(No Model.)

J. T. PEDERSEN.

TOOL HOLDER.

No. 390,516. Patented Oct. 2, 1888.

Fig. 1.

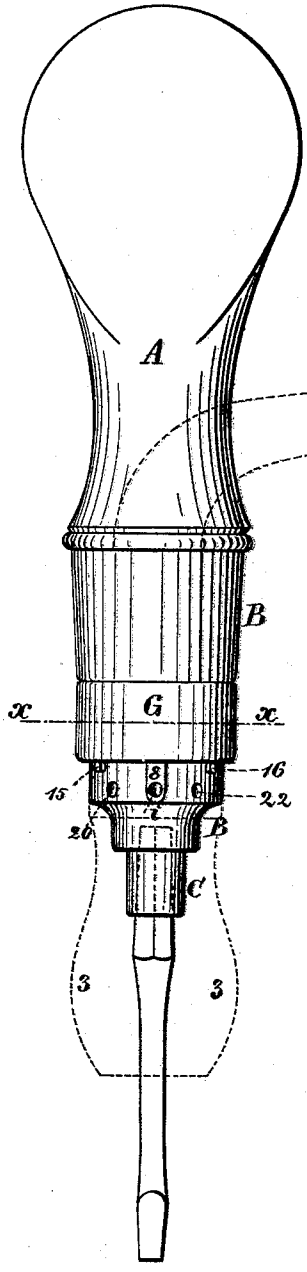


Fig. 2.

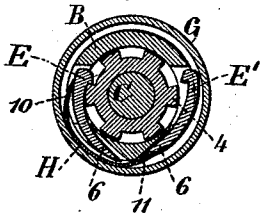


Fig. 3.

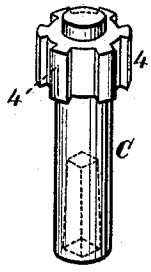


Fig. 4.

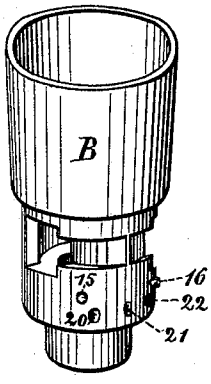


Fig. 5.

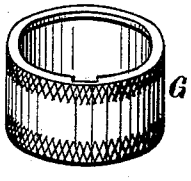


Fig. 6.

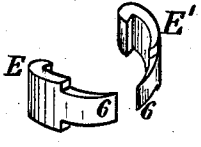
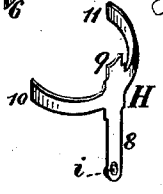


Fig. 7.



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UNITED STATES PATENT OFFICE.

JOHANNES TH. PEDERSEN, OF BROOKLYN, ASSIGNOR TO THE AMERICAN BIT-BRACE COMPANY, OF BUFFALO, NEW YORK.

TOOL-HOLDER.

SPECIFICATION forming part of Letters Patent No. 390,516, dated October 2, 1888.

Application filed January 6, 1888. Serial No. 259,966. (No model.)

To all whom it may concern:

Be it known that I, JOHANNES TH. PEDERSEN, of Brooklyn, in the county of Kings and State of New York, have invented an Improvement in Tool-Holders, of which the following is a specification.

In my patent, No. 317,187, granted May 5, 1885, for bit-stock, a mechanism is represented for rotating the tool-holder by gearing and for reversing the direction of the rotation by spring-pawls upon the shaft, that is at right angles to the tool-holder.

My present invention is for the purpose of simplifying the construction of the parts and for applying the pawls and ratchet directly to the tool-holder without intervening gearing.

In the drawings, Figure 1 is an elevation of my tool-holder. Fig. 2 is a cross-section at the line *x x*. Fig. 3 is a detached perspective view of the ratchet-wheel and tool-holder. Fig. 4 is a perspective view of the handle-stock. Fig. 5 is a perspective view of the movable collar. Fig. 6 shows the pawls in perspective, and Fig. 7 the spring for the same.

The handle A is of any desired character. If made with a crank, such as used with braces, the same will pass off from the stock B, as indicated by dotted lines at 2.

The tool-holder is shown as a socket, C; but it may be in the form of a chuck or clamping-holder, such as is common in tool-holders and braces, as illustrated by dotted lines at 3 3. Upon the tool-holder C are the ratchet-teeth 4, and this tool-holder fits within the stock B, which is hollow and adapted to be connected to the handle A in any desired manner. In this stock B there are mortises for the reception of the pawls E E′ and beveled channels for the tail-pieces 6 of such pawls, and these pawls stand in the opposite direction to each other and have hook ends for engaging the teeth 4.

Around the stock B is the hollow collar G, the interior surface of which is an annular recess having end beads or flanges, and within this recess is the spring H, having arms 10 11, that extend out over the pawls E E′ and press on either the head or the tail ends of the respective pawls, according to the position of the spring to the pawls; and there are projections 8 and 9 on the spring H, and the projection 8 passes through a notch in the flange of the collar G, and the projection 9 may pass into a similar notch.

When this collar G is turned, the spring H is moved with it, and the movement is preferably limited by the pins 15 and 16, that project from the stock B and hold the collar G in place, but allow it to be turned, and these pins form stops at opposite sides of the end portion, 8, of the spring H, and there is a dome-shaped projection, *i*, struck up in the spring H, and corresponding recesses, 20 21 22, in the stock B, so that the portion 8 of the spring will, by the projection *i*, hold the collar G in the position to which it may be turned, such projection *i* entering either recess 20, 21, or 22, but the parts yield to a sufficient turning force applied to the collar G to cause the dome-shaped projection *i* to leave one recess and slide on the surface of the stock B. When the projection *i* is in the central recess, 21, the two arms 10 and 11 bear equally upon the pawls E E′ and cause their ends to interlock with the teeth 4 and prevent the tool-holder revolving except by and with the handle. If the collar G is turned to bring the projection *i* into the recess 22, the arm 10 will act upon the tail-piece 6 of the pawl E and lift the hook end thereof out of contact with the teeth 4, so that the pawl E′ can act to revolve the tool in one direction, the handle being oscillated first one way and then the other way. When the collar G is turned to bring the projection *i* into the recess 20, the pawl E′ is raised and thrown out of action and the pawl E rotates the tool-holder in the opposite direction.

It will be understood that the operative parts will not be in any manner changed should the handle be attached to the part C, and the part B employed as part of the tool-holding stock or chuck.

I claim as my invention—

1. The combination, with the holder C, having teeth 4, and the stock B, surrounding the same and having mortises through it, of the pawls E E′, standing in opposite directions within the mortises, the internally-recessed collar G around the stock and pawls and the

spring H within the recess of the collar and having the arms 10 and 11 to act upon the outer surfaces of the pawls, substantially as set forth.

2. The spring H, having the arms 10 and 11 and the end portion, S, and a projection, *i*, in combination with the collar G, recessed to receive the spring and notched for the portion S, the pawls E E', and the stock B, mortised to receive the pawls and having recesses for the projection *i*, the holder C, and teeth within the stock, and the pins for holding the collar in place and forming stops, substantially as set forth.

Signed by me this 30th day of December, 1887.

J. TH. PEDERSEN.

Witnesses:
GEO. T. PINCKNEY,
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