(No Model.)

R. ROWE.

BOLT OR WIRE CUTTER.

No. 588,187. Patented Aug. 17, 1897.

Fig. 1.

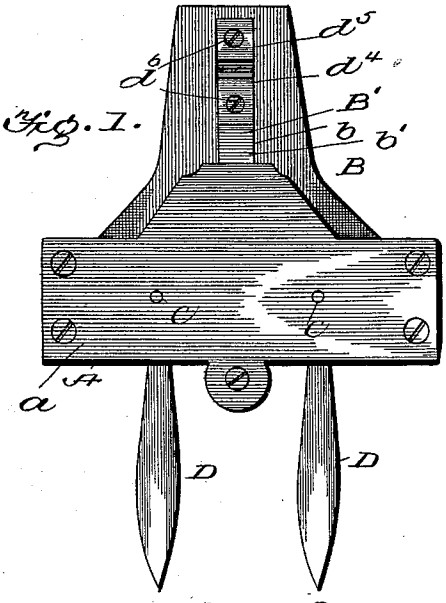


Fig. 2.

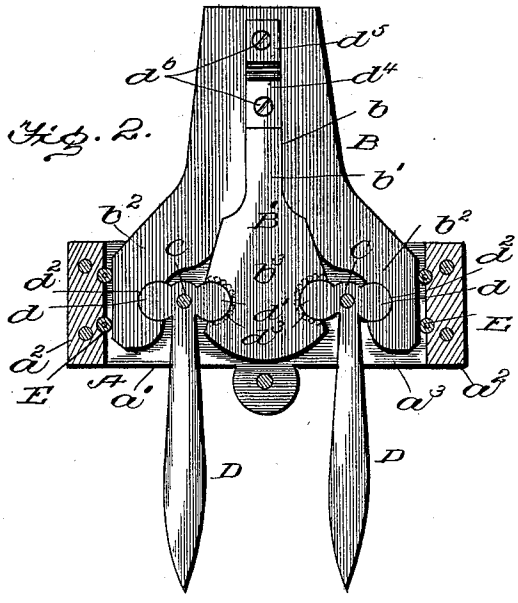


Fig. 3.

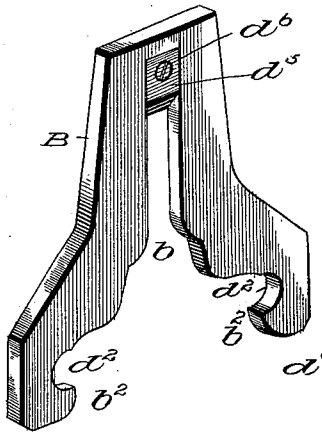


Fig. 4.

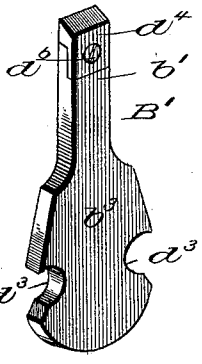
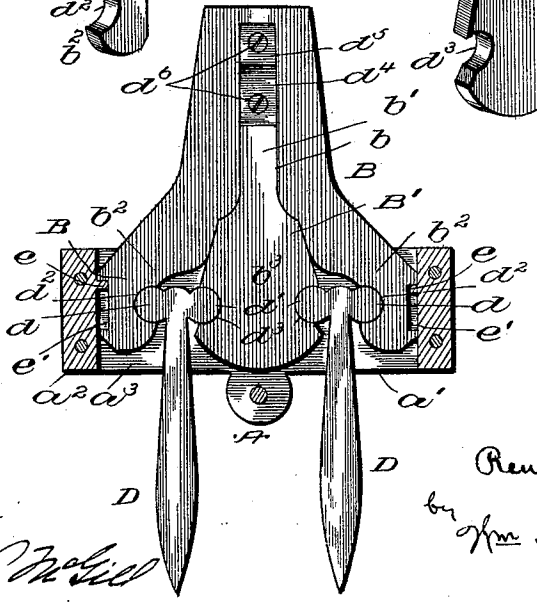


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

REUBEN ROWE, OF DOVER, NEW JERSEY.

BOLT OR WIRE CUTTER.

SPECIFICATION forming part of Letters Patent No. 588,187, dated August 17, 1897.

Application filed April 21, 1897. Serial No. 633,181. (No model.)

To all whom it may concern:

Be it known that I, REUBEN ROWE, of Dover, in the county of Morris and State of New Jersey, have invented certain new and useful Improvements in Bolt or Wire Cutters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain new and useful improvements in bolt or wire cutters; and it has for its object the production of a device of this character which will be simple and inexpensive in construction, strong and durable, and one in which a maximum power may be obtained for a given amount of pressure upon the operating levers or handles. These objects I accomplish by mounting two cutting members in a suitable frame in such manner that they may be simultaneously reciprocated back and forth, in opposite directions, by levers pivoted in said frame having cam connections therewith, the movement of said levers effecting the operation of said cutting members.

The invention will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a top plan view illustrating my invention. Fig. 2 is a similar view with the top plate of the supporting-frame removed. Figs. 3 and 4 are views of the reciprocating cutting members. Fig. 5 is a slight modification.

Referring to the drawings, A designates a frame having top and bottom plates a a', united by suitable end pieces a^2, whereby a space a^3 is formed between said plates, said frame being of any preferred form.

B B′ designate two reciprocating members mounted between the plates a a'. The member B is provided with a central longitudinal slot or opening b, in which the blade or tongue b' of the member B′ is designed to reciprocate, said former member being provided with rearwardly-extended diverging arms or members b^2, extending from said slot. An enlarged portion b^3 of member B′ is designed to extend between the arms b^2. The members B B′ are operated by levers D, which are pivoted at C in frame A, said levers each having opposite laterally-extended approximately circular cams d d', the former being in engagement with correspondingly-shaped cut-outs d^2 in the arms b^2 of member B and the latter engaging similar cut-outs d^3, formed in the enlarged portion of member B′, said latter cut-outs being formed in opposite sides of said member. On the forward end of member B′ is removably secured a cutting-blade d^4, while opposite thereto, in the end of slot or opening b, is a second similar cutting-blade d^5. These blades are preferably secured in position by screws d^6, whereby they may be readily and quickly removed when necessary to sharpen or replace.

If desired, roller-bearings E may be mounted in the end pieces a^2 and also around the cams d d', as indicated in dotted lines, whereby the friction against the parts is reduced to a minimum. The pivots C of the levers D may also be omitted, as illustrated in Fig. 5, without departing from the spirit of my invention. In this form lugs e, working in slots e', prevent the cutting members from falling out.

In practice, when the operating-levers are moved in either direction the cam portions thereof will cause the reciprocating members to simultaneously move toward or away from each other, the distance from the fulcra of said levers to the bearings of the cams being so short that a maximum power will be obtained for the amount of pressure exerted upon said levers, whereby a bolt or the like will be readily and quickly severed and with great ease. The fact that the cutting-blades simultaneously move toward each other and meet in the center of the bolt is a point of great advantage.

It will noted that the parts of my improved bolt-cutter, with the exception of the cutting-blades proper, may be stamped from or cast in any desired metal—such as steel, iron, brass, and the like—thus cheapening the cost of construction of an article of this character. The invention also comprises many advantages in point of simplicity and durability, and, being composed of but few parts, is not liable to readily get out of order or become deranged.

I claim as my invention—

1. The herein-described improved bolt-cutter, comprising a frame, cutting members

mounted therein and levers having opposite cams on their ends interposed between and adapted to engage opposite portions of said cutting members and reciprocate the same simultaneously in opposite directions, as set forth.

2. The herein-described improved bolt-cutter, comprising a frame, cutting members having opposite cut-outs, and levers pivoted in said frame and having opposite cams adapted to fit in and engage said cut-outs, whereby said members may be simultaneously reciprocated back and forth, substantially as set forth.

3. The herein-described improved bolt-cutter, comprising a frame, a reciprocating cutting member mounted therein having a central slot, a second reciprocating cutting member working in said slot and adapted to be guided thereby, and levers having their ends interposed between adjacent portions of said cutting members and adapted to engage the same, whereby they will be simultaneously reciprocated in opposite directions, substantially as set forth.

4. The herein-described improved bolt-cutter, comprising a frame, a cutting member mounted therein having a central slot, a second cutting member working in said slot, and levers pivoted to said frame and having their ends provided with opposite cams adapted to engage both of said cutting members, whereby the latter will be reciprocated simultaneously in opposite directions, substantially as set forth.

5. The herein-described improved bolt-cutter, comprising a supporting-frame, a cutting member mounted therein having a central slot and rear flaring ends, a second cutting member working in said slot and having an enlarged portion, and levers having cam ends adapted to engage the flared ends and the enlarged portion respectively of said cutting members, whereby the latter may be simultaneously reciprocated in opposite directions, substantially as set forth.

6. The herein-described improved bolt-cutter, comprising a supporting-frame, a cutting member mounted therein having a central slot and rear flaring ends provided with cut-outs, a second cutting member working in said slot and also having cut-outs, removable knives secured to said cutting members, and levers pivoted in said frame having their ends provided with opposite cams adapted to engage said cut-outs of both cutting members, substantially as and for the purpose set forth.

7. The herein-described improved bolt-cutter, comprising a frame, cutting members mounted therein, having opposite cut-outs, levers pivoted in said frame and having cam ends adapted to fit in and engage the cut-outs of said cutting members, and roller-bearings for said cutting members and cam ends, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

REUBEN ROWE.

Witnesses:
HORACE L. DUNHAM,
THOMAS BAKER.