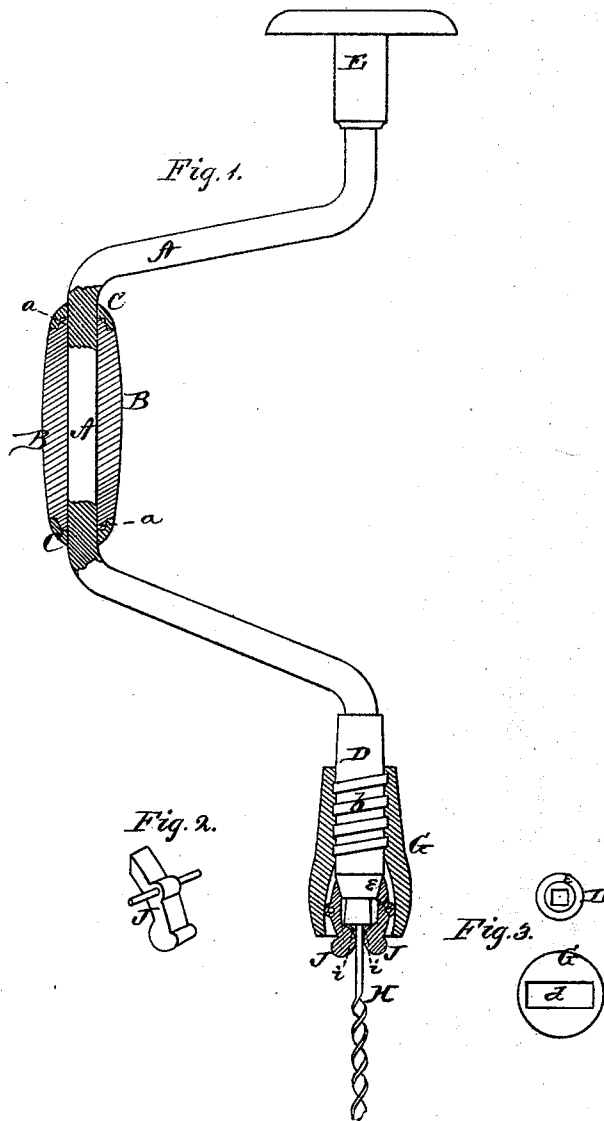


Q. S. BACKUS.

Improvement in Bit-Braces.

No. 132,791.

Patented Nov. 5, 1872.



Witness:

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UNITED STATES PATENT OFFICE.

QUIMBY S. BACKUS, MILLER'S FALLS, MASSACHUSETTS.

IMPROVEMENT IN BIT-BRACES.

Specification forming part of Letters Patent No. 132,791, dated November 5, 1872.

To all whom it may concern:

Be it known that I, QUIMBY S. BACKUS, of Miller's Falls, in the county of Franklin, and in the State of Massachusetts, have invented certain new and useful Improvements in Bit-Brace; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of a "brace for holding bits," as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side view of my bit-brace partly in section; Fig. 2 is a perspective view of one of the jaws used to hold and center the bit; and Fig. 3 shows the ends of the socket and screw sleeve.

A represents the usual brace made of a single rod bent in proper form. Before the rod is bent the wooden handle B is put on and held by a metal cup or washer, C, at each end. The handle B may be made in one or two pieces, as may be desired, and cut with a tenon, *a*, at each end, the rod passing through the center of said tenon. The cups or washers C C are provided with a central groove or recess for the tenons *a a* to enter into, and when said parts are in their proper positions on the rod the cups or washers C C are soldered or otherwise firmly fastened to the rod, allowing the handle to turn on the same in said cups. Even if the handle B should split, which is very often the case, it cannot come off the rod, as the tenons *a a* are inclosed by the cups or washers. On one end of the brace A is placed the usual revolving disk E, and on the other end is sol-

dered or otherwise permanently attached a solid piece, D, which is round and provided with screw-threads *b* around its outside. In the end of this solid piece is made a square hole for the insertion of the shank of the bit H, said piece D thus forming a socket for the reception of the bit. The extreme outer end of the socket D is made conical or beveled, as shown at *e*. On the socket D is placed a screw-sleeve, G, the outer end of which is enlarged and has a rectangular opening, *d*, in the end. Projecting through said opening are two jaws, J J, which are pivoted within the sleeve. These jaws are constructed substantially as shown in Fig. 2, their inner ends being beveled on the inner sides and their outer ends curved, with a groove, *i*, in the inner side.

The sleeve G being partially screwed to the socket D, the bit H may be inserted so that its shank shall enter said socket. The sleeve is now screwed up, when the beveled inner ends of the jaws J J will move up on the conical part *e* and close their outer ends, which will then grasp the bit—that is, the round part of the bit—by the grooves *i i*, and at the same time draw the shank into the socket, thus centering the bit and holding it firmly in its place. The strain of the bit is, so to say, transferred from the jaws to the socket D.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

As an article of manufacture, a hand bit-brace consisting of the socket D with conical end *e*, screw-sleeve G, and pivoted jaws J J, all used with a brace-rod, A, with handle B, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 27th day of August, 1872.

QUIMBY S. BACKUS.

Witnesses:

A. N. MARR,
EDM. F. BROWN.