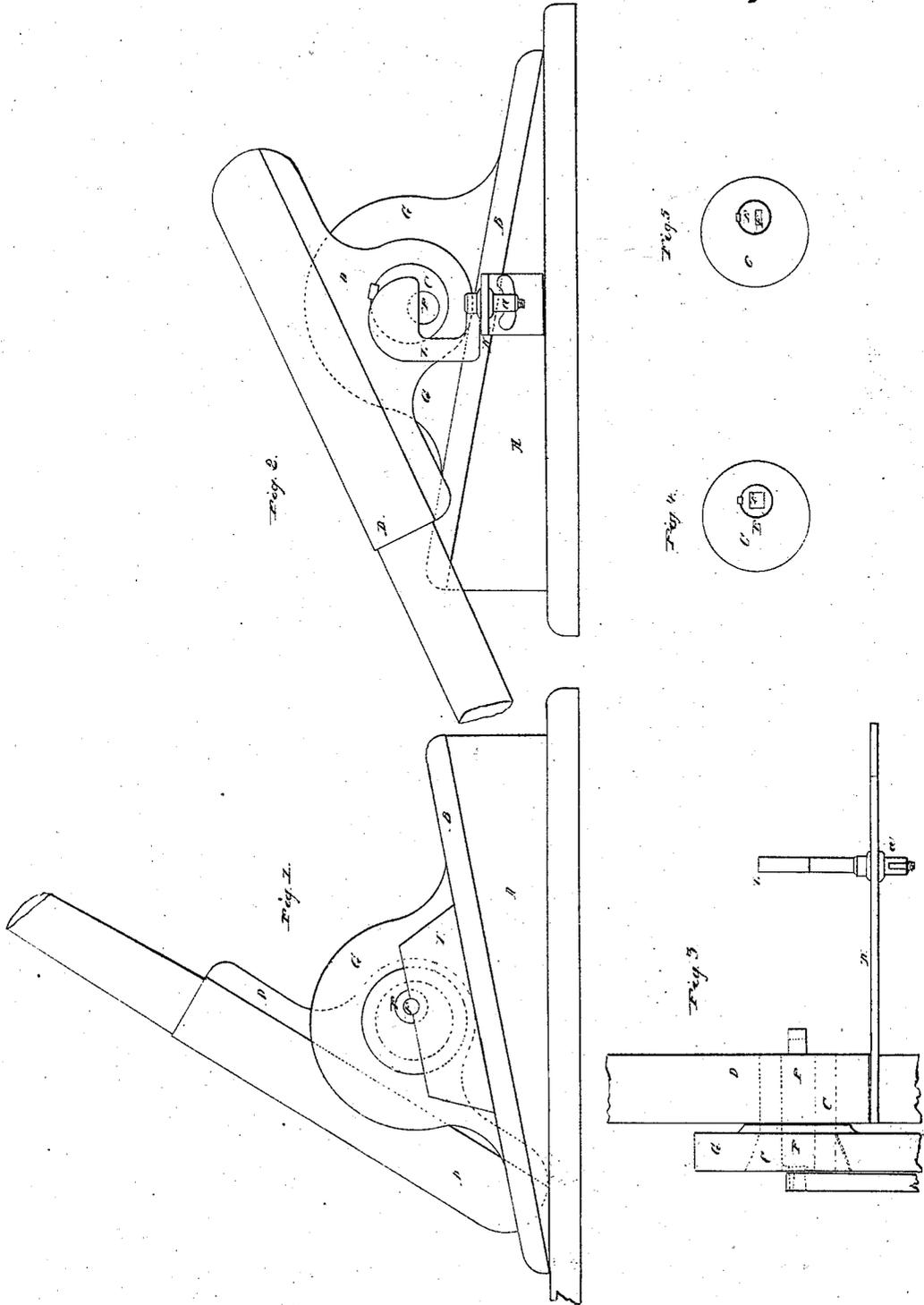


*J. Gallagher,
Bolt Cutter,*

No. 10,858,

Patented May 2, 1854.



UNITED STATES PATENT OFFICE.

JOHN GALLAGHER, OF NEW YORK, N. Y.

CUTTER FOR METALLIC BARS AND RODS.

Specification of Letters Patent No. 10,858, dated May 2, 1854.

To all whom it may concern:

Be it known that I, JOHN GALLAGHER, of the city, county, and State of New York, have invented certain new and useful Improvements in Machinery for Cutting Metallic Rods or Bars, Whether Round or Square, &c.; and to enable others skilled in the art to make and use my invention I do hereby declare that the following is a full, clear, and exact description of the construction and operation thereof, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a front elevation; Fig. 2, back ditto; Fig. 3, a transverse view of Fig. 1; Fig. 4, form of die E, for cutting square bars; Fig. 5, a modified form of Fig. 4, adapted to flat bars.

The letters refer to the same parts in all the figures.

The nature of my improvements consist in providing as simple and efficient means for cutting bolts, rivets, &c., as is obtained by the use of shears for cutting metallic plates, it being well known that they are not adapted for the purposes to which my improvements refer. And in the construction of the machine herein described simplicity and durability are combined, thereby affording a cheap and expeditious mode of accomplishing the object.

The construction and operation of the machine is as follows:

To a suitable base, A, of wood or other material, the frame B, is bolted on, the center of its upright portion or rim, G, being bored out to receive the eccentric shaft, C, which is turned so that it fits snugly therein, and when so fitted in its face side is brought flush with the face side of the same, the other extremity projecting sufficiently to admit of keying on the arm or lever D, by which it is operated.

When employed to cut round rods, the superior cutter or die, E, consists of either a circular or semicircular hardened steel ring, slightly in excess of the largest diameter rod that the machine is intended to cut. It is turned conical on the inside sufficiently to give clearance to the rod in cutting, and is set in the recess turned out in the shaft, C, so that their faces are in the same plane, and may be attached by a key or feather to or allowed to work around in the recess in the shaft, C, which I prefer, as in that case the entire surface of the die is

gradually worn. An opening, F, extends through the shaft C, of rather larger diameter than the die, E, this opening and the die E, are set in the shaft, C, so as to give the smallest possible amount of eccentricity relatively to the shaft's center, by which means the greatest possible amount of leverage is applied to the cutting edge of the dies and unlimited strength of material secured for a fulcrum, which is transferred to the rim, G, through the medium of the shaft, C, working in it.

The inferior die, H, consists of a semicircular hardened steel ring, let in flush with the face or inner side of the standard, I, which serves the purpose also of an abutment for the face side of the shaft, C, and the die, E, and is attached by bolts to the frame, B, or the rim, G.

When the machine is required to cut square or flat bars of metal, dies of a description such as shown in Figs. 4 and 5 are inserted in place of those shown in Figs. 1 and 2, Fig. 5 being a modification of the superior die, E, Fig. 4, which may be advantageously employed in some cases, more especially in respect to flat bars, the form of the inferior dies in either case corresponding to the lower half of the superior ones. I do not confine myself to the peculiar form of the dies as represented, which may be varied according to the form of the article required to be cut without affecting the principle of the machine's operation. In the employment of dies to cut other than round forms, it will be necessary to key the superior die, E, in its proper position, to the shaft, C. When the cutting edge of either the superior or inferior dies become dull or broken, they can be taken out of their seats and after being dressed up replaced and brought up flush by rings or slips of metal behind.

To facilitate the cutting of a number of bolts of a given length and dispense (except in some cases) with the tedious process of laying them off on the rod before being cut, I employ in combination with the parts previously described an adjustable stop, the precise arrangement of its parts admitting of varied application, according to the position in which the machine may be placed and many other circumstances, but consisting substantially of a traverse bar or frame, K, to which the stop, L, is made fast by a thumb screw, a, or other suitable means, at

such distance from the face of the dies as when the rod or bar to be cut is passed through them so far as to come in contact with it they will then be cut off the required
5 length by bringing the lever, D, down so as to sever it. The peculiarity of this adjustable stop consists in the simple and efficient means whereby clearance is provided for the bolts, &c., as they are cut off. The abut-
10 ment portion of the stop, L, extends below that portion of it lying in the same plane with the center of the die, E, when fully open to receive the rod to be cut, say, about
15 equal to half the diameter of the die E. The opening through the shaft C, is rather larger than the greatest diameter rod that the machine is intended to cut, which retains the bolt in an angular position its end
20 next the stop falling by its own weight assisted by the eccentric course of the die,

E, during the time of its being cut off, before the completion of which the end next the stop has fallen below it into the open space beneath, and on the bolt being fully severed from the rod the effect is to jerk it
25 wholly or partially through the opening, F; if wholly, then the bolt falls to the ground, but if not, the following up of the rod to cut off the next bolt displaces it.

What I claim as my invention, and desire
30 to secure by Letters Patent, is—

The arrangement of the movable cutting die, in the eccentric lever operating in connection with the fixed cutter, as herein described.

JOHN GALLAGHER.

Witnesses:

JOS. O. BROWN,
WILLIAM H. LINDSAY.