

(No Model.)

2 Sheets—Sheet 1.

R. FAWCETT.
Bolt and Rivet Cutter.

No. 229,987.

Patented July 13, 1880.

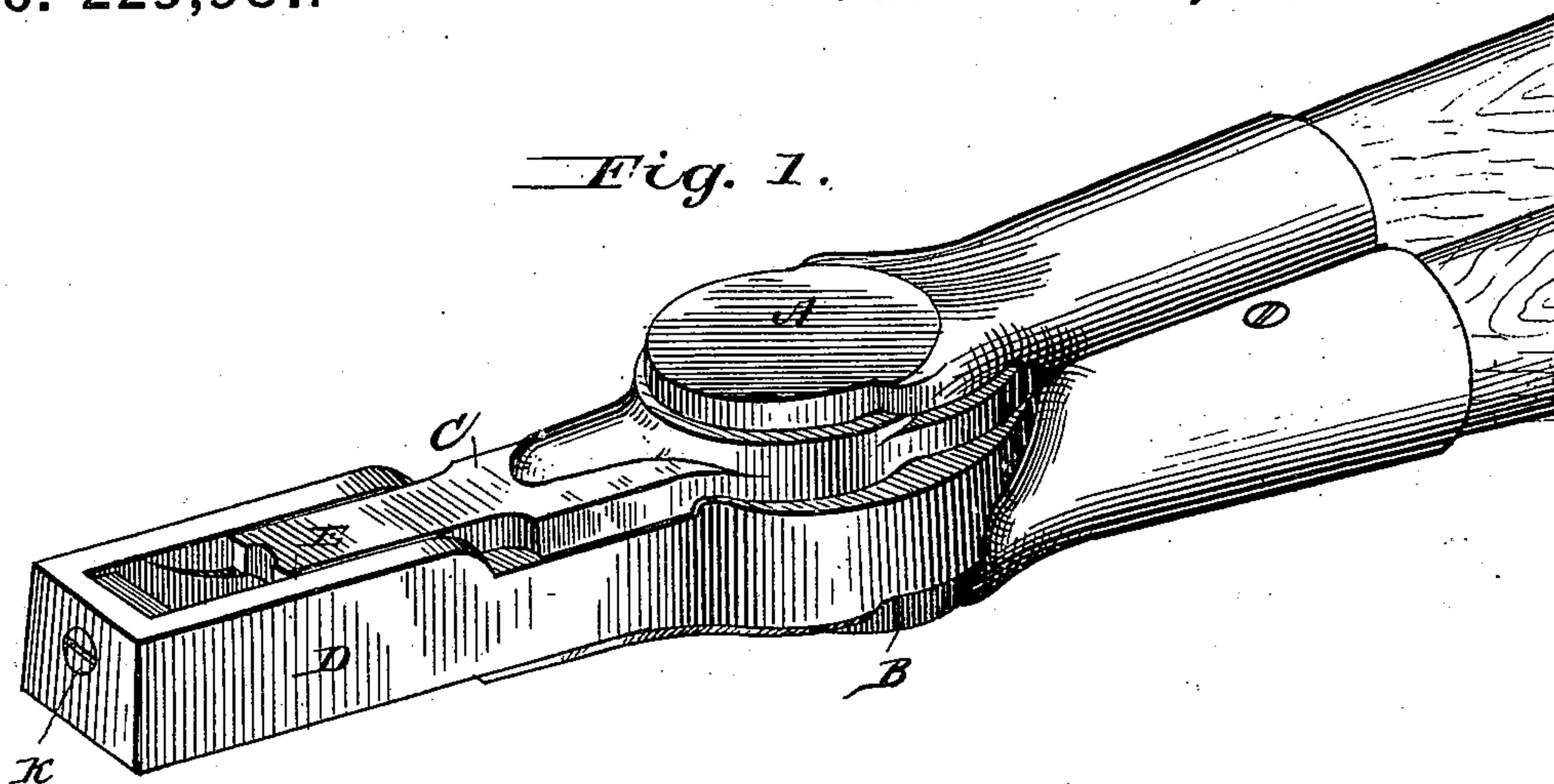


Fig. 2.

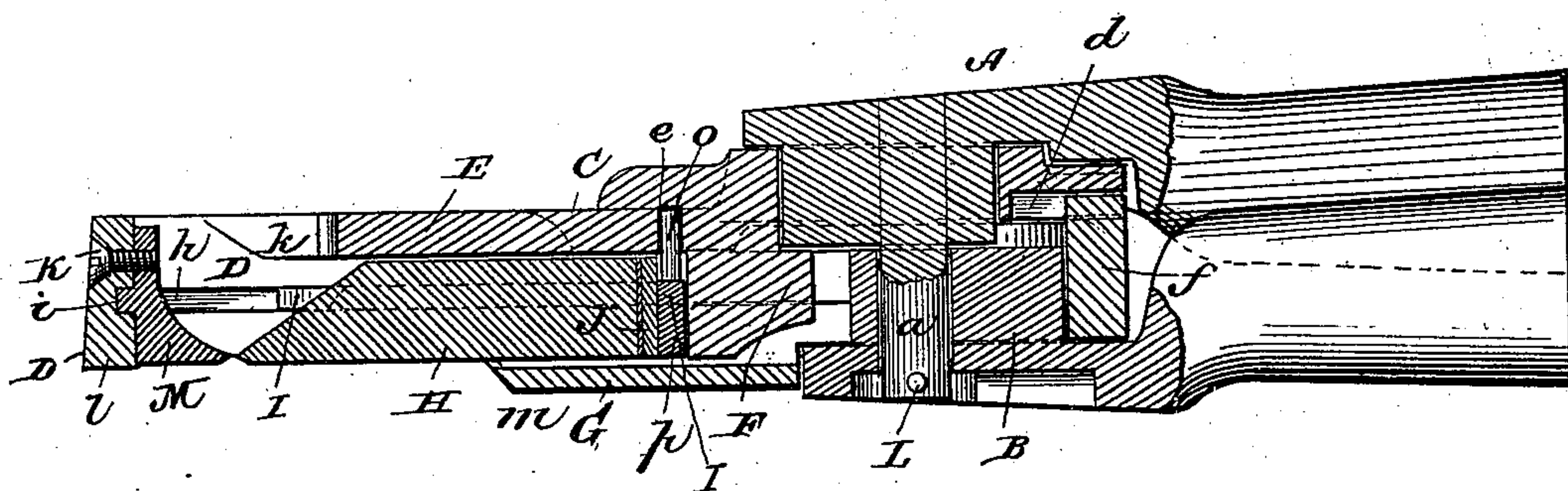
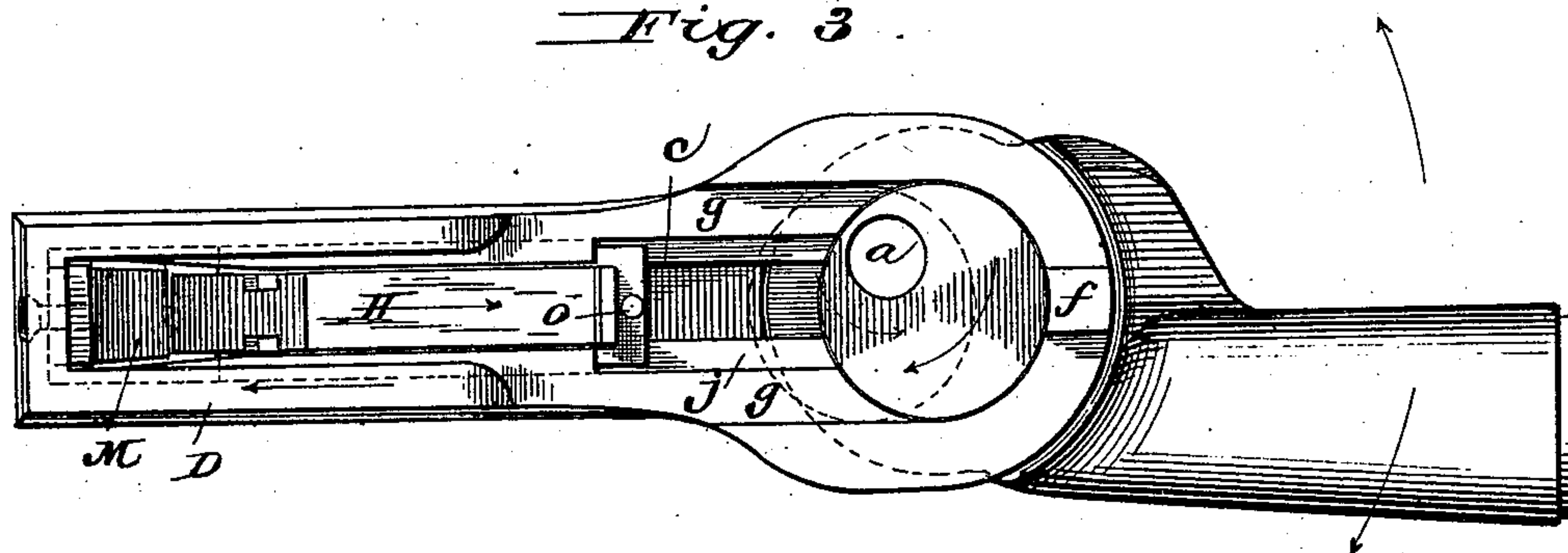


Fig. 3



Inventor:
Richard Fawcett.

Attest:
H. L. Bernier
Atty. Gen.

By

H. J. Abbot,
Atty.

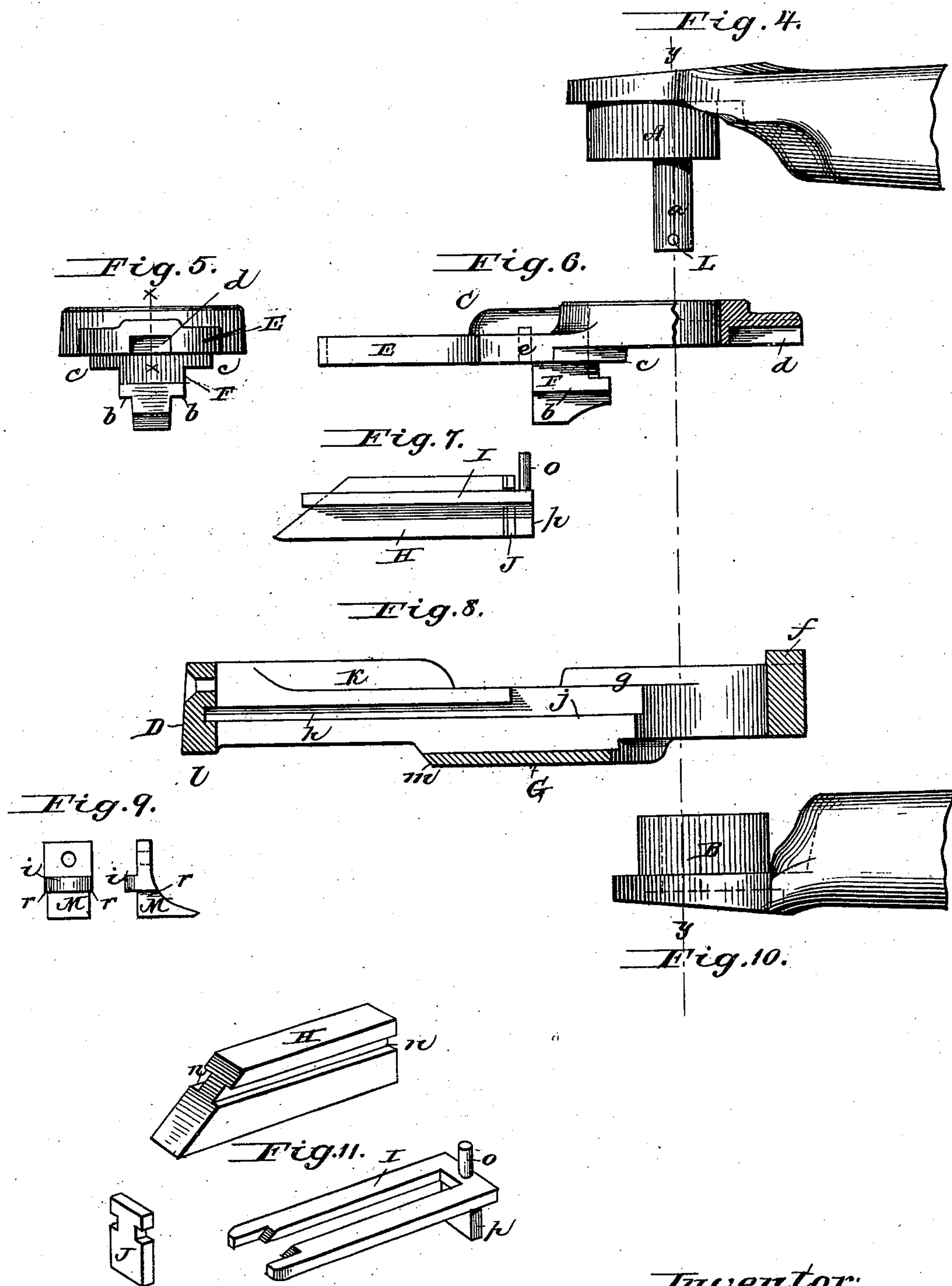
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2 Sheets—Sheet 2.

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Attest:
H. L. Pennic
Atty. Gen.

Inventor:
Richard Fawcett.

By H. J. Abbott
Atty.

UNITED STATES PATENT OFFICE.

RICHARD FAWCETT, OF SALEM, OHIO.

BOLT AND RIVET CUTTER.

SPECIFICATION forming part of Letters Patent No. 229,987, dated July 13, 1880.

Application filed April 22, 1880. (No model.)

To all whom it may concern:

Be it known that I, RICHARD FAWCETT, a citizen of the United States, residing at Salem, in the county of Columbiana and State of Ohio, have invented certain new and useful Improvements in Bolt and Rivet 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification, in which—

Figure 1 is a perspective of the cutter; Fig. 2, a longitudinal section thereof; Fig. 3, a top view of the lower section of the tool; Fig. 4, a detached view of the top eccentric; Fig. 5, an end view of the upper section of the tool; Fig. 6, a side view thereof, partly in section; Fig. 7, a side view of the long sliding cutter in its carrier; Fig. 8, a longitudinal section of the lower part of the tool; Fig. 9, a back and side view of the short cutter; Fig. 10, a detached view of the lower eccentric; and Fig. 11, a perspective of long cutter, its carrier and adjusting or compensating block detached from each other.

My invention relates to bolt and rivet cutters; and it consists in the construction of the several parts, as hereinafter described, whereby the cutters are moved toward each other, the cutters are supported in their frame, and the loss in the length of the sliding cutter is compensated for.

In the accompanying drawings, the letter A indicates the top eccentric, and B the bottom eccentric, both having a handle attached thereto. The top eccentric has a pin, *a*, projecting therefrom, which passes through a hole formed in the lower eccentric, as shown in Fig. 2, and forms the pivotal connection between the two.

The frame of the cutter is made in two sections, C and D. The section C is composed of a bar, E, enlarged at one end, so that there may be formed therein a circular opening, in which the eccentric A is to fit, as illustrated in Fig. 2. The lower face of the same section is formed with a lug, F, just in front of the circular opening in the enlarged part of the

section D, which lug projects partly into or under the circular opening, so as to form a seat for the eccentric A, as shown in Fig. 2, and is made with shoulders *b* on its sides. A portion of the under face of the bar E is cut away, so as to form shoulders *c* around the opening on either side of the lug F, and to the rear of the opening there is formed a recess, *d*. In the bar E, just in front of lug F, there is a hole, *e*.

The lower section, D, is a frame or box enlarged at one end, where it is provided with a circular opening to correspond with the one in the upper section, C. On its top face it is provided with a lug, *f*, to fit into the recess *d*, and with a recess, *g*, for the reception of the shoulders *c* of the upper section, C. It is further made with a groove, *h*, running the length of both sides of the box on the inside, and also across the end, so as to be on the same plane. A part of the top wall of the groove next to the circular opening is cut away, as illustrated in Figs. 3 and 8, so that the lower wall of the groove at that point will form a seat, *j*, for the shoulder *b* of lug F. A portion of the inside face of the sides of box D, next to the end where the cutter M is held, is cut away from the groove *h* upward, so that the lower wall of the groove at that point will afford a seat for a shoulder formed on the side of said cutter M. The upper wall of the groove *h*, from the end of seat *j* to nearly the end of the box, forms a flange, *k*, for the support and guide of the bar E of the upper section, C. The bottom of the box is open from *l* to *m*, and generally closed by plate G from *m* to the circular opening.

The letter H indicates the long cutter, which is formed with a beveled end and with grooves *n* in its two sides. It is held in a carrier, I, which is provided with an upright pin, *o*, and a pendent shoulder, *p*, beneath, and constructed so that it will spring a little at its open end, so as thereby to tightly hold the cutter between its prongs. A portion of these prongs fit into the grooves in the side of the cutter, and the remaining portion fit into the grooves *h* of the section D, while the pin *o* fits into the hole *e* of bar E, and shoulder *p* against lug F.

The letter J indicates blocks formed with notches in their sides, so as to fit over the

prongs of carrier I, and are used to fill up the space lost in the length of the cutter H by grinding, and thereby keep the cutter at a uniform length.

5 The short cutter (lettered M) is formed with a lug, *i*, on its back and sits against the end of box D, the lug *i* fitting into the groove *h*, thereby preventing the cutter from moving up and down. The cutter is kept from tipping
10 forward by means of a screw, K, which is passed through the end of the box and into the hole made in the cutter at the point indicated in Figs. 2 and 9.

In order to brace the cutter M against any
15 down or lateral pressure it is formed with a shoulder, *r*, on both sides, which shoulders rest on the seat afforded by the lower wall of groove *h*, formed as hereinbefore described. These shoulders on the sides of the cutter re-
20 lieve the lug on the back thereof from considerable strain, and very much assist in resisting any great pressure exerted on the cutter while being operated.

After the parts have been constructed as
25 described they are fitted together so as to bear the relation one to another shown in Fig. 2, and detached parts in Figs. 6, 7, 8, and 10, and in which the line *yy* indicates the central point of connection of the main parts. The
30 two eccentrics are held together by a pin, L, passed through a hole in pin *a*, as illustrated in Fig. 2.

In operation, the tool is applied so that the bolt or rivet will pass between the cutters H
35 and M when the handles of the tool are brought toward each other, which movement turns the two eccentrics so that the upper one, A, will push forward the bar E, and with it the sliding cutter H, while the lower eccentric
40 will draw back the section D, and with it the short cutter M, so that the two sections carrying the cutters will be caused to slide in contrary directions and exert the same pressure against both sides of the bolt, so that it will
45 be quickly and with ease cut in two parts.

The tool is very strong and made at small cost, and is very effective in operation.

Having described my invention, what I claim is—

1. The combination of eccentrics A and B 50 and sliding sections D and E, carrying the cutters, the eccentrics being arranged to operate so as to slide the cutters in parallel lines in opposite directions, for the purpose set forth.

2. The bar E, formed with a circular open- 55 ing and shoulder *c* and recess *d*, and provided with lug F, formed with shoulders *b*, substantially as set forth.

3. The frame D, provided with lug *f*, and formed with a circular opening, grooves *h*, 60 flanges *k*, seat *j*, and recess *g*, substantially as set forth.

4. The cutter H, provided with grooves *n*, substantially as set forth.

5. The carrier I, provided with pin *o* and 65 shoulder *p*, substantially as set forth.

6. The combination of cutter H and carrier I, substantially as set forth.

7. The combination of cutter H, carrier I, and grooved frame D, substantially as set 70 forth.

8. The combination of cutter H, carrier I, and blocks J, substantially as set forth.

9. The cutter M, provided with lug *i* and shoulders *r*, in combination with box D, pro- 75 vided with a groove and a seat for lug *i* and shoulders *r*, substantially as set forth.

10. The cutter H and carrier I, provided with pin *o* and shoulder *p*, in combination with bar E, provided with lug F, and frame 80 D, provided with grooves *h*, substantially as set forth.

11. The combination of bar E, provided with lug F, sliding cutter H, frame D, provided with cutter M, and eccentrics A and B, substan- 85 tially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

RICHARD FAWCETT.

Witnesses:

HENRY JUDD,
GEO. STREET.