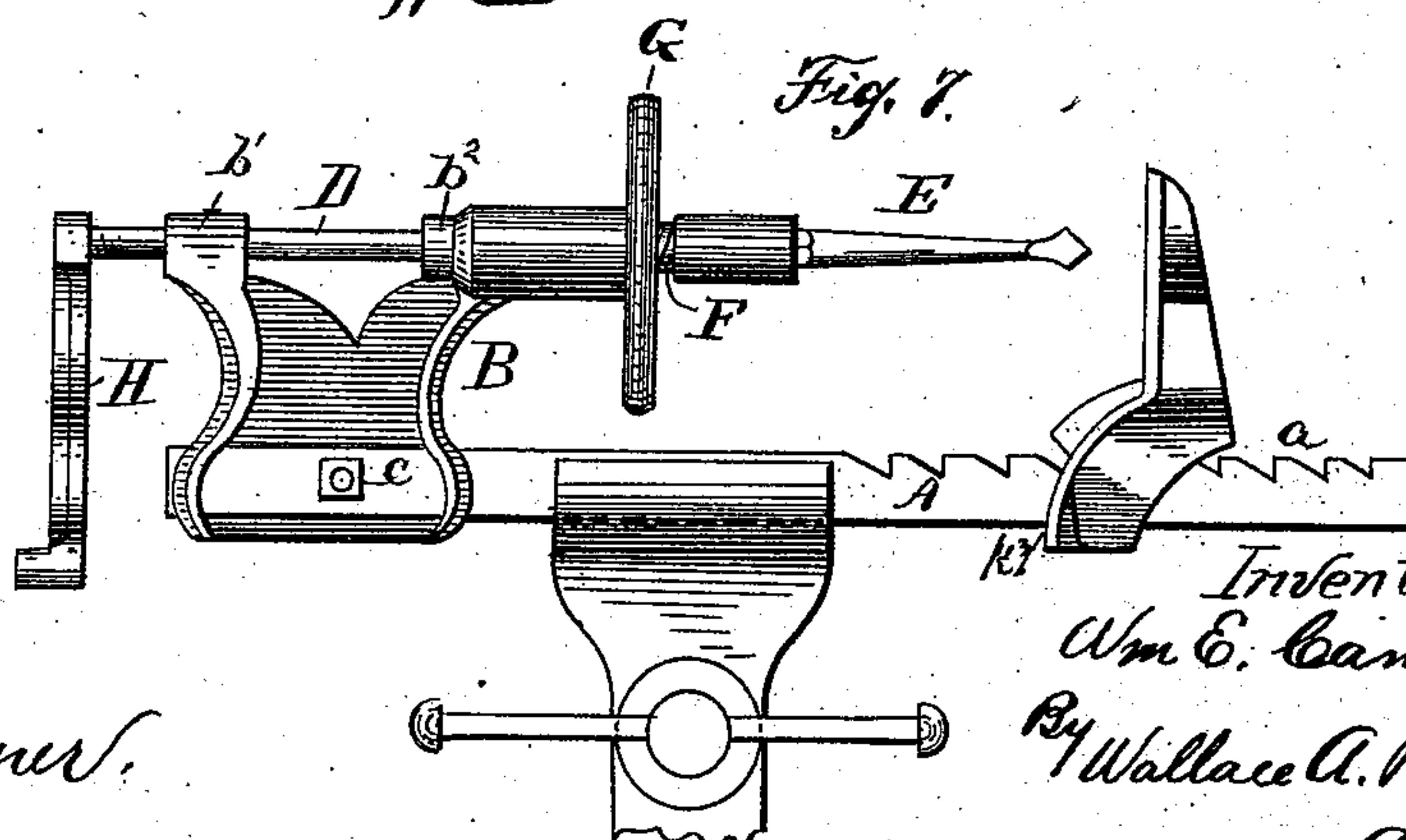
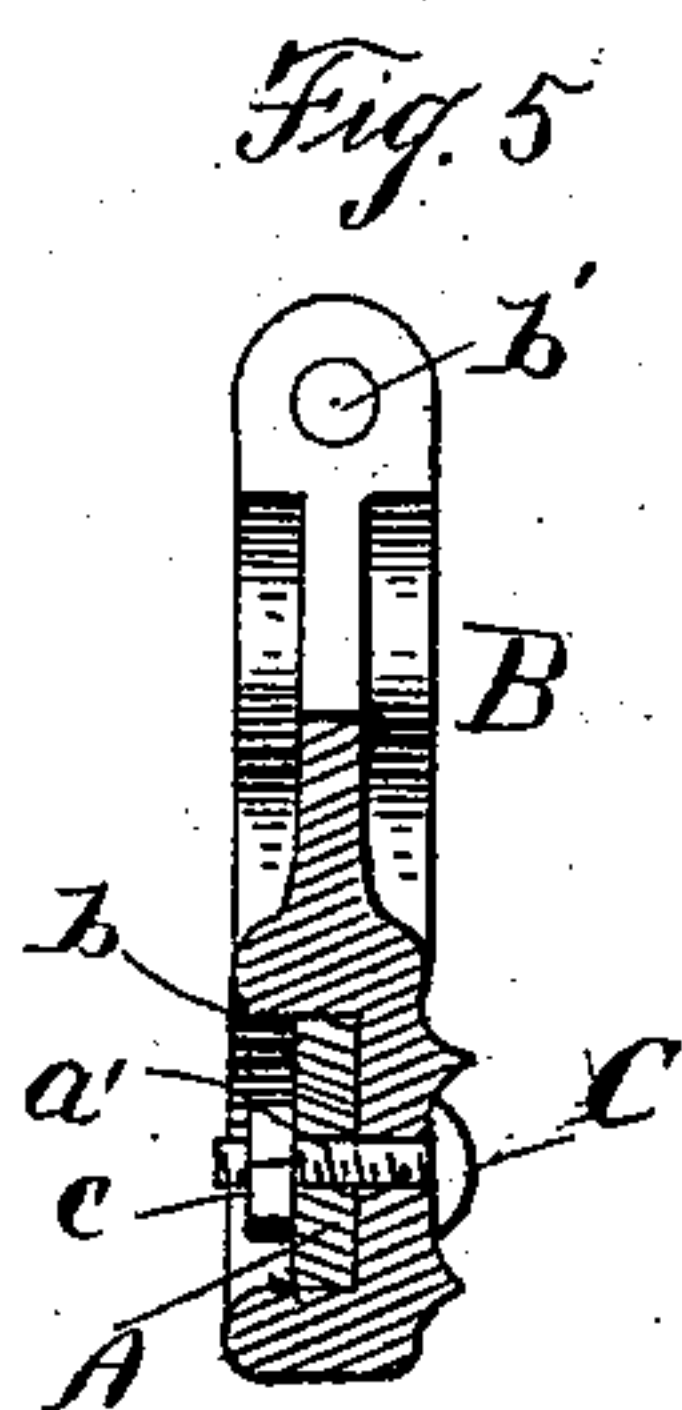
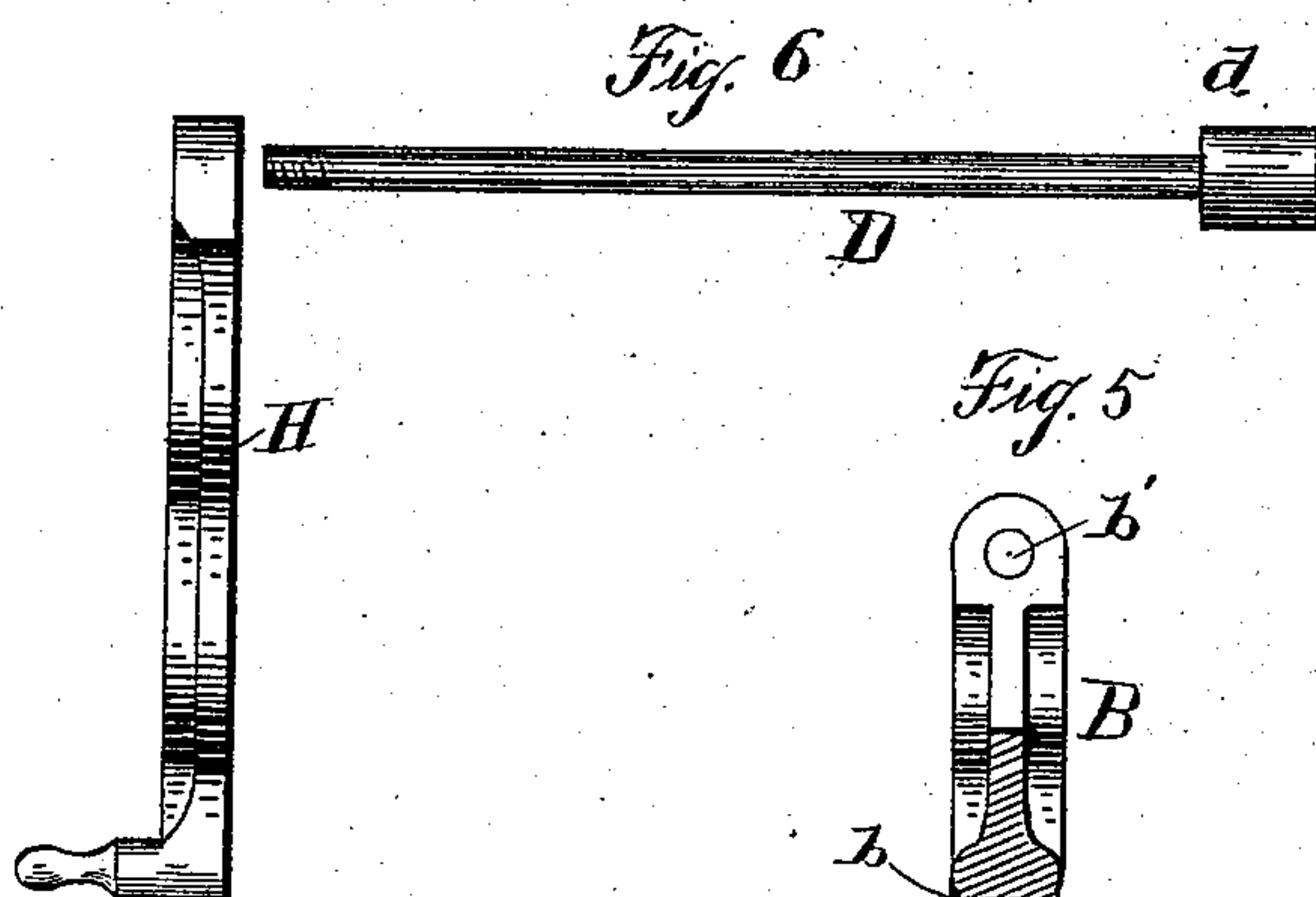
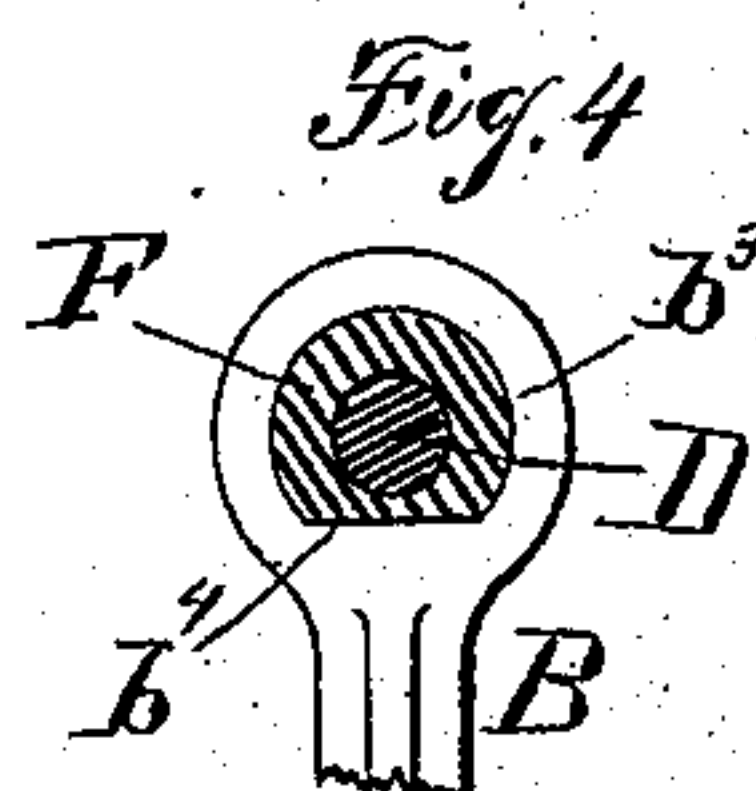
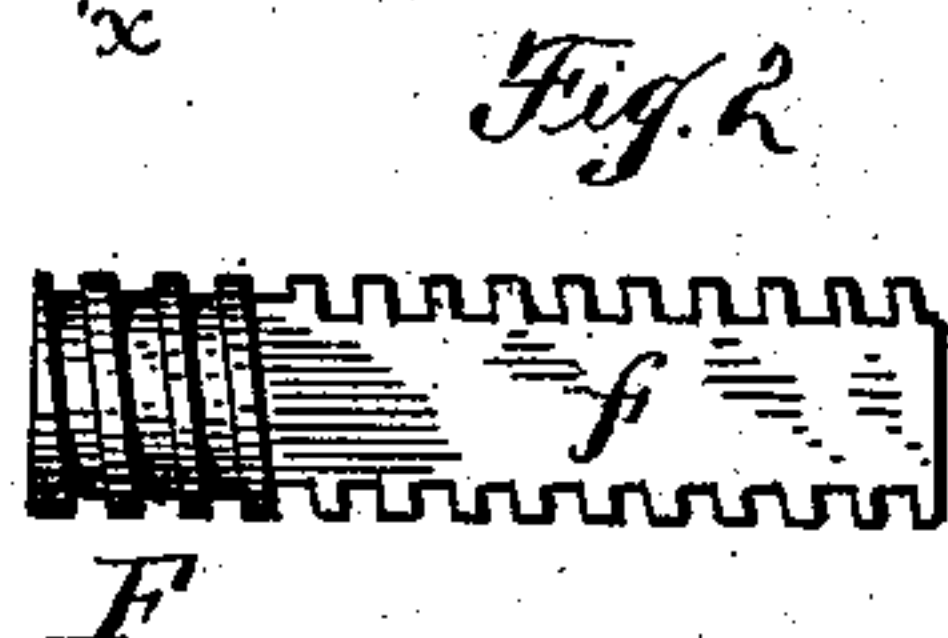
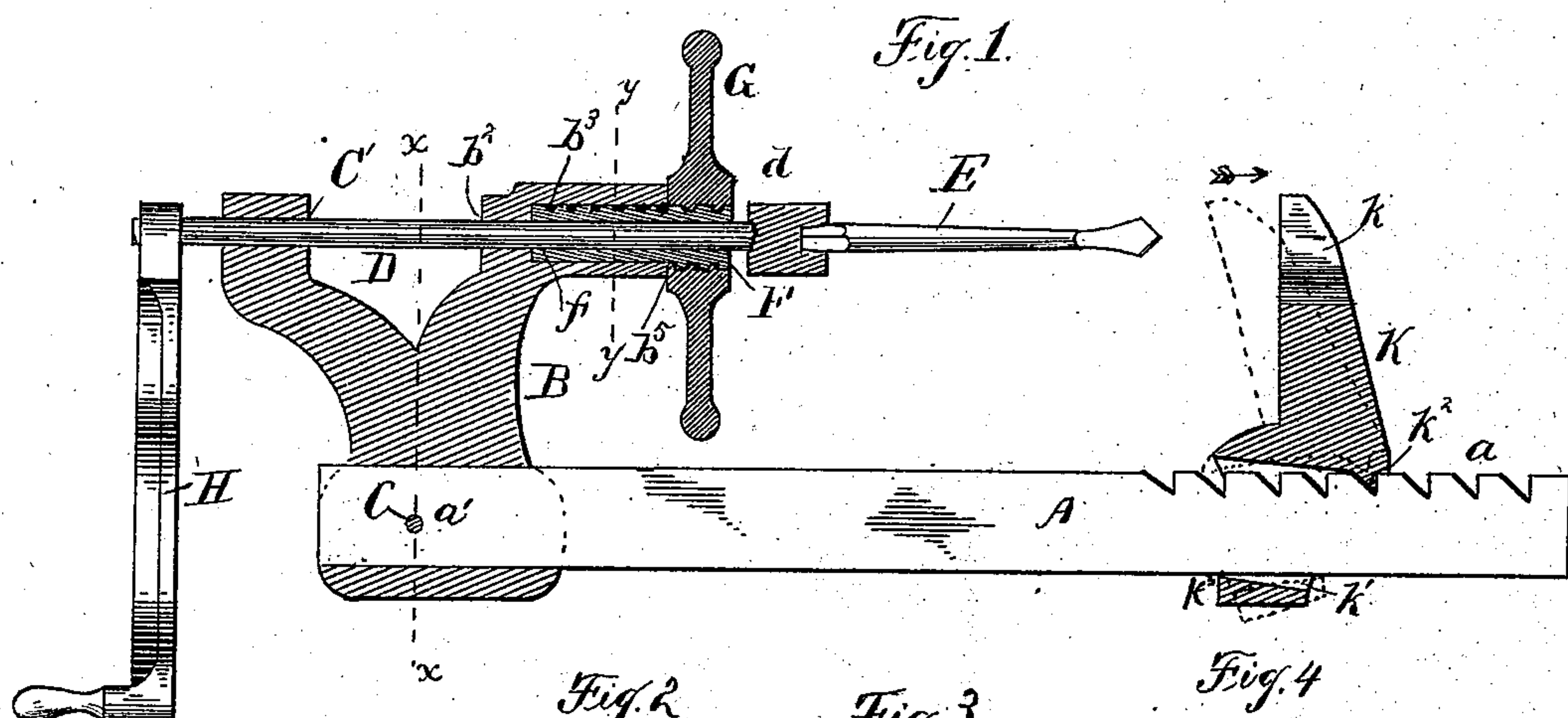


(No Model.)

W. E. CANEDY.
DRILLING MACHINE.

No. 380,018.

Patented Mar. 27, 1888.



Witnesses:

C. H. H. Brown,

F. Brown.

Inventor:

Wm E. Caneby,

By Wallace A. Bartlett
att'y.

UNITED STATES PATENT OFFICE.

WILLIAM E. CANEDY, OF ROCHESTER, MINNESOTA.

DRILLING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 380,018, dated March 27, 1888.

Application filed August 21, 1885. Renewed September 12, 1887. Serial No. 249,530. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. CANEDY, residing at Rochester, in the county of Olmsted and State of Minnesota, have invented certain new and useful Improvements in Drilling-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to drilling-machines, especially machines of the class intended to be held in a vise while in operation.

The invention consists in the construction of the mechanism for feeding the drill-shaft forward; also, in the construction of the standard, shaft, and crank-handle so that the parts can be readily assembled; also, in the various constructions and combinations hereinafter described and claimed, by which a light and cheap machine-tool is produced.

In the drawings, Figure 1 is a central longitudinal section of the drilling-machine, some parts being in elevation. Fig. 2 is a plan, and Fig. 3 an end elevation, of the feed-screw. Fig. 4 is a section on line *yy*, and Fig. 5 a section on line *xx*. Fig. 6 is an elevation of the boring-bar and its crank detached. Fig. 7 is a side elevation of the machine complete.

A indicates the base-bar, which is provided with notches *a* at one end and a perforation, *a'*, near the other end.

The standard B has a mortise through which the bar A passes. One side of the standard has a rabbet, *b*, extending to the mortise, and a hole through the opposite side of the standard permits the passage of bolt C through this hole and the hole *a'* in the bar, and the nut *c* screws on this bolt, resting against the face of the bar A within the rabbet *b*. The standard and bar are thus secured firmly, but may be readily disconnected by removing the bolt C.

The standard B has bearings *b'* *b''* for the boring-bar. In front of the bearing *b''* there is a recess, *b'''*, larger than the bearing *b''*, and having a spline or flat side, *b''''*, the recess being otherwise circular in cross-section.

The boring-bar D has a head, *d*, which contains a socket for the drill E and presents a shoulder toward the boring-bar. The bar is otherwise of size to fit the bearings. A screw-threaded piece, F, having a flattened or splined face, *f*, fits snugly into the recess *b'''*, and has a

perforation corresponding to the bearing *b''*. This screw-threaded piece slides easily lengthwise in the recess *b'''*, but cannot turn therein, owing to the flattened or splined faces of the recess and screw-threaded piece.

A hand-wheel, G, has an internal screw-thread which fits upon piece F. This hand-wheel, when on its seat, has a side bearing against the shoulder *b''* of the standard B.

When the parts are assembled, by placing the piece F in the recess and screwing the hand-wheel on the end of said piece and passing the boring-bar from the front through its bearings the shoulder *d* rests against the front end of the screw-piece F. Then by turning the hand-wheel G the screw-piece, being unable to turn, must advance through the wheel, and so bear against the head *d* and advance the boring-bar. The boring-bar may be pressed back by pressure from the front, (the hand-wheel having been turned to permit such movement;) but the hand-wheel does not of itself retract the boring-bar.

The crank H is attached to the boring-bar, after its insertion in its bearings, by screwing thereon, or by a pin or spline, in usual manner.

The work-rest K is a standard extending upward from the base-bar, and can be moved to such position on the bar as to accommodate work of various kinds. A notch, *k*, in the top of this rest may be used to receive the end of a shaft or similar piece, or a projection from an irregular casting, serving to steady the same, and will act as a clamp and prevent the work from turning. The lower end of rest K has a mortise, *K'*, extending through it. A tooth, *K''*, extends downward into the mortise, which is a little wider than the width of the base-bar A. When the top of the rest K is pressed in the direction indicated by the arrow, the tooth *K''* will be pressed down into one of the notches *a* in the boring-bar, and by the binding of the side *K'''* of the mortise against the bar and the tooth extending into the notch the rest will be firmly held against backward movement. By rocking the rest slightly, as in dotted lines, Fig. 1, the tooth will be disengaged from the notches, and the work-rest may be moved in either direction along the bar.

This drilling-machine is very light and sim-

ple, can be readily taken apart and assembled, and is easily held in working position in any ordinary vise or clamp.

I claim—

5 1. In a boring-machine, the combination, with the base-bar A, of the standard B, carrying the boring-bar and feed, said bar passing through a mortise in the standard and secured by a bolt passing through a hole in the bar
10 and standard and held by a nut, the bolt-head and nut resting against the bar and standard, as set forth.

2. The combination, with the recessed standard, of the screw-threaded piece in said recess, the boring-bar passing through said piece
15 and having a rest against the end thereof, and the hand-wheel screw-threaded to said piece and resting against the standard.

3. The standard B, having bearings b' b'' and recess b^3 , the flattened screw-threaded piece F, 20 fitting said recess, the boring-bar D, having a head, d , resting against said piece, the hand-wheel G, screwed on piece F, and the crank H on the boring-bar, all combined, as stated.

4. The combination, with the notched base- 25 bar, of the standard, drill, and feed mechanism and the work-rest K, mortised for the passage of the base-bar and having a tooth, K^2 , to enter a notch in the bar, substantially as described.

In testimony whereof I affix my signature in
presence of two witnesses. 30

WILLIAM E. CANEDY.

Witnesses:

FRANK B. KELLOGG,
CYRUS SCHWAB.