W. C. CARLTON.

BOLT-CUTTERS.

No. 183,640. Patented Oct. 24, 1876.

Fig 2.

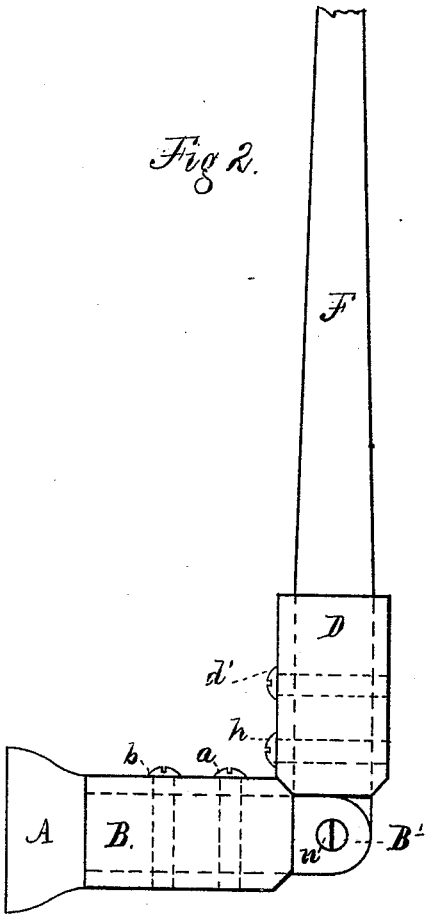
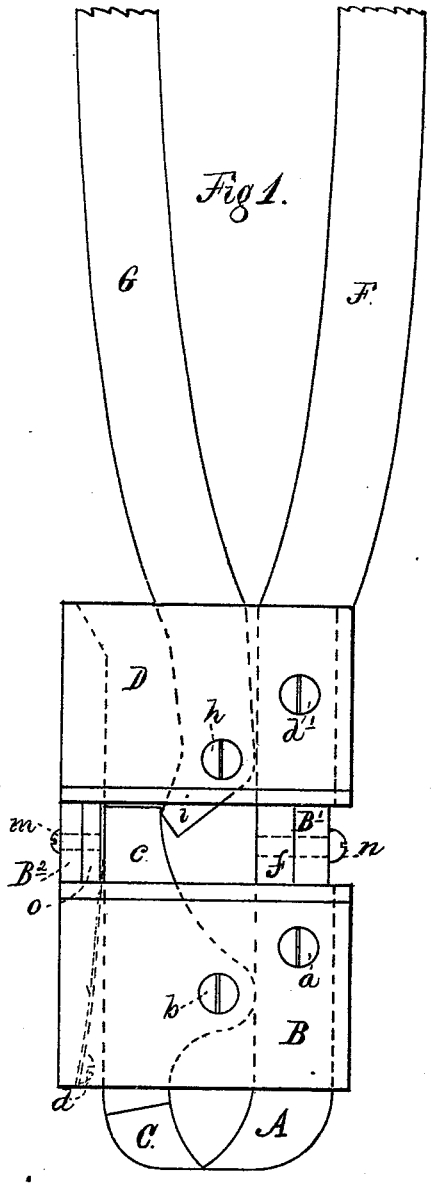


Fig 1.



Witnesses;

Wm. J. Schilling

L. Watkinson

Inventor;

William C. Carlton

By A. L. Thomson

Atty

UNITED STATES PATENT OFFICE.

WILLIAM C. CARLTON, OF BOISE CITY, IDAHO TERRITORY.

IMPROVEMENT IN BOLT-CUTTERS.

Specification forming part of Letters Patent No. **183,640**, dated October 24, 1876; application filed April 29, 1876.

To all whom it may concern:

Be it known that I, WILLIAM C. CARLTON, of Boise City, Ada county, Idaho Territory, have invented certain new and useful Improvements in Bolt and Rivet Cutters, of which the following is a specification:

This invention relates to that class of metal-working tools known as "bolt and rivet cutters;" and it consists in a novel construction and arrangement of the operating parts, so that the cutting-blades may be turned and used at any angle to the right or left, as may be desired, thus enabling the insertion of the tool and its easy manipulation in places where the ordinary tools would be useless, the details of the construction and operation of which will be hereinafter fully pointed out and described.

In the drawings, which form an essential part of this specification, Figure 1 is an elevation of a tool in which my invention is fully embodied and carried out; and Fig. 2 is a side elevation of the same, showing the cutters turned at a right angle.

Similar letters of reference will locate and point out the corresponding parts in the two figures of the drawing.

All mechanics and artisans who are familiar with the construction of machinery, bridges, and all classes of work in which bolts, rivets, &c., are largely used, are well aware of the many difficulties experienced in cutting off bolts, or rivets, or spikes located in positions not accessible to, and out of the reach of, all of the common forms of tools used for that purpose. They are also fully cognizant of the great advantages that will be gained by the introduction and use of a tool which will operate at any angle, and at the same time enter a small space; and it is to accomplish this purpose that I have made my present invention.

The tool is in two parts or sections, the first containing the cutting-blades and the arms on which they are mounted or formed, and a casing or frame in which they are secured, the second section containing the arms or levers for operating the cutting-blades, also provided with a casing or frame, in which they are mounted and operated, the two sections being hung together on two pivots and manipulated, as will presently be more fully set forth.

A is a fixed arm, terminating in front in a cutting-blade of the usual form. It is secured in the base and interior of the frame or casing B, its rear end extending outside of the casing, as shown at B^1, and that part projecting beyond the casing is reduced in size one-half, as shown. It is secured and retained in place by means of one or more rivets or screws, *a*, which pass through it, also through the sides of the casing; or the sides of the casing may be grooved to receive it, in which case a single screw will suffice to secure it in place. C is a movable arm, also terminating in front in a cutting-blade of the usual form. It is of the form shown, and is pivoted centrally in the casing B by means of a screw or shaft, *b*, its rear end *c* terminating in the rear of the casing, as shown. The casing or frame B is preferably made solid, and its center cut away to the proper shape to receive the two arms A and C, its top, on the interior, being cut away at an angle, so as to admit of the introduction of a flat spring, *d*, whose office it is to return the cutter to its normal position after being used. The top of the casing *o* is also extended to the rear and reduced in size, so as to correspond to that of the rear B^1 of the fixed arm A. D is the frame or casing, in which are mounted the operating-handles. It is also preferably made solid, and its interior cut away for the reception of the handles or operating-levers. F is a fixed handle or lever, which is secured in the base of the casing D by means of one or more screws or rivets, *d'*. It might be inserted in a groove formed in the casing to receive it, in the same manner as described in the case of the fixed arm A. Its face projects beyond the face of the casing D to a distance corresponding with the projecting end B^1 of the arm A, this projection *f* also being reduced one-half in size, as in the case of projection B^1. The top of the casing D is provided with a projection, B^2, corresponding in size with that of projection *o* of the casing B. G is the movable handle or lever by means of which power is given to the cutting-blades. It is pivoted near the front and center of the casing D by means of a suitable screw or bolt, *h*, as shown, its short arm *i* rest-

ing beneath the lower and rear end *c* of the movable arm C, carrying the cutting-blade.

The two sections of the apparatus are pivoted together by means of shoulders *o*, *f*, and B^1 B^2, through which are passed two screws or bolts, *m n*, which form a pivot, upon which the casing or frame B swings to the right or left at any angle up to right angles with the casing D.

It will be plainly seen that, no matter at what angle the casing carrying the cutting-tools may be swung, the operating handle or lever G will retain its position under the end of the arm C, and that it will operate as effectively in one position as another. It is also obvious that the principle involved in the construction of this bolt-cutter can be applied to pipe-tongs and wrenches, all kinds of cutting-pliers, and may be adapted to other tools of a kindred nature, and it is my intention to so apply my invention.

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

1. A bolt or rivet cutter constructed in two sections, one consisting of a frame or casing, in which are secured and hung the operating handles or levers, the other of a casing carrying the cutting-blades and their arms, the two sections being pivoted and secured together by means of suitable projections, through which the pivots are passed, enabling the section carrying the cutting-blades to be turned at any angle to the right or left, and operated thereat, in the manner as and for the purposes as herein shown and set forth.

2. In a bolt or rivet cutter, the combination of the casing B, carrying the fixed cutting-blade and arm A, and movable cutting-blade and arm C, pivoted therein, and provided with returning-spring *d*, and the casing D, carrying the fixed arm F and movable lever G, pivoted therein, the two parts being pivoted together by means of projections *o*, *f*, and B^1 B^2, and pins *m* and *n*, the whole operating substantially as and for the purposes as herein shown and set forth.

WILLIAM C. CARLTON.

In presence of—
A. L. MUNSON,
L. WILKINSON.