

O. PECK.
Bit-Stock.

No. 219,872.

Patented Sept. 23, 1879.

Fig. 1

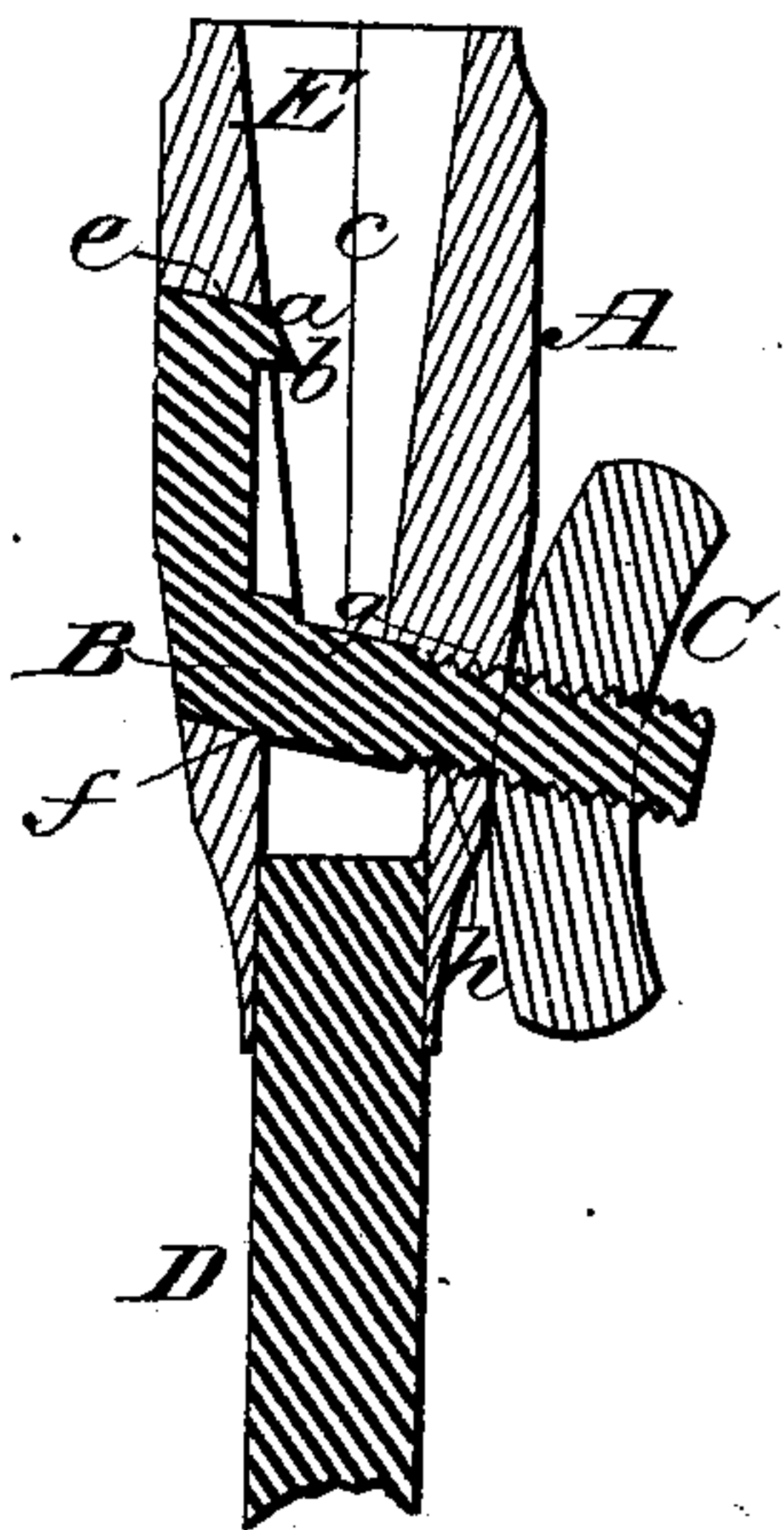


Fig. 2.

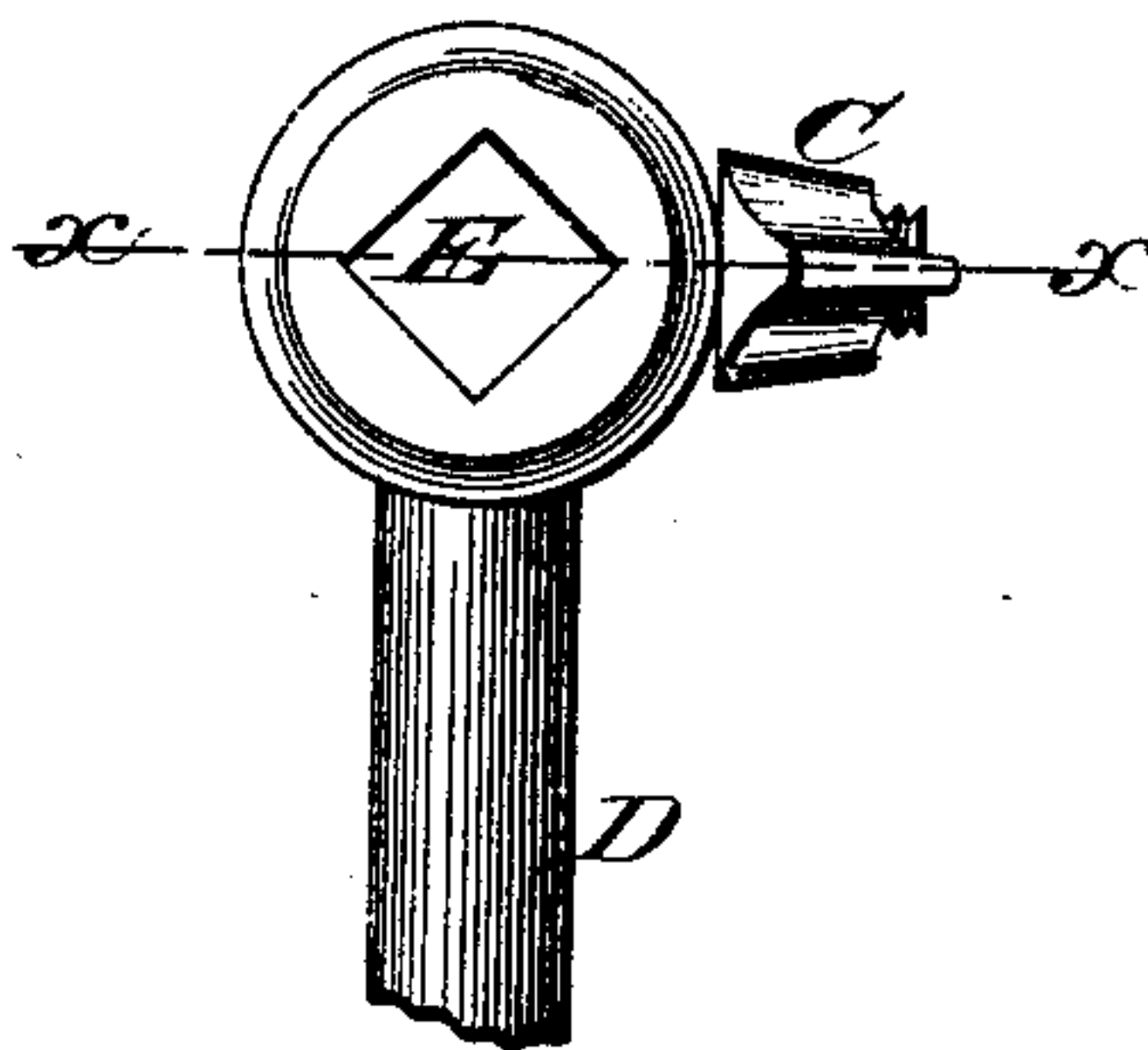


Fig. 3.

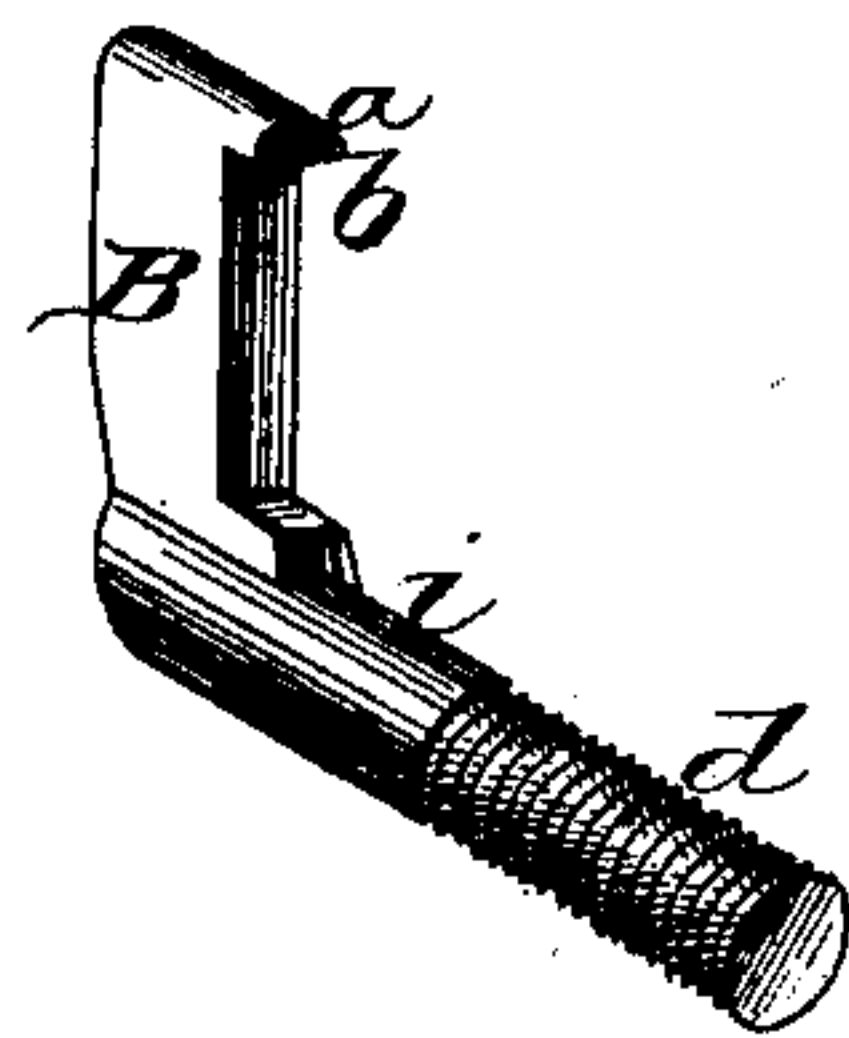
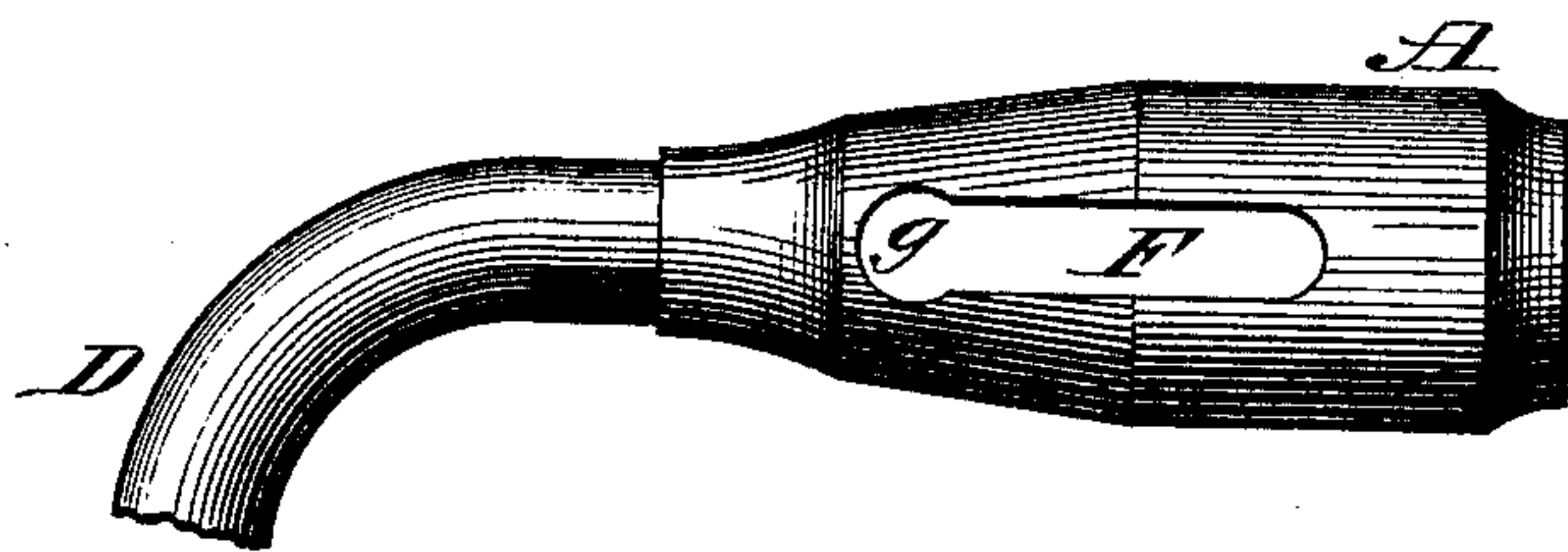


Fig. 4.



Witnesses:

Horace H. Mayhew
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UNITED STATES PATENT OFFICE

OBED PECK, OF ROWE, MASSACHUSETTS.

IMPROVEMENT IN BIT-STOCKS.

Specification forming part of Letters Patent No. **219,872**, dated September 23, 1879; application filed January 2, 1879.

To all whom it may concern:

Be it known that I, OBED PECK, of Rowe, in the county of Franklin and State of Massachusetts, have made certain new and useful Improvements in Bit-Stocks, whereof the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a longitudinal section of my brace, taken through the line *x x* of Fig. 2. Fig. 2 is a front-end view of my bit-brace. Fig. 3 shows the jaw-piece which draws the bit-shank into the socket and holds it there. Fig. 4 shows the head of my bit-brace attached to the sweep, with the jaw-piece and thumb-nut removed.

A is a shell, solidly attached to and forming part of the common sweep D of a bit-brace, which, being well known, is not fully represented. Said shell has in its upper end a socket, E, to hold the shanks of bits. Through the shell A, into its socket E, is cut a slot, F, large enough to admit the jaw-piece B, and in which the jaw-piece has bearings *e f*; and through the opposite side of shell A is made a hole, through which the end *i* of the jaw-piece passes, and in which it has the bearings *g h*.

C is a threaded thumb-nut, operating on the thread *d* of the jaw-piece B. The jaw-piece B, which I usually make of steel and temper like a cold-chisel, has a chisel-shaped edge, *b*, one side of which is formed of the incline *a*, tending downward into the socket when in place.

The line *c* represents the axis of rotation of a bit and its shank in the socket in operation.

The bearings *e f g h* are located at obtuse angles, as shown, to said axis of rotation, so that any part taking hold of the bit-shank and forced along said bearings, or either of them, would be by them driven inward from the outer end of the brace-head, and would draw the shank inward into socket E.

The operation of the brace is as follows: The thumb-nut C is loosened sufficiently to allow the edge *b* to be pushed out of the socket E, and a bit is introduced, the shank entering said socket. Then the thumb-nut C is turned, drawing, by its screw purchase, the edge *b* with great force against some portion, preferably the corner, of the bit-shank, and, as the

jaw-piece moves along the bearings *e f g h*, forcing the shank downward into the socket E, and firmly holding it there. The edge *b* cuts into the shank, cutting its notch therein, and thereby taking hold of the same to operate upon it.

Two parts of the mechanism combine to draw the shank inward into the socket E. First, the inclined surface *a* bears against the shank of the bit as it is driven into it, and tends to drive the edge *b* forward by its inclination, thereby drawing inward the shank, and also making a notch in it of suitable shape to draw inward the shank at its next insertion, and this advantage is gained more or less in proportion as the angle of the bevel with the line of motion of an entering shank on the side *a* of the edge *b* is less than on the other side; second, the line of draft of the thumb-nut is inward, because the bearings *e f g h* have the inclinations described, thereby guiding the jaw-piece downward after it takes hold of the shank, and drawing the shank with it firmly into its bearings in the socket.

I have preferred to draw the edge *b* into the shank by a jaw-piece projecting through the opposite side of the head, because its point *i* projects into position to be conveniently struck a light blow if the jaw-piece sticks when the nut is loosened, and because of additional leverage procured by its shape, and for other reasons.

Obviously the edge *b* might be driven into the shank by a thumb-screw applied on the side of the jaw-piece opposite the thumb-nut C, near the bearing *e*, when that bearing would, from its inclination, force the edge downward and draw the shank inward into the socket, an essential part of the invention being the jaw-piece taking hold of the shank and driven along a bearing which guides it, and the shank with it, downward into the socket.

Jaw-pieces have been made with a threaded end extending lengthwise through the head and a part of the sweep, so as to draw inward directly the shank when applied to it. In these constructions the nut is in the way of the hand when operating the brace, and they are expensive.

My invention has for a principal purpose to obviate this difficulty, and draw the shank down into the socket, while the thumb-nut is located in the convenient place at the side of the brace-head.

Obviously any handle may be applied to part A in place of the sweep D.

What I claim, and for which I pray Letters Patent, is—

1. The jaw-piece B and nut C, combined with the shell A, having a socket to receive and hold bit-shanks, when said jaw-piece has a chisel-edge, *b*, of which the bevel on the side

of said edge in the direction toward which a bit-shank moves in entering said socket makes a greater angle with the line of motion of said shank in entering the same than the bevel on the other side of said edge.

2. The jaw-piece B, having one or more bearings in the shell A, inclined as described, to guide it inward from the outer end of said shell, for the purposes described.

OBED PECK.

In presence of—

DANIEL POWERS,
W. R. BUZZELL.