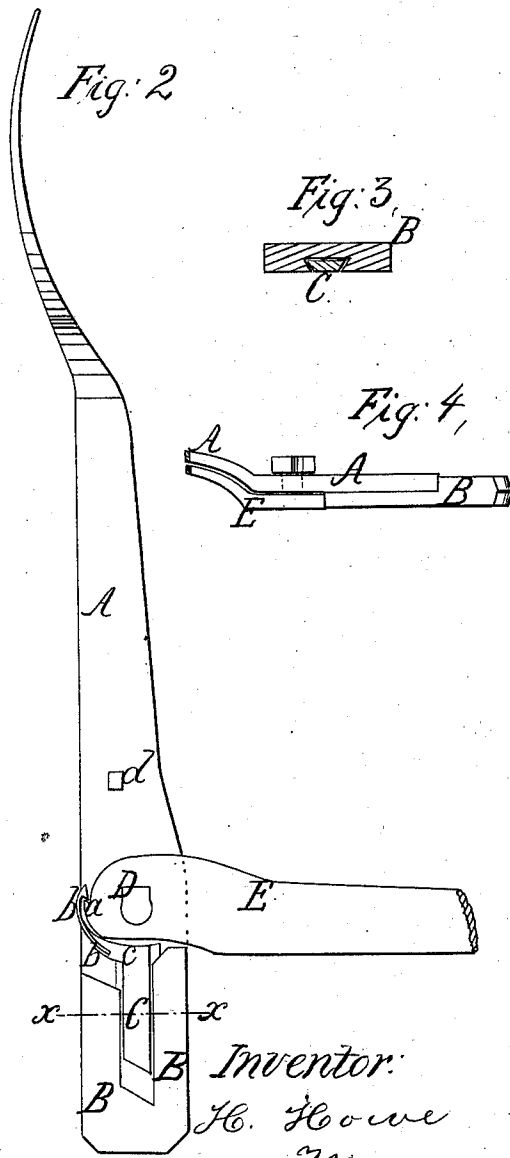
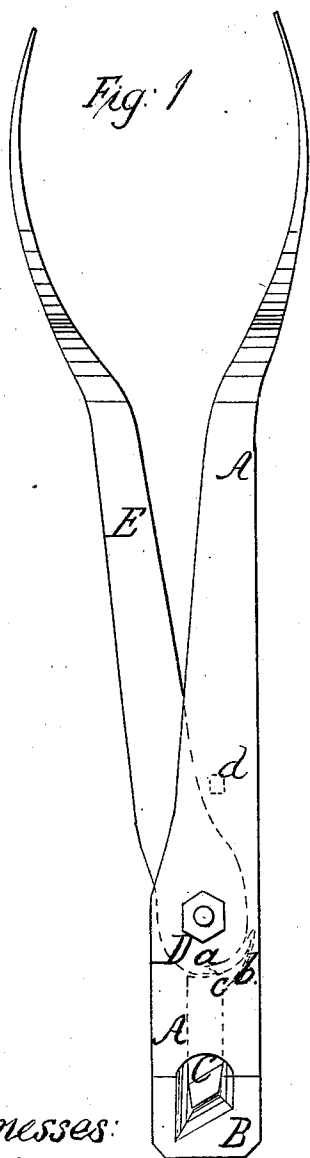


H. Howe, Bolt Cutter.

N^o 80,351.

Patented July 28, 1868.



Witnesses:
D. C. Ashkettle
Wm A. Morgan

Inventor:
H. Howe
per J. M. [Signature]
attorneys

United States Patent Office.

HENRY HOWE, OF ONEONTA, NEW YORK.

Letters Patent No. 80,351, dated July 28, 1868.

IMPROVEMENT IN BOLT-CUTTER.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that I, HENRY HOWE, of Oneonta, in the county of Otsego, and State of New York, have invented a new and improved Bolt-Trimmer; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a plan of top view of my improved bolt-trimmer.

Figure 2 is an inverted plan view of the same.

Figure 3 is a detail transverse section of the same, taken on the plane of the line *x x*, fig. 2.

Figure 4 is a detail side view of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to a new device for trimming bolts, rivets, and other suitable articles, and consists of a cutter, sliding within the lower part of a slotted plate, so that its bottom is flush with the under side of the plate. Reciprocating motion is imparted by means of an oscillating-cam working on the said plate, and by means of a spring-catch, projecting from the rear end of the cutter. The cutter is supported in the plate by having bevelled edges, which rest upon the similar-shaped inner edges of the slot in the plate. The cutting-edge of the tool and the corresponding cutting-edge of the plate are set diagonal, so that a drawing cut is produced on a reciprocating cutter.

B, in the drawing, represents a metal plate, attached to one end of a suitable handle, A, and projecting below the lower face of the same. The plate B is slotted, as shown in fig. 2, the slot reaching to the rear end of the plate, as shown. The parallel sides of the slot are bevelled, as in fig. 3, so that the slot is narrower at its lower than at its upper part, while the front edge of the slot is diagonal to the sides, as shown.

C is the cutting-tool, of such size as to fit the slot in the plate B. It has bevelled sides, so that it is supported throughout its entire length by the bevelled sides of the slot, and has a diagonal cutting-edge parallel with the front end of the slot.

D is a cam, pivoted to the handle A, and connected with a suitable handle, E, as shown.

The cam D has a hook, *a*, which engages into spring-catch *b*, that projects from the rear end of the cutter, as shown.

When the cutter is to be drawn off the abutting edge of the slot, the cam is turned into the position shown in fig. 2, it, by such motion, drawing the cutter out by the aid of the spring-catch.

When something is to be cut, the cam is turned into the position indicated by dotted lines in fig. 1. To facilitate the latter motion of the cutter, a projecting arm, *c*, is arranged at its rear end, against which the cam strikes at the beginning of its motion, and by means of which lateral strain of the movable cutter is avoided.

By means of a stop, *d*, the cutter is arrested at the end of its stroke.

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

The combination of the slotted plate B, cam D, spring-catch *b*, and projecting arm *c*, all made and operating substantially as herein shown and described.

HENRY HOWE.

Witnesses:

WM. F. McNAMARA,

ALEX. F. ROBERTS.