(No Model.)

E. C. HEYDENREICH.

TOOL HOLDER.

No. 455,101. Patented June 30, 1891.

Fig. 1.

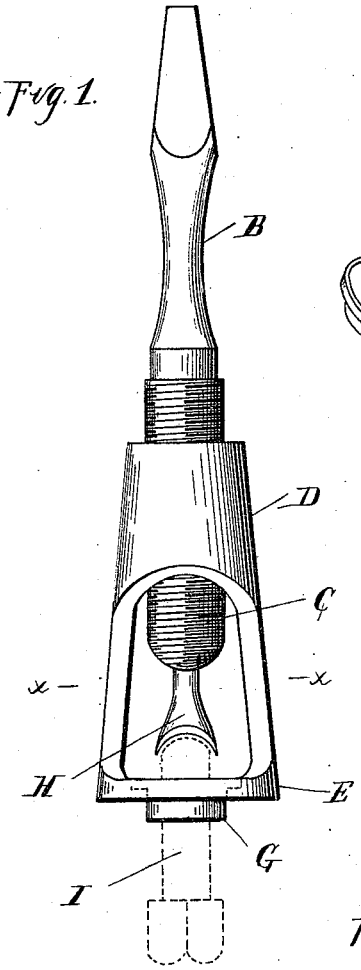


Fig. 4.

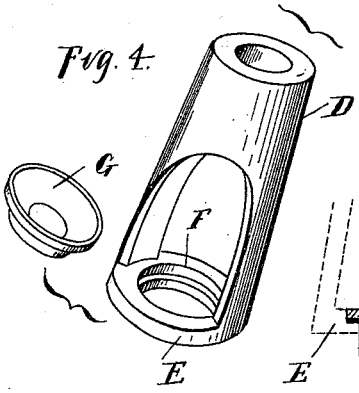


Fig. 3.

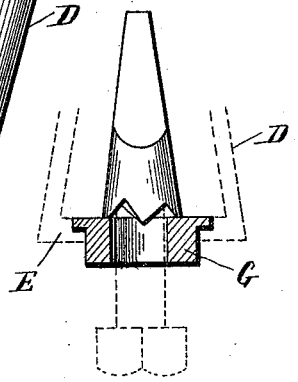


Fig. 2.

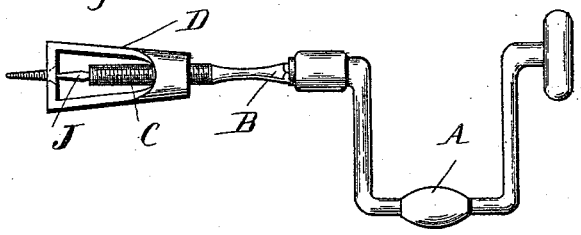


Fig. 5.

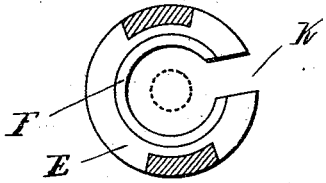
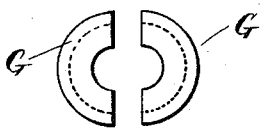


Fig. 6



Witnesses
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UNITED STATES PATENT OFFICE.

ERNST C. HEYDENREICH, OF MOUNT CLEMENS, MICHIGAN.

TOOL-HOLDER.

SPECIFICATION forming part of Letters Patent No. 455,101, dated June 30, 1891.

Application filed January 22, 1891. Serial No. 378,735. (No model.)

To all whom it may concern:

Be it known that I, ERNST C. HEYDENREICH, a citizen of the United States, residing at Mount Clemens, in the county of Macomb and State of Michigan, have invented certain new and useful Improvements in Tool-Holders, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a new and useful improvement in tools; and the invention consists in the peculiar construction of a head, a bit secured therein, and means for using various tools with said head and bit, in connection with an ordinary brace, all as more fully hereinafter described.

In the drawings, Figure 1 is a side elevation of my improved tool, showing it in use in chamfering bolts. Fig. 2 is a similar view showing it applied with a screw as a gimlet. Fig. 3 is a vertical section through the head, showing its use in cupping set-screws, &c. Fig. 4 is a detached perspective view of the head and holder. Fig. 5 is a cross-section on line *x x*. Fig. 6 is a plan view of the holders.

A is an ordinary brace, in which the bit B is adapted to be secured in any well-known manner. This bit is provided with the usual securing-shank and with the screw-threaded portion C, upon which is secured by means of a suitable screw-threaded aperture a head D. This head is preferably of the shape shown in the drawings—that is, gradually enlarging toward the base—and is cut away on the sides to allow of the insertion of the tools. The bit B is provided at its lower end with a suitable socket to receive any desired tool.

The head D has formed at its lower end a ring E, on the inside of which is formed a suitable bearing F, adapted to receive a holder, such as G.

To use this tool for chamfering bolts, for instance, I turn the bit in the head until it is withdrawn a suitable distance to allow of my inserting the chamfering-tool H in its end. I then turn the bit down the proper distance and placing the bolt, such as I, within a vise, with its shank extended through the holder in the ring E, I apply the brace to the bit and rapidly turn the same, whereby the end of the bolt will be suitably formed.

In case I desire to cup a set-screw or bolt it may be accomplished by using a tool such as shown at Fig. 3.

It is evident that the device may be used as a screw-driver by inserting a suitable screw-driver tool J into the end of the bit, or by inserting a suitable holder in the ring E and placing therein a screw. Then in turning the screw-driver down until it enters the slot in the head of the screw, as shown in Fig. 2, the device with the screw clamped therein may be used as a gimlet. I preferably cut away the ring at one point, such as K, (shown in Fig. 5,) so that I may use tools of greater length than the distance between the bit and the ring. The ring thus forms a guide for the shank of the tool, and in such case, if necessary, I can use a two-part holder, as shown in Fig. 6. Thus with a single head I am enabled to use a number of tools, or to make use of conveniences commonly in hand in a carpenter's kit for a variety of work.

What I claim as my invention is—

1. The combination, with a bit having a screw-threaded portion C, of the head D, adjustably secured thereon, apertured at its lower end and formed with open sides, the ring E, having the bearing F, and the holders adapted to be secured therein, substantially as described.

2. The combination, with the bit B, of the head D, adjustably secured thereon and formed with an opening in its side through which the tools are passed, the ring E, secured to the lower end of said head, the bearing F, formed in said ring, and the holders G, substantially as described.

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

ERNST C. HEYDENREICH.

Witnesses:

M. B. O'DOGHERTY,

N. L. LINDOP.