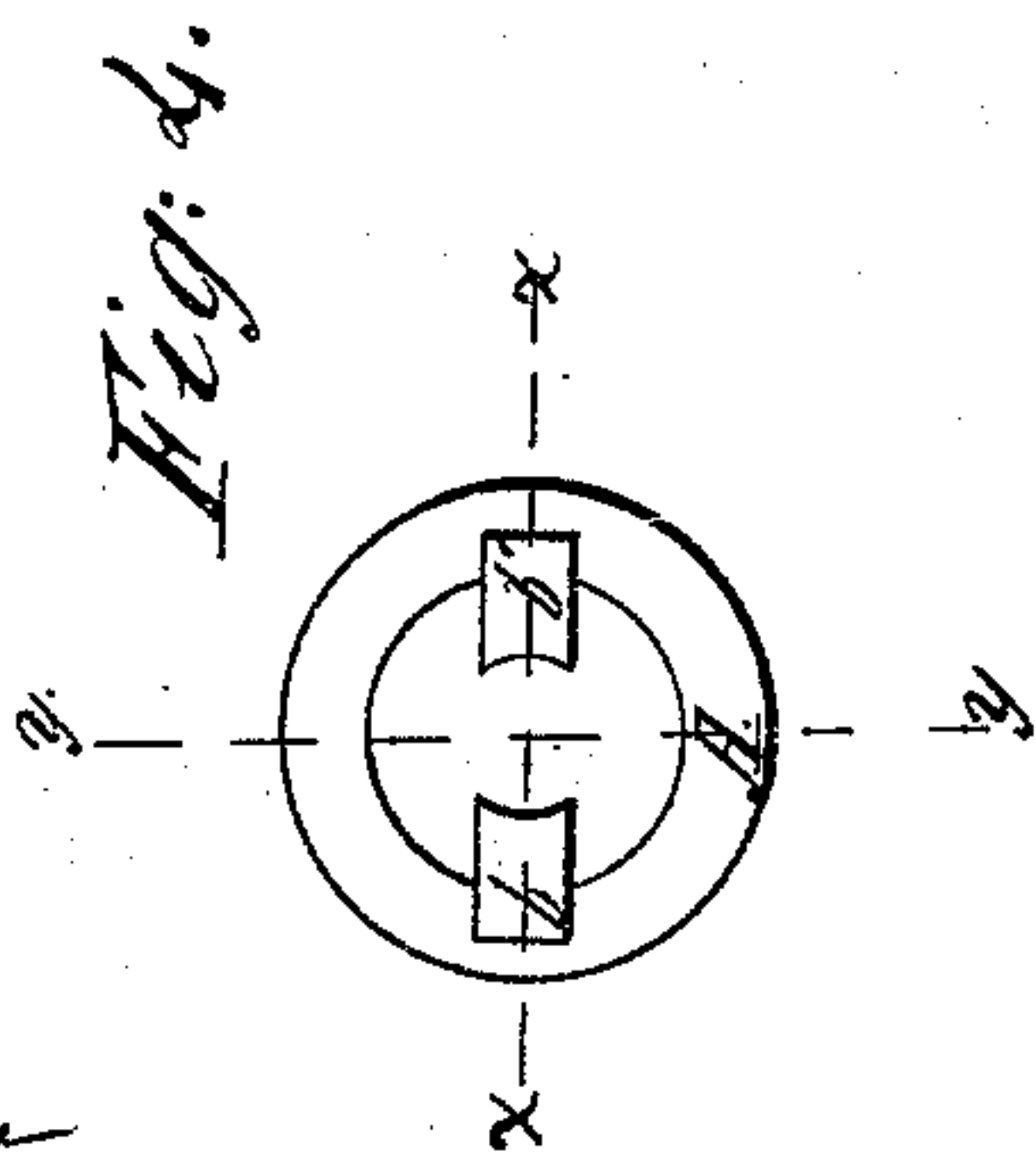
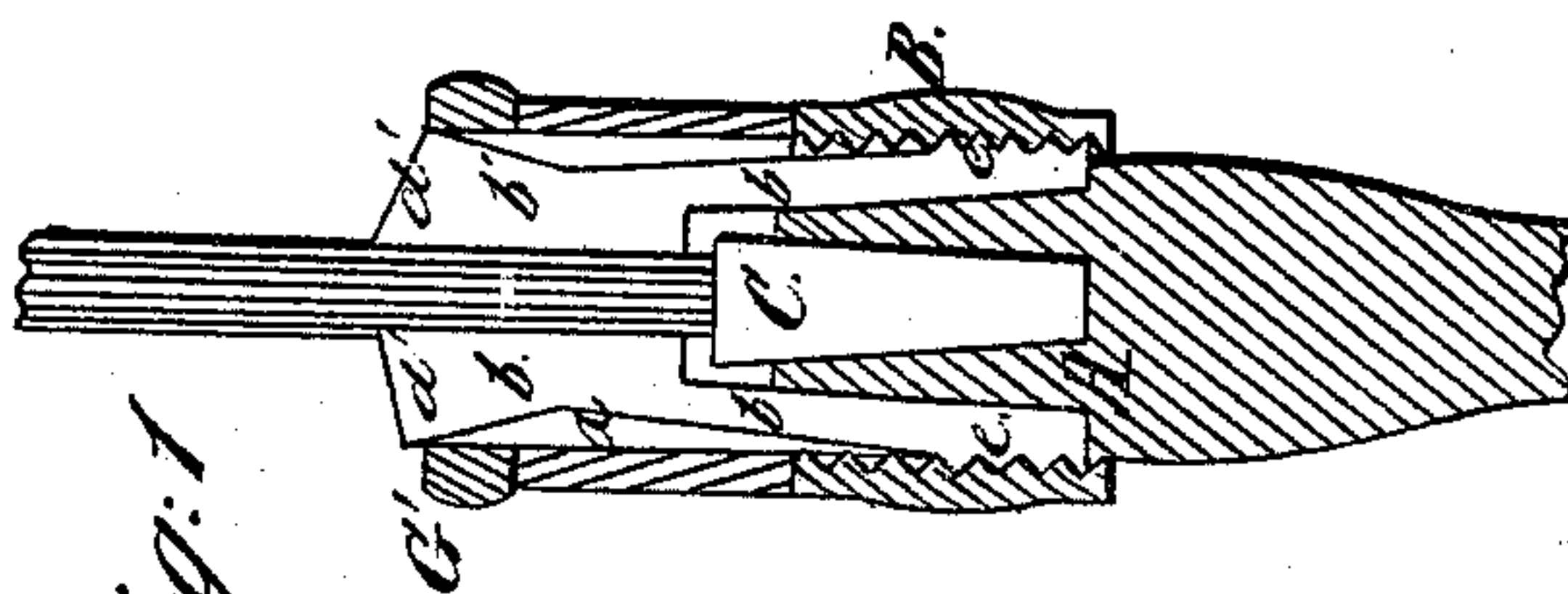
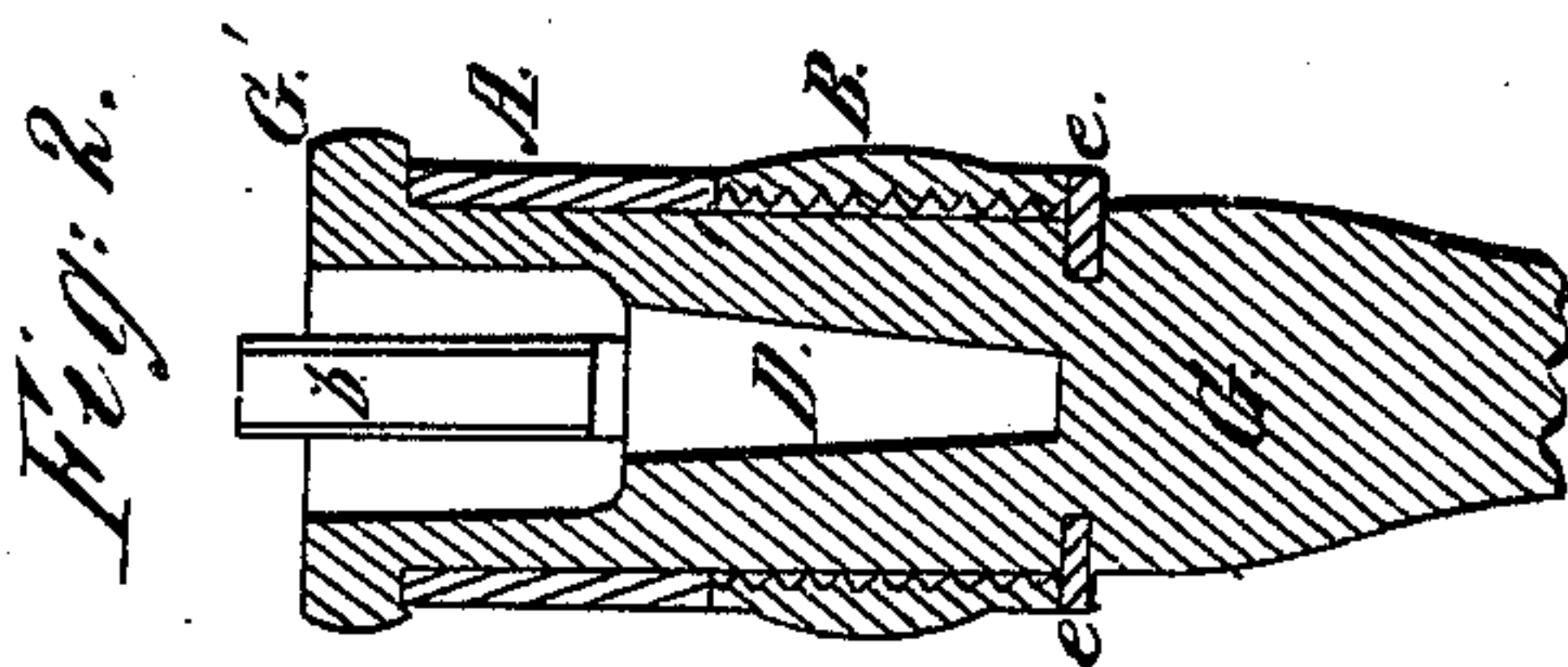
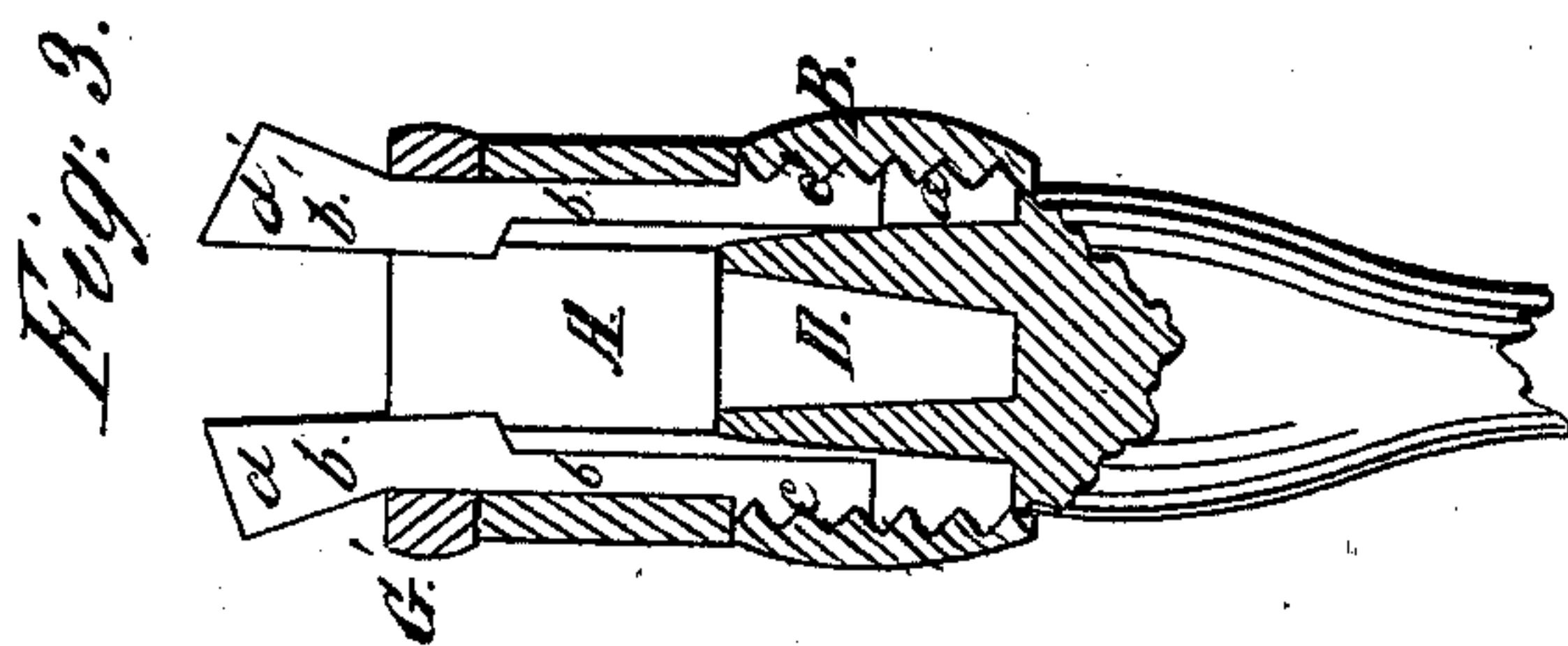
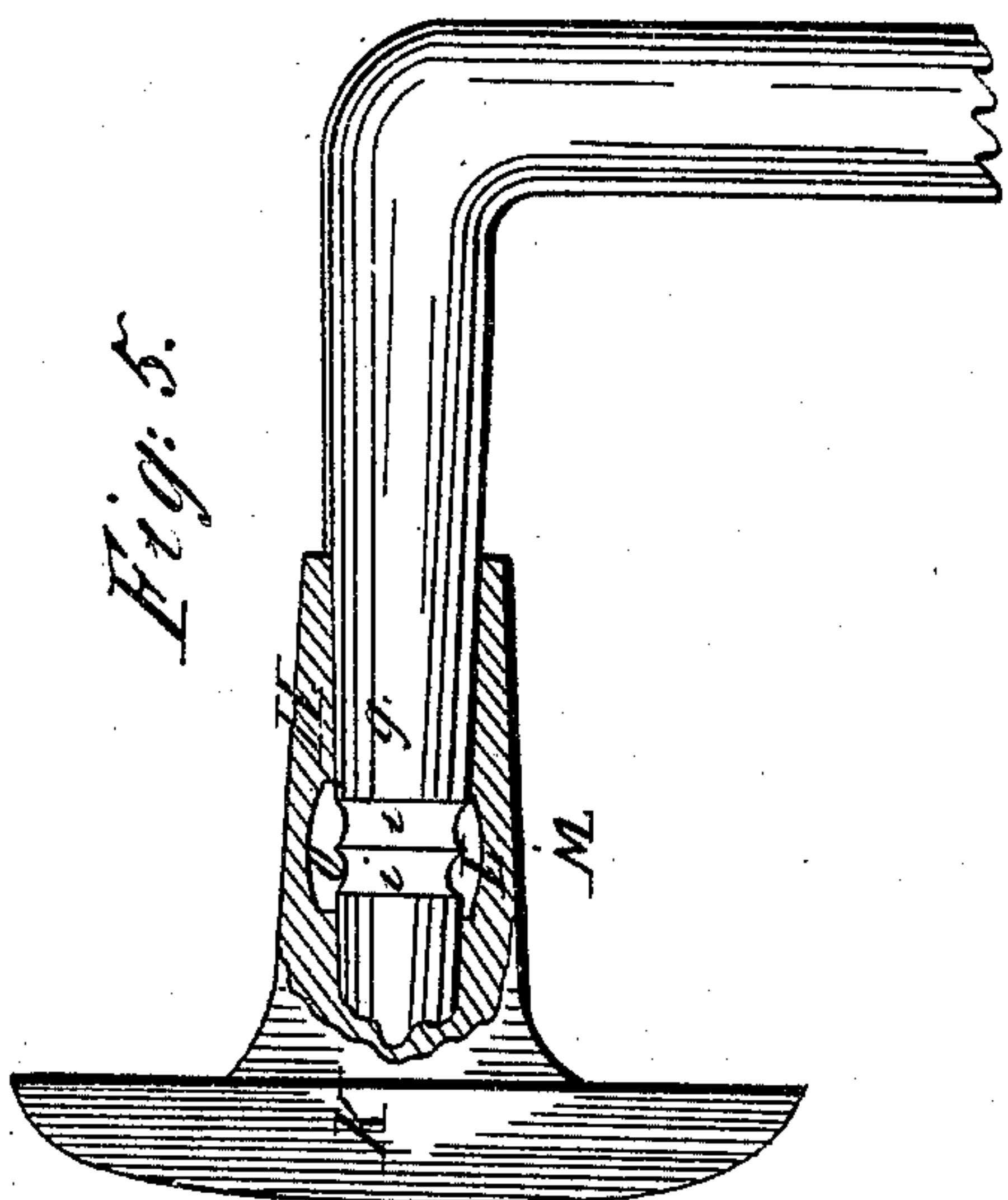


*C.B. Rose,  
Bit Stocks,  
No 63,944, Patented Apr. 16, 1867.*



*Witnesses.*

*J Jones*

*Edward H Hyde.*

*Inventor.  
C B Rose*

*By his attorney  
J B Gardiner*



# United States Patent Office.

CLEMENS B. ROSE, OF SUNDERLAND, MASSACHUSETTS.

*Letters Patent No. 63,944, dated April 16, 1867.*

## IMPROVEMENT IN BIT-STOCKS.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, CLEMENS B. ROSE, of Sunderland, Franklin county, Commonwealth of Massachusetts, have invented a new and useful Improvement in Bit-Stocks; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists, first, in a novel arrangement of devices for securing and centring the bit in the stock; and second, in a novel method of attaching the head to the stock G.

Figures 1 and 3 are transverse longitudinal sectional views of the lower end of the stock taken on the line *x x*, fig. 4, which is an end view of the same.

Figure 2 is a similar sectional view taken on the line *y y* of fig. 4.

Figure 5 is a side view, with a portion broken away to show the manner of attaching the head to the stock.

I construct the stock G of metal, in the usual form, the extreme lower end being formed with a projecting bead or rim, G', as shown in fig. 2. A circular recess is formed in the central portion of the end of the stock G', as shown in figs. 2 and 4, and above this recess, at the centre, is formed a rectangular socket, D, having its sides slightly inclined, to receive and hold the end of the bit-shank C, as shown in fig. 1. A groove or recess is then cut in opposite sides of the stock G, and extending from the end up to the upper edge of the ring B, as shown in figs. 1 and 3; the form of these grooves being shown clearly in fig. 4, with the jaws *b* inserted therein. These grooves are cut in the outer surface of the stock, for their entire length, with the exception of that portion where the bead G' is, the bead protruding sufficiently to form a bearing outside of the grooves at that point, as represented in fig. 4. A ring, A, is then slipped on at the opposite end of the stock G, and is shoved down against the bead G', as shown in fig. 2, where it is secured by brazing or soldering, or it may be forced on sufficiently tight to remain in position. A second ring, B, having a screw-thread cut on its inner surface, is then slipped on to the stock, and shoved down against the ring A, where it is held by pins *e* inserted into the sides of the stock, as shown in fig. 3; this ring B being left loose so that it can be turned on the stock G. If preferred, it is obvious that the bead G' may be omitted, and the ring A made to come out flush with the end of the stock G, in which event the rings A and B may both be shoved on at the lower end of the stock, even after the head K has been attached. I then construct a pair of jaws, *b*, the form of which is clearly shown in figs. 1 and 3. These jaws have screw-threads, *c*, cut on their outer surfaces, near their upper ends, as shown, this thread being raised or projecting from the surface of the jaws, and made to correspond with and engage in the thread of the ring B, as shown in figs. 1 and 3. The lower or outer portions of these jaws *b* are made parallel on their inner faces, and are curved or grooved, as represented in fig. 4, to aid in grasping and securely holding the bit C, as represented in fig. 1. On their outer surfaces, near their lower ends, they are inclined so as to increase in width towards their outer ends, as represented at *d* of figs. 1 and 3. These jaws thus constructed are placed in the grooves formed for them in the sides of the stock G, inside of the ring A, and shoved up until the screw-threads *c* on them engage with the thread of ring B, when, by turning the latter, the jaws will be drawn up into the grooves, their inclined or wedge-shaped heads *d* forcing them together as they are drawn in, as shown clearly in fig. 1. When it is desired to insert or remove a bit, the ring B is turned in an opposite direction, by which the jaws *b* are forced out, and spread apart, as represented in fig. 3, and to secure the bit, the ring is turned so as to draw the jaws in, and cause them to seize and hold the shank of the bit, as shown in fig. 1, thus centring the bit at the same time, while the square socket D keeps the bit from turning in the stock. In fig. 3 is shown my improved arrangement for attaching the head upon the shaft forming a bearing for the journal. It consists of a sleeve or socket, H, forming part of or attached to the head K. Into this sleeve the journal *g*, or end of the shaft, fits. Around this journal, near its end, I cut grooves *i i*, and corresponding with these grooves, inside of the sleeve H, I make a larger groove, L, which extends past on either side of the grooves *i i* in the journal. Through the side of the sleeve entering into the groove L, I make a hole, M, and having placed the journal *g* in the sleeve H, I pour melted metal through the hole M, which fills up the grooves *i i* and L, forming a collar around the journal, which prevents it from coming out, but does not interfere with its revolution. When the metal or other substance used becomes worn by use, loosening the shaft in its bearing, it can be taken out by melting or other suitable methods, and more substituted in the same manner. In the drawing, a section of the

metal collar is shown and indicated by the letter O. The advantages of these arrangements are that I have a brace with a powerful vise for a bit-holder, which is adjustable to any size of bit, and can be readily loosened or tightened by merely turning the collar around in the direction needed for either operation. Besides this I have a bearing for the shaft to turn in, which can always be kept tight-fitting and in order, for as soon as it becomes loosened by the metal being worn away, which only takes place after much use, it can be renewed very readily and is again tight and in good order, whereas in ordinary bit-stocks the head of the brace and the shaft themselves are subject to wear, and become useless when worn out.

Now, having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The bit-stock, provided with the socket D, the sliding jaws *b*, having the inclined heads *d*, and projecting or raised screw-threads *c*, and ring B, all constructed and arranged to operate as herein shown and described.
2. Connecting the head K to the shaft by means of the grooves *i i* and L, and the collar O melted in around them, substantially as set forth.

CLEMENS B. ROSE.

Witnesses:

EDWARD H. HYDE,  
J. B. GARDINER.