

(No Model.)

J. CHANTRELL.

BRACE CHUCK.

No. 337,243.

Patented Mar. 2, 1886.

Fig. 1.

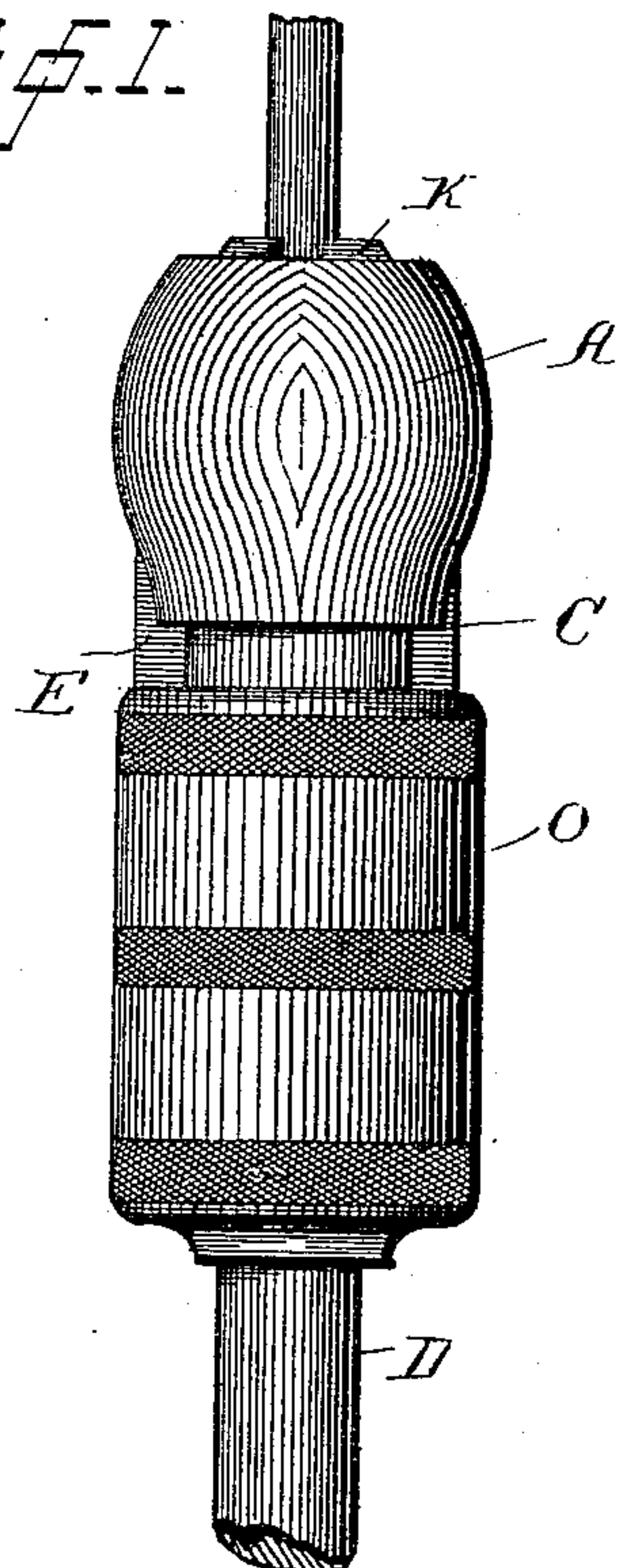


Fig. 2.

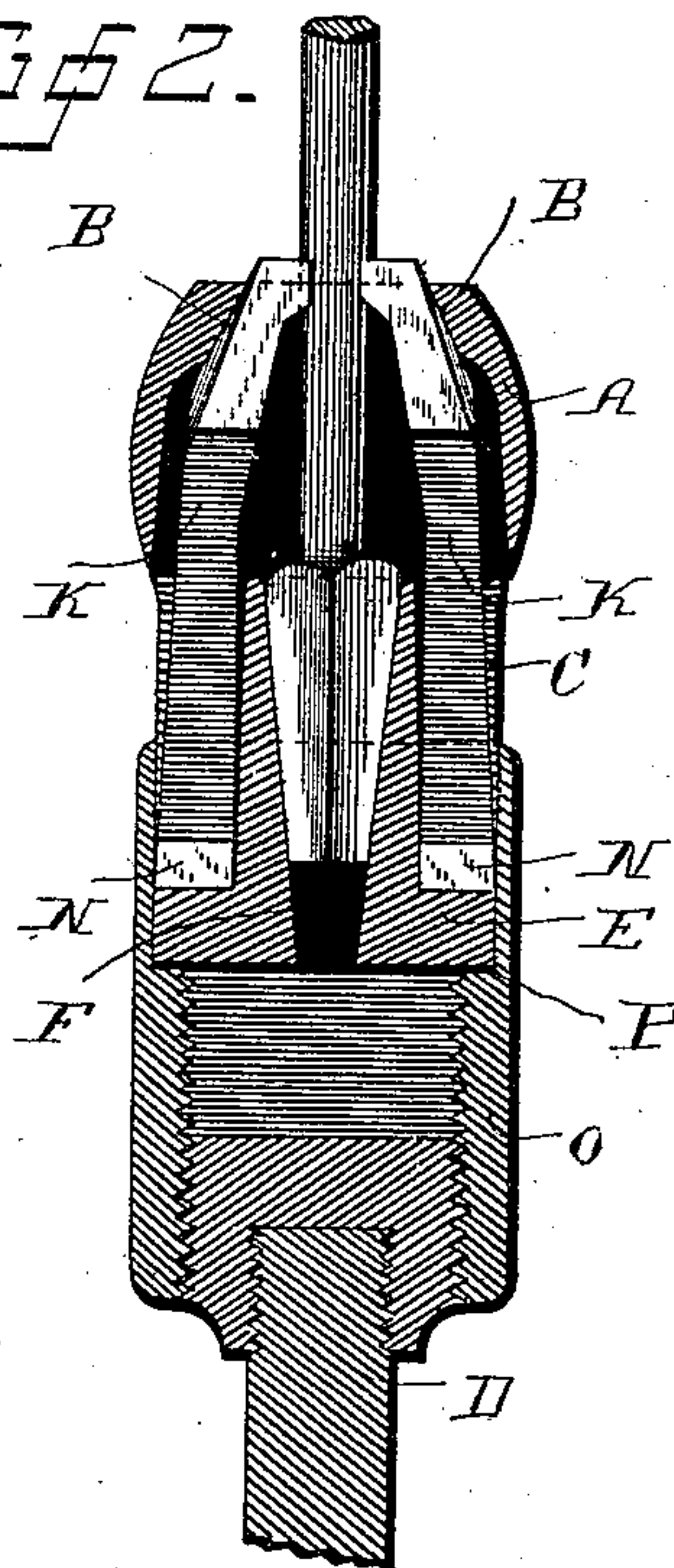


Fig. 3.

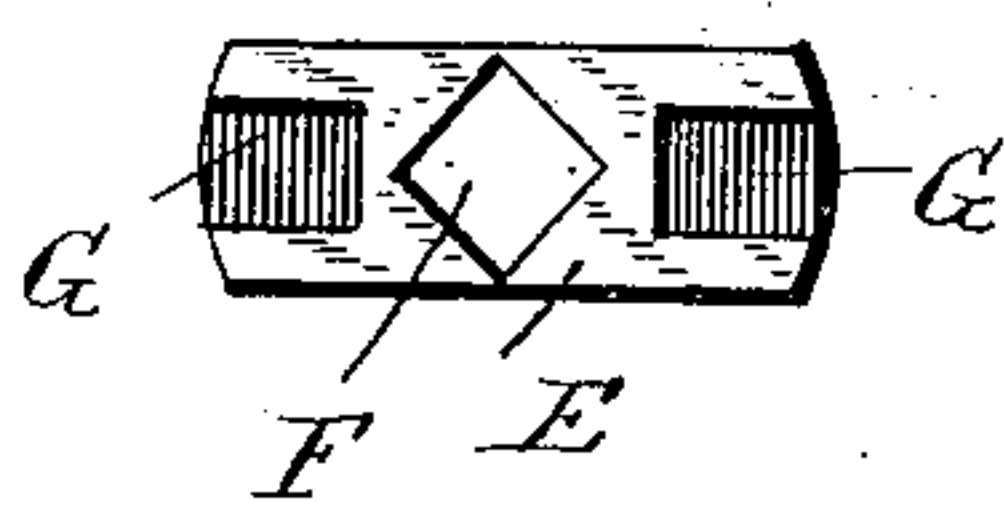


Fig. 4.

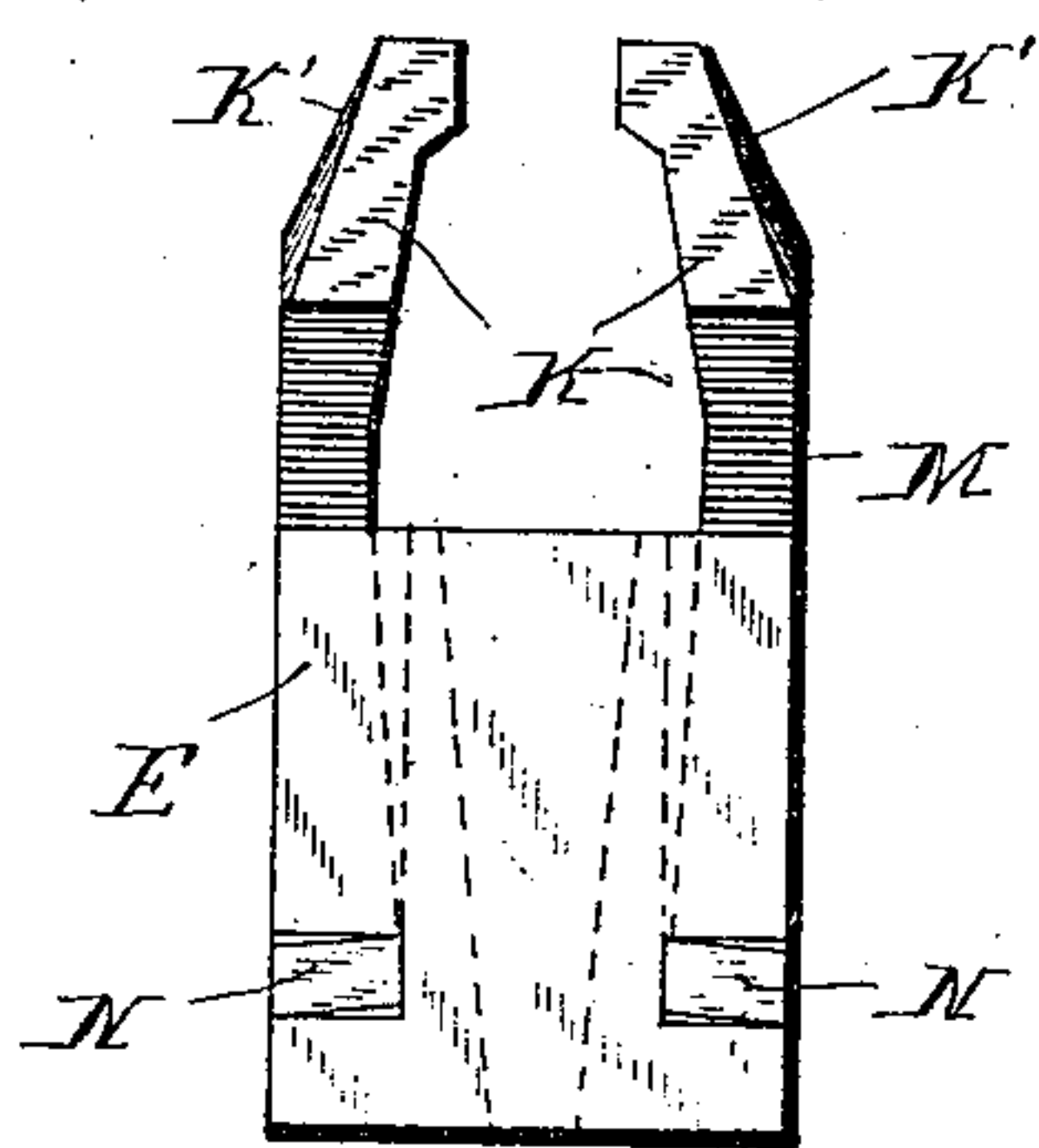


Fig. 5.

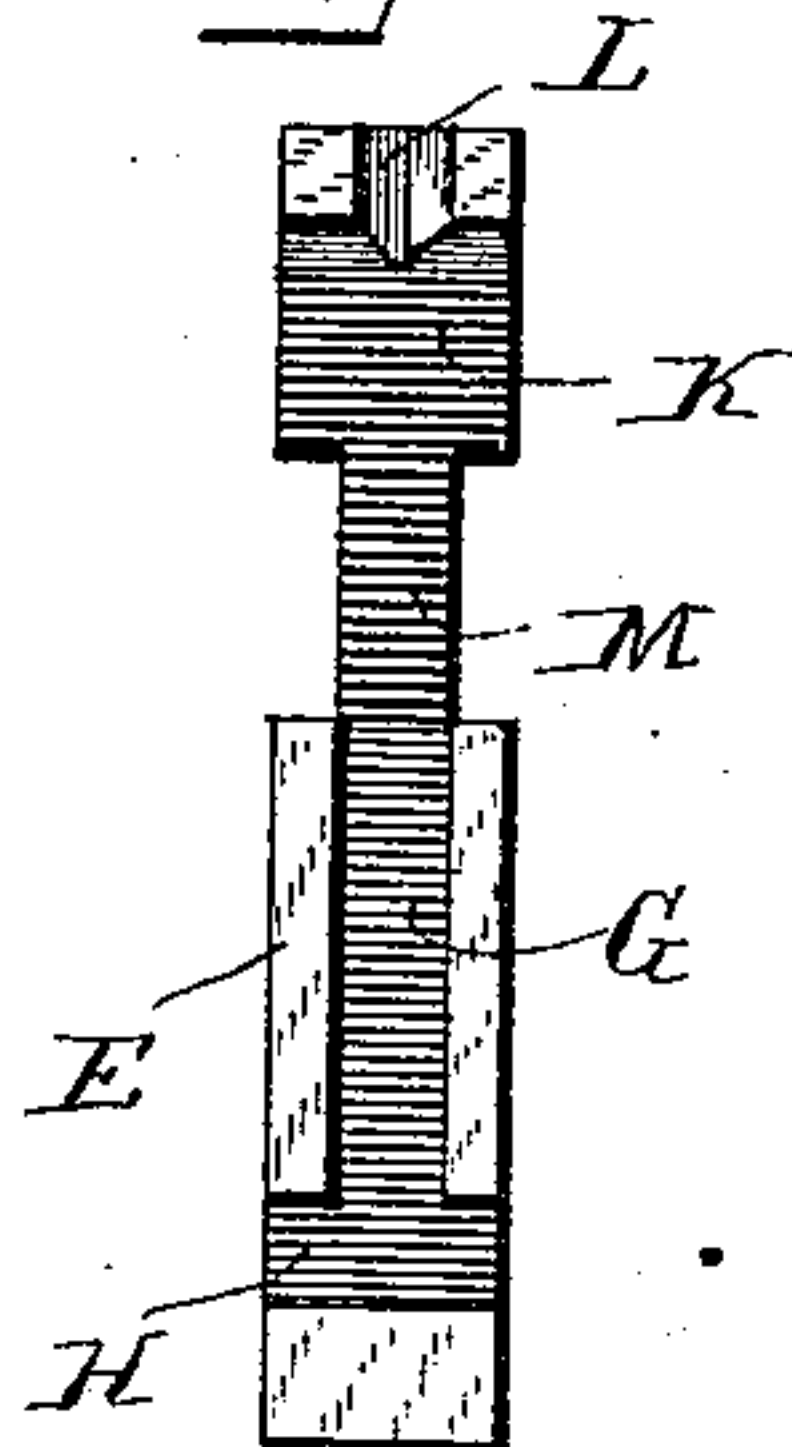
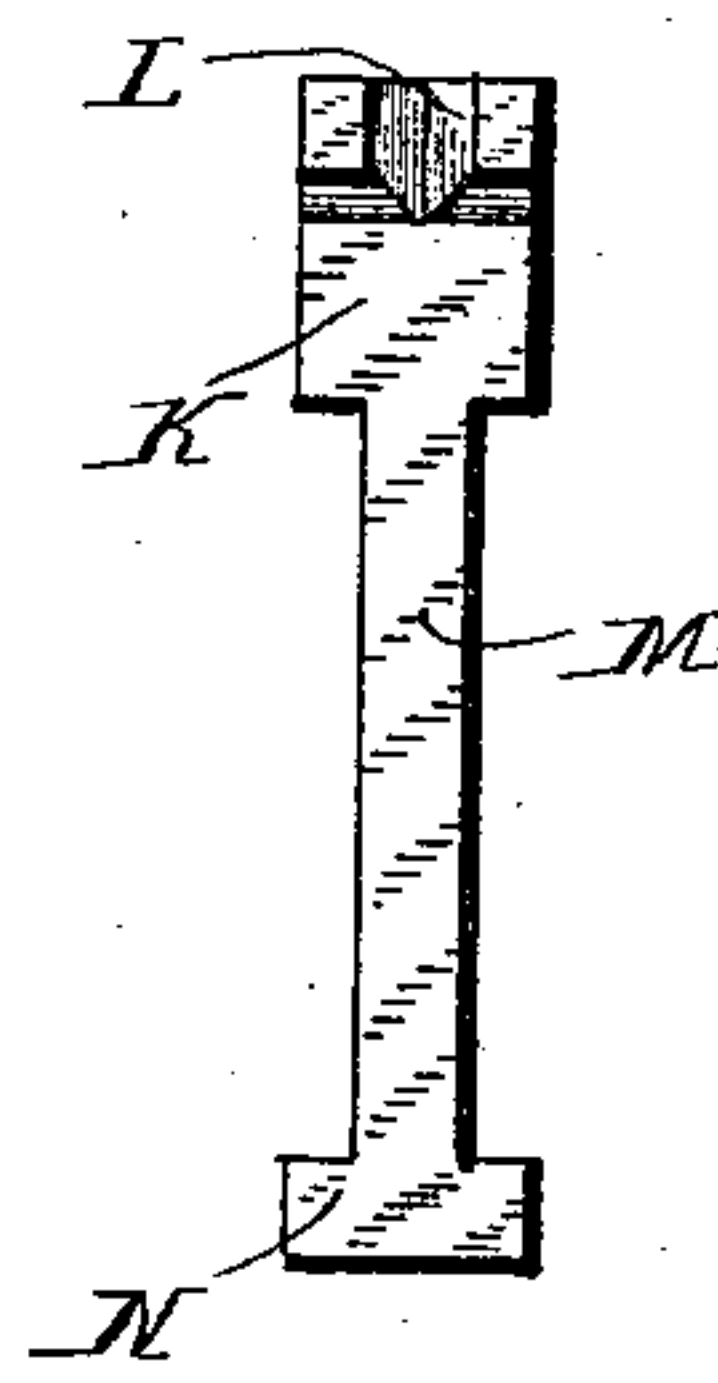


Fig. 6.



Witnesses

Wm. A. Jones.
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Inventor

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UNITED STATES PATENT OFFICE.

JOHN CHANTRELL, OF READING, PENNSYLVANIA, ASSIGNOR TO THE
READING HARDWARE COMPANY, OF SAME PLACE.

BRACE-CHUCK.

SPECIFICATION forming part of Letters Patent No. 337,243, dated March 2, 1886.

Application filed October 2, 1885. Serial No. 178,834. (No model.)

To all whom it may concern:

Be it known that I, JOHN CHANTRELL, a citizen of the United States, residing at Reading, in the county of Berks and State of Pennsylvania, have invented certain new and useful Improvements in Brace-Chucks; 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.

My invention has for its object to simplify and improve the construction of this class of devices by lessening the number of parts, and wholly dispensing with springs.

With this end in view I have devised the simple and novel construction which I will now describe, referring by letters to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an elevation of the chuck complete, showing a bit between the jaws; Fig. 2, a sectional view with the parts in the same position; Fig. 3, a plan view of the follower detached; Fig. 4, a detail view showing the follower and jaws inside elevation; Fig. 5, an end view of the follower, one jaw being removed; and Fig. 6 a face view of one of the jaws detached.

Similar letters indicate the same parts in all the figures.

A indicates the head, which is provided with inclines B for closing the jaws.

C is a slot through the head in which the follower slides, and D is the shank. I have shown the head and shank as made separate and screwed together. This, however, is a matter wholly within the judgment of the manufacturer. In practice the head and shank may be made in a single piece, if preferred.

E is the follower, which is provided with a central opening, F, to receive the shank of the bit, and at each end with a vertical groove, G, extending from the top downward and terminating in a transverse groove, H, near the bottom of the follower.

K K are the jaws, which are preferably provided with inclines K' upon their backs and with notches L in their faces, to receive the shank of the bit. The shanks M of the jaws extend downward and are made to correspond in shape and size with grooves G in the follower, in which they fit loosely. At the lower ends of the shanks

are cross-pieces N, which rest in grooves H, thus holding the jaws against vertical displacement. I preferably bevel the top and bottom of the cross-pieces, so that when the jaws are in their opened position the top inclines downward and outward, and the bottom inclines upward and inward, all of which is clearly shown in Fig. 4. The object of this construction is to permit the jaws to rock freely in grooves H.

O is the sleeve having an internal screw-thread which engages a corresponding screw-thread upon the head. The sleeve is provided with a circular recess, P, in which the follower rests.

It will be seen that the jaws are wholly independent of each other, and are so recessed into the ends of the follower that while they are permitted to rock freely in use any displacement thereof is absolutely impossible.

The parts are assembled by simply placing the jaws in the slots in the follower, then sliding the follower with the jaws into the slot in the head and turning the sleeve forward until the screw-threads are in engagement. Either right or left screw-threads may be used as most convenient.

In use, when the sleeve is turned backward, the follower of course drops down with it, as its only support is the bottom of the recess in the sleeve. This movement permits the jaws to assume the position shown in Fig. 4, when the shank of a bit may be readily inserted or withdrawn. To close the jaws upon the shank of the bit, as shown in Figs. 1 and 2, the sleeve is rotated forward, which raises the follower and with it the jaws, whose inclines K' come in contact with the corresponding inclines, C, upon the head, thus causing them to grasp the tool firmly.

It will of course be understood that the details of construction may be varied within reasonable limits without departing from the spirit of my invention.

I claim—

1. A brace-chuck consisting of a head having inclines, a follower adapted to slide within the head, and having an opening to receive the bit-shank, jaws loosely recessed into the ends of the follower, by which they are carried, and a sleeve adapted to raise the follower when it is desired to close the jaws.

2. The follower having a central opening to

receive the bit-shank, and grooves in its ends, in combination with jaws loosely held in said grooves, a sleeve adapted to receive and carry the follower, and the head having inclines which close the jaws.

5 3. The jaws having shanks M and cross-pieces N, and the follower having a central opening to receive the bit-shank, and grooves in each end corresponding in shape with said shanks and cross-pieces, in which they loosely fit, in combination with the head, and the sleeve screw-threaded to engage therewith.

1 4. The follower having a central opening to receive the bit-shank, and vertical and trans-verse slots in its ends, in combination with jaws having shanks and cross pieces which engage said grooves, said cross-pieces having inclines, as shown, a sleeve which carries the fol-

lower, and a head having inclines which close the jaws.

20 5. The head having internal inclines, B, a slot, C, through it, and an external screw-thread, in combination with the follower adapted to slide within the head and provided with a central opening to receive the bit-shank, independent jaws recessed into the ends of the follower, and a sleeve screw-threaded to engage the shank and having a circular recess which receives the follower, substantially as described.

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

JOHN CHANTRELL.

Witnesses:

JAMES R. KENNEY,
CHAS. P. HAZELTINE.