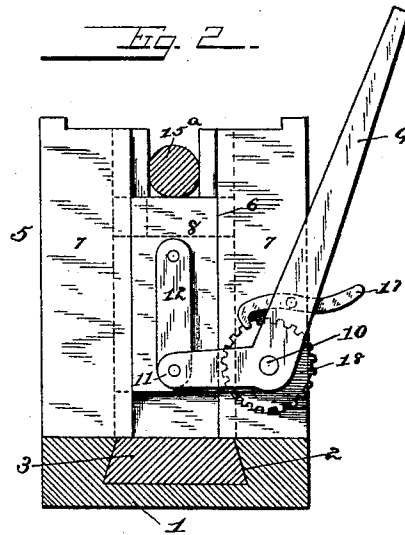
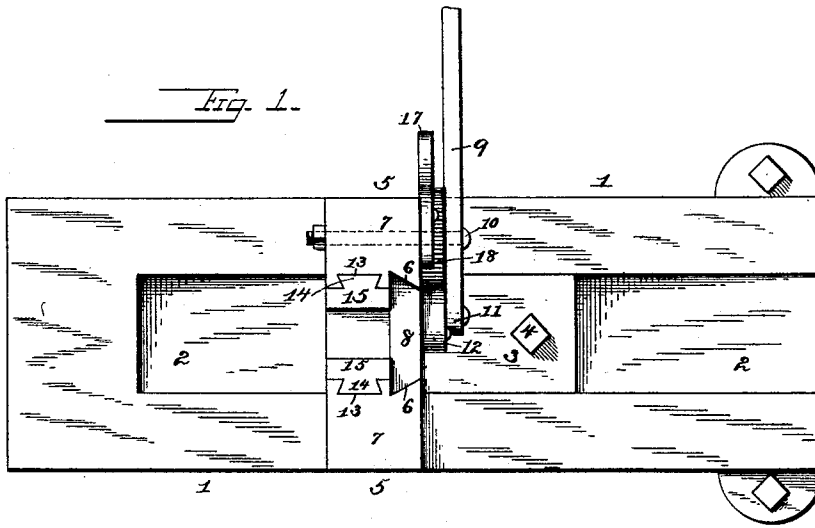


(No Model.)

G. W. LOUDEN.
ADJUSTABLE BIT HOLDER.

No. 480,666.

Patented Aug. 9, 1892.



WITNESSES:

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GEORGE W. LOUDEN, OF PITTSBURG, PENNSYLVANIA.

ADJUSTABLE BIT-HOLDER.

SPECIFICATION forming part of Letters Patent No. 480,666, dated August 9, 1892.

Application filed March 13, 1891. Serial No. 384,936. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. LOUDEN, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Adjustable Bit-Holders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention has relation to means for supporting drilling-bits and other like devices while being dressed; and its objects are to provide a means for the purpose set forth which will be extremely simple in construction and which will be capable of accommodating bits of different lengths and thicknesses and of supporting the same at any desired height within the limits of its adjustment.

To these ends the invention consists in certain peculiarities in the construction, arrangement, and combination of the several parts, substantially as hereinafter described, and particularly pointed out in the subjoined claims.

In the accompanying drawings, illustrating the invention, Figure 1 is a plan view of my improved bit-holder; and Fig. 2 is a front elevation of the same, partly in section.

1 designates a base which is provided on its upper face with a longitudinal dovetailed groove 2, in which is loosely fitted a block 3, having beveled sides. This block is adjustable lengthwise of the base within said groove and it is held in position by a set-screw 4, which passes vertically through its forward end and engages the bottom of said groove 2. Rigidly secured to the rear end of said block 3 and adjustable therewith is an upright frame 5, which extends transversely to the length of the base 1 beyond the opposite sides of said block. By making the block, with its attached frame, adjustable longitudinally bits of various lengths can be accommodated, as will be hereinafter seen. A vertical dovetailed groove 6 is formed in the opposing faces of the upright members 7 of the frame 5, and in the ways formed thereby is fitted a sliding

plate 8, which is operated by a bell-crank lever 9, which is fulcrumed on a rotatable shaft or bolt 10 or other suitable means that extends through and is borne by one of the members 7 of the frame. The inner end 11 of the lever is connected with the plate 8 by a link 12. The opposing faces of the members 7 of the frame 5 to the rear of the grooves 6 are formed with grooves 13, having inclined side walls in which the beveled tongues 14 of removable liners 15 are fitted, whereby the space between the members of the frame can be increased or diminished to suit bits of various diameters by removing the liners and substituting others of a proper size or sizes. Although I have described a liner as being at each side of the space, it is obvious that I can dispense with one of the members to receive a liner. From the above it will be seen that by depressing the outer end of the lever 9 the plate will be raised and that by raising the outer end of the lever said plate will be lowered, thereby adapting the device for use with anvils of different heights. This plate is designed to carry the bit 15^a, which is to be dressed, and in order to hold it in its uppermost or in an intermediate position I have provided the device with a pawl-and-ratchet mechanism. In the pawl-and-ratchet mechanism shown one member thereof (the pawl 17) is pivoted to the frame and has its outer end formed to provide a handle portion and its inner end hook-shaped, and the other member thereof (the ratchet 18) is a wheel mounted on the shaft or bolt 10, and has teeth of such shape that the hook end of the pawl will engage between them and be in contact with both side walls of the tooth, thereby preventing the ratchet and shaft from turning in either direction, and consequently holding the lever and plate in proper adjusted position.

From the above the operation of my invention will be readily understood. The bit to be dressed is placed on the plate 8 and extends through the opening in the frame and said space built up by a liner or liners. Said frame is then adjusted longitudinally and held by the fastening means 4 and the pawl disengaged from the ratchet, after which the plate, with the bit, is raised to the proper height and the pawl again engaged with the

ratchet. The manner of removing the bit after it is dressed is obvious and needs no description.

5 Having now described my invention, what I believe to be new, and desire to secure by Letters Patent, is—

10 1. In a device of the character set forth, a frame having an opening, a vertically-adjustable plate fitted in suitable ways in said frame, a lever connected with the plate for adjusting the same, a pawl-and-ratchet mechanism for holding the lever and consequently the plate in adjusted position, and a liner or liners for reducing the width of the opening
15 in said frame.

20 2. In a device of the character set forth, the combination of a base, a frame adjustable longitudinally in said base and having an opening, a plate in said frame, means for adjusting said plate vertically, and liners for reducing the width of the opening in said frame, substantially as shown and described.

3. In a device of the character set forth, a frame having an opening, a vertically-adjust-

able plate fitted in suitable ways in said 25 frame, means for adjusting said plate, and liners for reducing the width of the opening in said frame, substantially as shown and described.

4. In a device of the character set forth, the 30 combination of a frame, a vertically-adjustable plate fitted in suitable ways in said frame, a bell-crank lever, a link connecting the inner end of said lever to said plate, a shaft borne by said frame and forming the 35 fulcrum for said lever, a ratchet on said shaft, and a pawl pivoted to said frame, adapted to engage said ratchet and serving to hold it and consequently the plate in adjusted position, substantially as shown and described. 40

In testimony that I claim the foregoing I hereunto affix my signature this 16th day of February, A. D. 1891.

GEORGE W. LOUDEN. [L. S.]

In presence of—

CHARLES LARGE,
M. E. HARRISON.