

(No Model.)

2 Sheets—Sheet 1.

J. KIRBY.

BUNG HOLE CUTTER.

No. 312,359.

Patented Feb. 17, 1885.

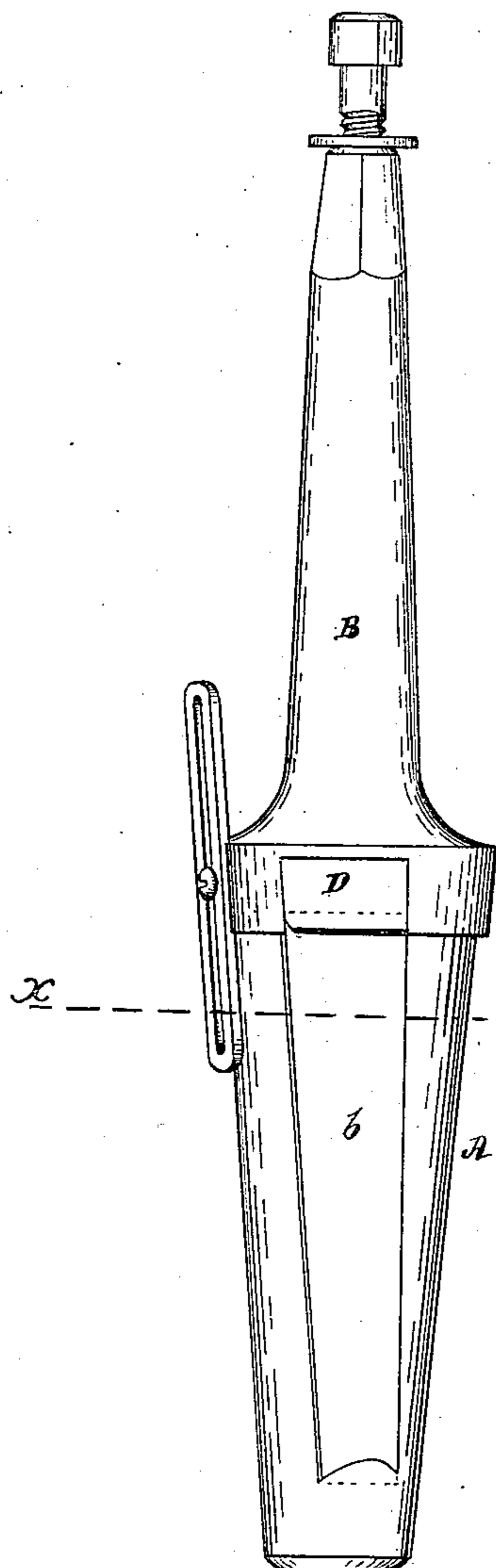


Fig. 1.

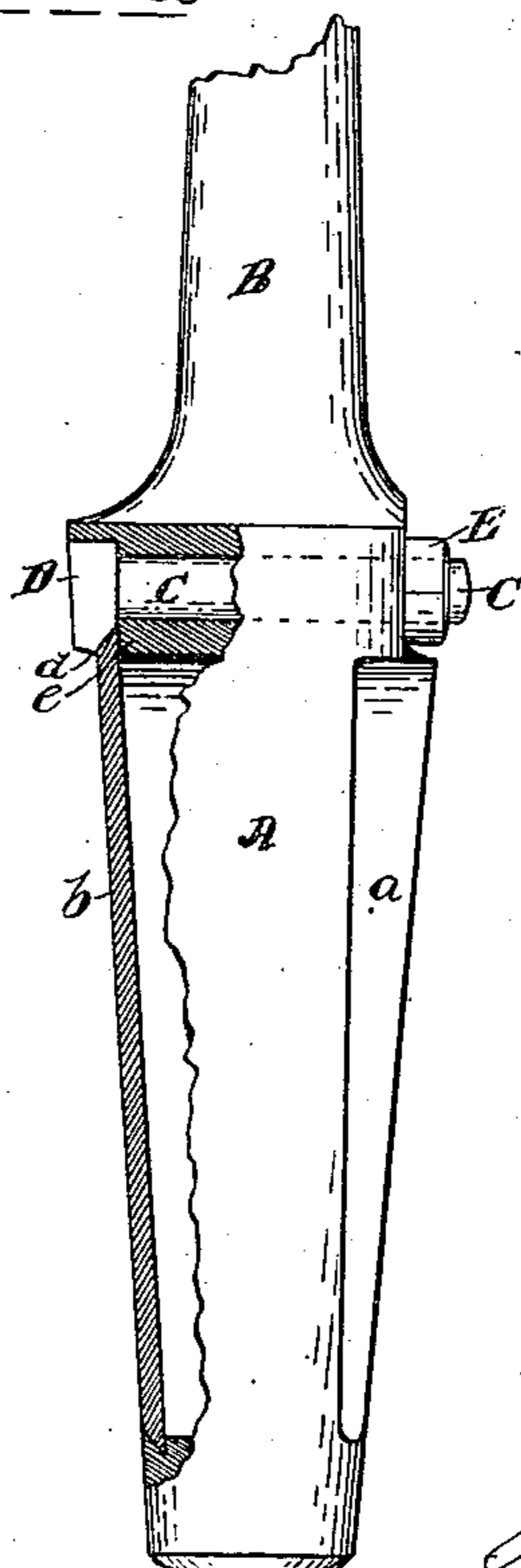


Fig. 3.

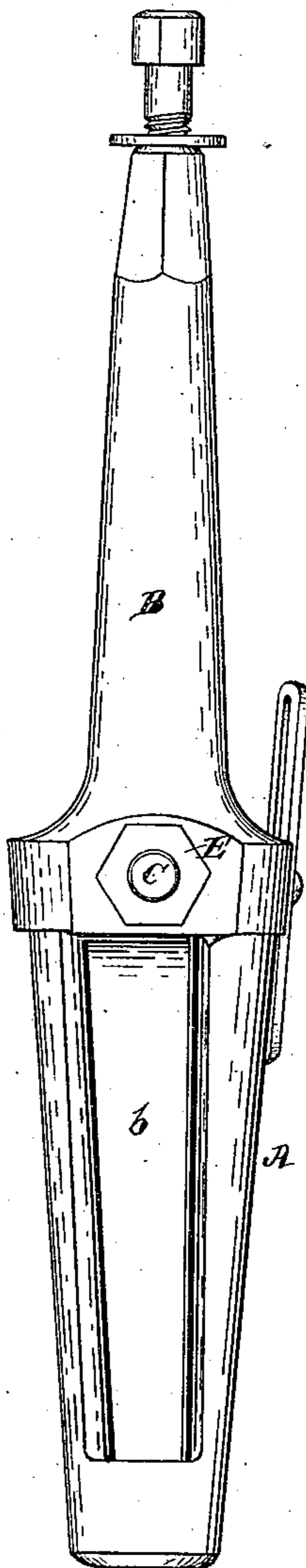


Fig. 2.

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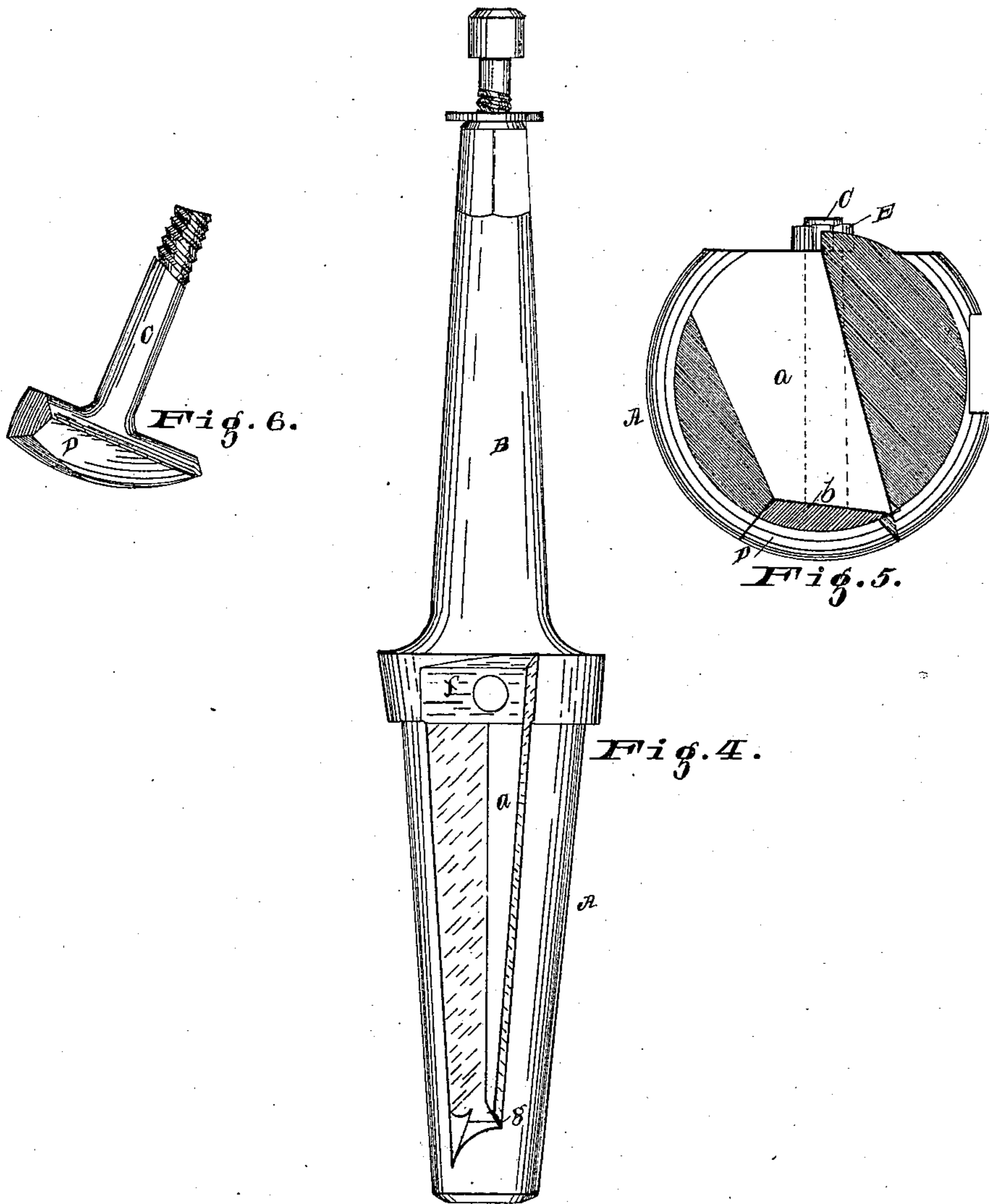
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E. R. Still,
J. M. Stahl.

Inventor.

Josiah Kirby
per Wm. Hubbell Fisher,
Atty

UNITED STATES PATENT OFFICE.

JOSIAH KIRBY, OF CINCINNATI, OHIO.

BUNG-HOLE CUTTER.

SPECIFICATION forming part of Letters Patent No. 312,359, dated February 17, 1885.

Application filed September 18, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOSIAH KIRBY, of Cincinnati, Hamilton county, Ohio, have invented certain new and useful Improvements in Bung-Hole Reamers, of which the following is a specification.

My present invention is designed as an improvement on the invention for which Letters Patent were granted to me on the 20th of September, 1859; and its object is to lessen the cost of construction at the same time that it strengthens the instrument.

Referring to the drawings forming part of this specification, Figure 1 represents one side of the reamer; Fig. 2, the opposite side, and Fig. 3 is a view taken at right angles to the plane of Figs. 1 and 2. Fig. 4 is an elevation of the reamer with the bit and bolt removed to show the recesses in the reamer which respectively receive same. Fig. 5 is a transverse central section taken at the dotted line *x x* of Fig. 1, and Fig. 6 is a view of the preferred form of bolt and its shank for holding the upper end of the bit to the body of the reamer.

A is the body, and B the shank, of the reamer, both of which are cast or otherwise formed of one piece of metal. The body A is provided with a longitudinal slot or opening, *a*, extending through the body from side to side and nearly from end to end. At one side of this opening *a* is the knife or bit *b*, which operates after the manner of a plane. Near the junction of the body with the shank is a bolt, C, passing through an opening, *f*, in the body, as shown in Fig. 3. This bolt has a square head, D, the lower edge of which is beveled at the expense of the inner face, as shown at *d* in Fig. 3. The lower end of the bit *b* is beveled at the expense of its outer face, and rests in a similarly-shaped notch or depression, *g*, at the lower end of the opening *a* in the body, and the upper end of the bit *b* is also beveled at the expense of the outer face, the bevel corresponding to the bevel on the lower side of the head D of the bolt C. When the bit *b* is in position, the lower end rests in the notch at the lower end of the opening *a*, and the upper end rests against a shoulder, *e*, at the upper end of the opening *a*, and is held firmly in this position by the head D of the bolt C, a nut, E, being screwed on the end of the latter, by which the head D is drawn tightly against the bit, which is thus held tightly in position. By forming the shank

and body in one piece the instrument is very strong, thus overcoming a very common objection urged to the instrument patented to me by my aforesaid Letters Patent, this instrument being made in several pieces. If desired, the ends of the bit *b* may be square instead of beveled, and the notch at the lower end of the opening *a* and the head D of the bolt be shaped accordingly. An auger may be connected to the end of the reamer, as in the instrument described in my aforesaid Letters Patent.

The various features of my invention are preferably used together; but one or more may be used without the remainder, and also, when applicable, in combination with reamers of constructions different from the one herein shown and described.

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

1. The combination of the tubular body A, provided with notch *g*, and recess *f*, and opening *a*, bit *b*, and bolt entering the body A at the upper end of the latter, and securing the bit at its upper end to the body, and preventing the bit from coming up out of notch *g*, for the purposes set forth.

2. The combination of the tubular body, having notch *g*, and the bit *b*, having its lower end received in said notch, and a bolt arranged to overlap the upper end of the bit and to secure the latter in position to the body A, substantially as and for the purposes specified.

3. The combination of the body A, bit *b*, having a beveled upper end, and the bolt C, having a head, D, provided with a beveled edge, *d*, the bolt being retained in position by a nut, E, and the lower end of the bit being retained in position by the notch *g* in the body A, substantially as and for the purposes specified.

4. The combination of the tubular body, having notch *g* and depression *f*, and bit *b*, its lower end in notch *g* and its upper end in depression *f*, and the bolt C, having head D, provided with edge *d*, overlapping the upper end of the separable bit, and having shank, which passes through the body A and on its end receives a nut, E, substantially as and for the purposes specified.

Attest: JOSIAH KIRBY.

EDWARDS RITCHIE,
J. WM. STREHLI.