(No Model.)

J. T. PEDERSEN.

BRACE FOR HOLDING BITS OR OTHER TOOLS.

No. 392,062. Patented Oct. 30, 1888.

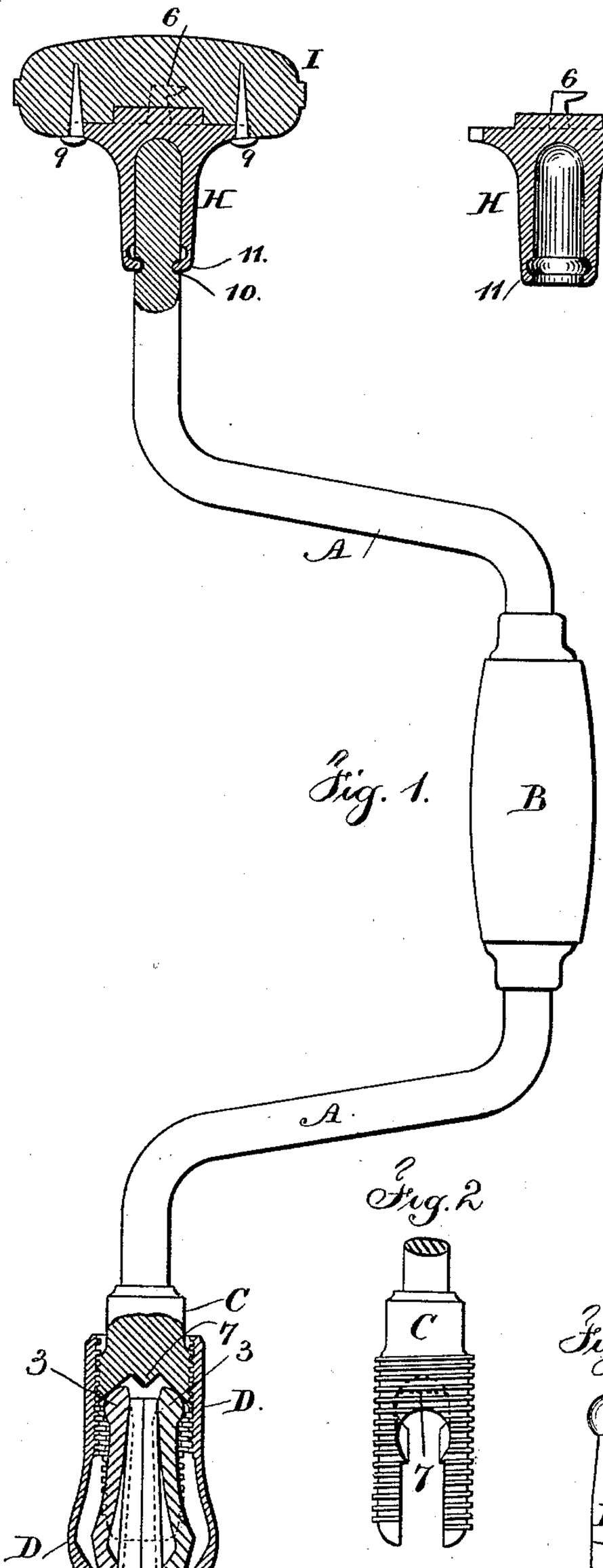


Fig. 1.

Fig. 4.

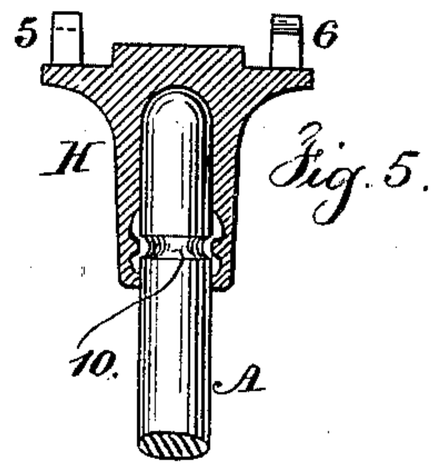


Fig. 5.

Fig. 6

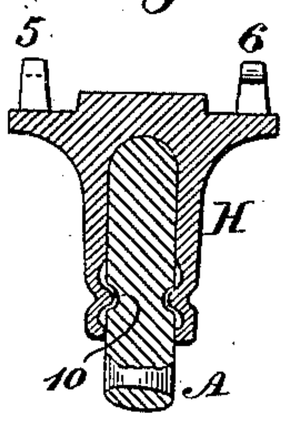


Fig. 2.

Fig. 3.

Fig. 7.

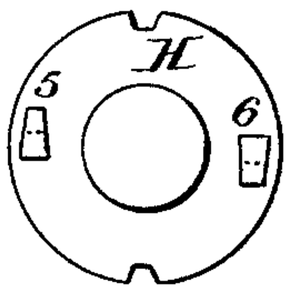
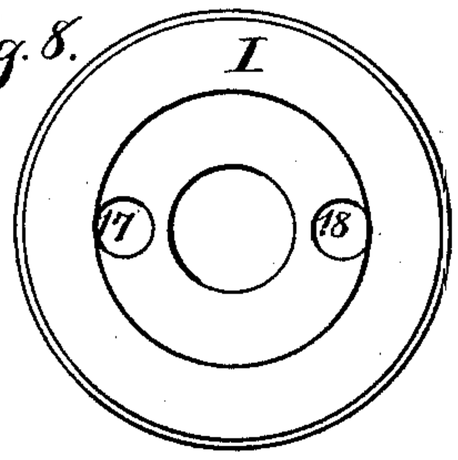


Fig. 8.



Witnesses.
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UNITED STATES PATENT OFFICE.

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BRACE FOR HOLDING BITS OR OTHER TOOLS.

SPECIFICATION forming part of Letters Patent No. 392,062, dated October 30, 1888.

Application filed January 6, 1888. Serial No. 259,967. (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 Braces for Holding Bits or other Tools, of which the following is a specification.

Braces for bits have heretofore been constructed with a crank-shaped handle and a chuck at one end and a presser-head at the other end to rest against the person while the brace is being revolved. In constructing the chuck portion of the brace the jaws have usually been held in place by pins passing through them, and the presser-head has been connected to the crank-handle by a recessed nut.

My invention is made for simplifying the construction of the brace and lessening the expense of the same, and it relates to the construction and combination of parts hereinafter set forth.

In the drawings, Figure 1 shows the brace with the two ends in section. Fig. 2 is an elevation of the screw-stock. Fig. 3 shows one of the jaws detached. Fig. 4 is a section of the button-head shown in Fig. 1. Figs. 5 and 6 are sections of the button-head in a slightly-modified form. Fig. 7 is an end view of the button-head, and Fig. 8 is a view of the under side of the presser-head.

The crank-handle A is provided with a hand-piece, B, as usual, and at one end is a stock, C, having upon the exterior thereof a screw-thread, over which the sleeve D is passed, and by the revolution of which the jaws E are brought together for clamping and holding the bit or other tool inserted between them. These jaws are usually grooved longitudinally upon their adjacent faces. My improvement relates to the manner of connecting the inner ends of these jaws E to the stock C, so that they are free to open and close in receiving and clamping the boring-bit or other tool. The inner ends of these jaws E are globular, as seen at 3, the diameter being greater than the thickness of the jaw, and into the stock C diagonal recesses are made to pass in from the outside of the stock and are of a size to receive the globular portions 3 of the jaws, the jaws themselves occupying the parallel-sided slot within the stock C, as usual. The inclined recesses that are formed in the stock C are preferably made with a round or globular tool, and the recesses do not intersect each other within the stock; but there is a ridge or projection, 7, left between the two recesses, so that the jaws E E cannot slide together at their inner ends, but are kept in their proper places, and they can also be forced apart by the shank of the tool that is inserted between them, the globular ends 3 sliding outwardly in the inclined recesses.

When the sleeve D is revolved to clamp the bit or other tool between the jaws E E, the inclined interior surface of such sleeve acts against the inclined exterior edges of the jaws E to press them upon the shank of the tool, as usual; but at the same time the sleeve D tends to give the said jaws E an endwise motion to drive them inwardly, and the globular ends sliding along the inclined bottoms of the recesses force the inner ends of the jaws toward each other, and thereby the tool is clamped uniformly and rapidly by the jaws, and it is not liable to become loose as the brace is rotated in using the tool, and the jaws cannot draw forward, because the slot is not as wide as the globular ends, except at the bottom portions of the slot.

I simplify the construction of the presser-head by turning in the cylindrical upper end of the bar A, forming the crank-handle, the annular groove 10, and I apply the tubular button-head H over this end of the brace and close the metal of the annular rib 11 at the lower end of the button H into the annular groove 10, so as to hold the button-head upon the end of the brace and prevent it falling off when in use. The annular groove 10 may be so placed that the end portion or annular rib 11 of the button H may be circumferentially pressed inwardly into such annular groove by any suitable dies, or the annular groove 10 may be at a little distance from the end portion of the button H, as shown in Figs. 5 and 6, so that the metal of the cylindrical portion of the button H may be pressed as an annular rib into said groove by dies acting around the outside of said cylindrical portion. In either instance the metal of the cylindrical portion of the button is closed circumferen-

tially into the groove sufficiently to hold the button upon the end of the brace; but this is not to be done so firmly as to prevent the button-head turning freely upon the brace, and the button-head is recessed at each side of the rib that is pressed into the groove, so that the metal will not bind upon the round rod above or below the groove. A wooden presser-head, I, is recessed for receiving the circular upper end of the button-head H, and upon the top of this button-head are claws 5 and 6, having laterally-projecting hooks, and there are recesses at 17 and 18 in the wooden presser-head I for the reception of these claws, so that after the button-head has been inserted into its recess and the hooks 5 and 6 passed into their recesses a partial revolution is given to the presser-head upon the button-head, so that the laterally-projecting hooks or points of the claws penetrate into the wood of the presser-head, and the presser-head cannot be pulled off the button-head; but in order to prevent the one part being turned upon the other, so as to unhook the claws, I insert nails or tacks 9 into the notches or holes provided in the disk portion of the button-head, which nails, entering the wood, aid in connecting the parts, as well as effectually preventing one part turning on the other.

I claim as my invention—

1. The jaws E, having globular inner ends that are of greater diameter than the thickness of the other portions of the jaws, in combination with the screw-sleeve and the screw-stock, the slot of which is widest at the inner end to receive the globular ends, substantially as specified.

2. The combination, with the brace A, of the button-head H at the end thereof, having claws 5 and 6, and the presser-head I, recessed to receive the button-head and the said claws, and the nails or tacks 9, passing through openings in the button-head into the presser-head, to prevent one part turning upon the other and insure a reliable connection, substantially as set forth.

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

J. TH. PEDERSEN.

Witnesses:
GEO. T. PINCKNEY,
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