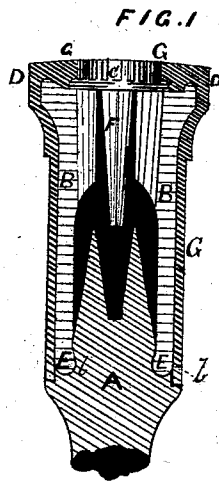
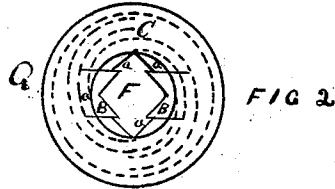


J. S. FRAY.

Improvement in Bit-Braces.

No. 130,709.

Patented Aug. 20, 1872.



WITNESSES

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INVENTOR

John S. Fray
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UNITED STATES PATENT OFFICE.

JOHN S. FRAY, OF BRIDGEPORT, CONNECTICUT.

IMPROVEMENT IN BIT-BRACES.

Specification forming part of Letters Patent No. 130,709, dated August 20, 1872.

I, JOHN S. FRAY, of Bridgeport, county of Fairfield, State of Connecticut, have invented a new and Improved Bit-Brace or Tool-Holder, of which the following is a specification, reference being had to the accompanying drawing, in which like letters represent the same parts in the different figures.

My invention relates to the devices used in grasping and holding the inserted tool; and consists in the construction, arrangement, and combination of the different parts of the device, as will be hereinafter more fully set forth and claimed.

In the drawing, Figure 1 is a longitudinal section of the holder. Fig. 2 is an end view. Fig. 3 is a detailed view of the gripping-jaw.

A, Fig. 1, is the fixed stock of the brace. B B, Figs. 1 and 3, are the gripping-jaws; C, Figs. 1 and 2, the eccentric or scroll-grooves, which operate the jaws; D, Figs. 1 and 3, a working-tooth on the gripping-jaw; E, Fig. 1, the hinge-abutment; F, Fig. 1, the socket in which the tool is inserted; G, Figs. 1 and 2, the rotating shell.

The manner of construction is as follows: The lever part of the brace is of wrought or malleable iron or steel. The stock, through the center at *a a a*, is removed for the reception of the gripping-jaws B B, and to form the socket F, in which the tool is inserted. The jaws B B are of steel or other suitable material. Their inner face is V-shaped to enable them to grasp the tool more firmly. The foot of these jaws is rounded to fit the recess *b*, against which they abut. The opposite end has the working-tooth D, which is formed to match the groove of scroll C. This scroll is first cut on a blank, then fitted to the rotary sleeve G, and secured. Its inner face bears on the fixed stock, and allows free action to the jaws B B.

The manner of operation is as follows: The

gripping-jaws B B are thrown apart at their outer ends by the scroll C attached to the shell G, one-half a turn opening the jaws. The shank of the bit or tool is inserted in the socket, and, the rotating shell being turned in the opposite direction, the jaws B B are forced against the shank, securely keeping the bit or tool in place.

The advantages of my invention are, that the scroll C being cut or sunk on the inner face of the end of the shell G, it provides a shoulder each side of the tooth D, and enables it to perform the double work of opening and closing the jaws; while, with the ordinary method of a cam formed on the exterior of the shell it only closes the jaws, and a spring is used to open them again. The recesses *b b* are so formed that they keep the foot of the jaws in position.

To keep the shell from working off I secure it by a set-screw or other desirable mode.

The novelty of my invention consists in using a scroll that opens and shuts the jaws B B, which, acting in conjunction with the hinge *b b*, enables me to dispense with the springs to open the jaws.

What I claim as my invention, and desire to secure by Letters Patent, is—

In a brace or tool holder, the combination, with socket A, and rotating sleeve G, of the hinged gripping-jaws B B, abutting in recesses *b b*, and scroll C on the inner face of sleeve G, and operating as described, and for the purpose set forth.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

JOHN S. FRAY.

Witnesses:

A. SKAATS,
GEO. SKAATS.