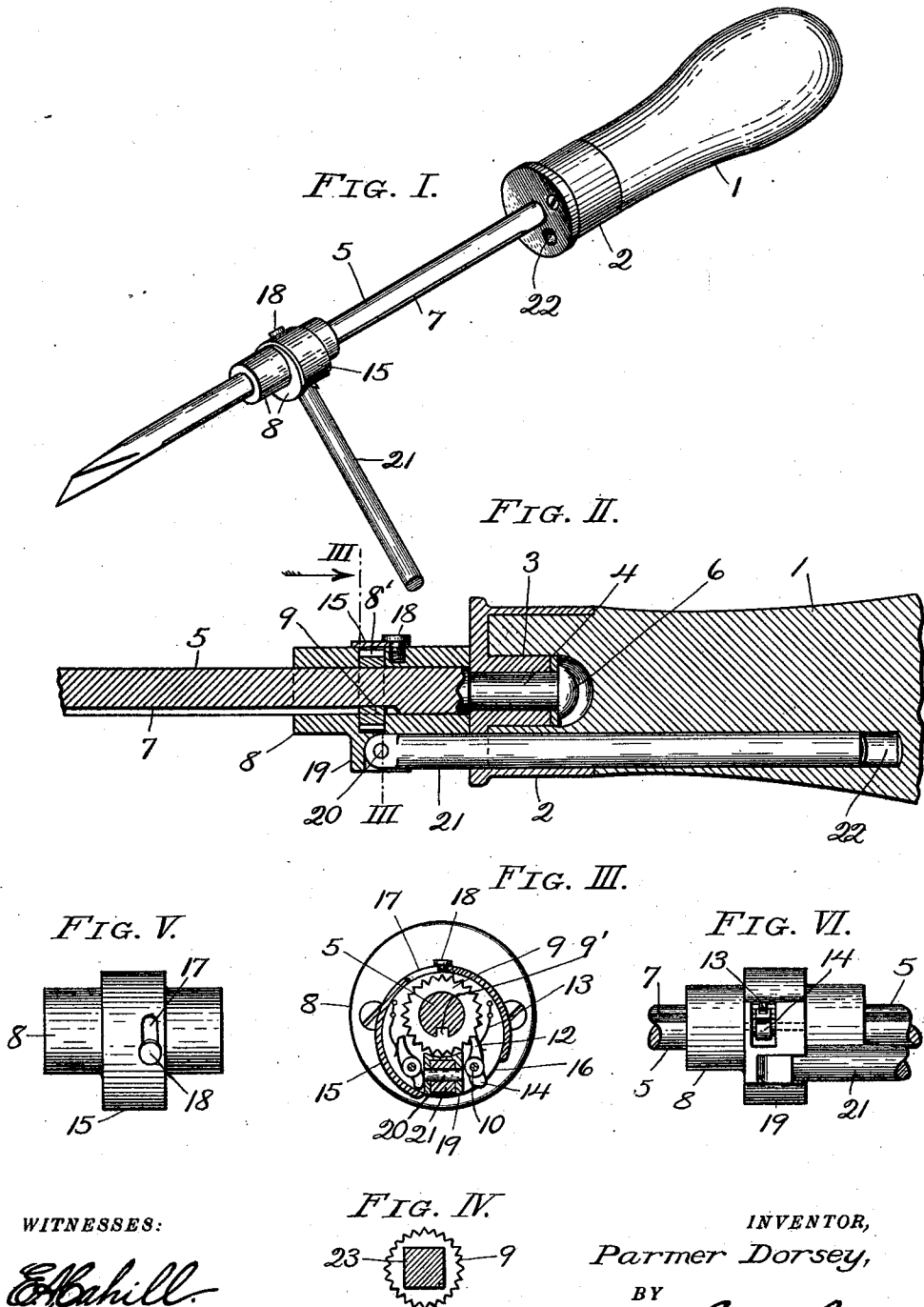


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 BIT STOCK.
 APPLICATION FILED APR. 25, 1910.

1,000,900.

Patented Aug. 15, 1911.

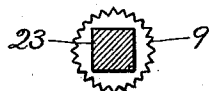


WITNESSES:

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FIG. IV.



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BIT-STOCK.

1,000,900.

Specification of Letters Patent. Patented Aug. 15, 1911.

Application filed April 25, 1910. Serial No. 557,520.

To all whom it may concern:

Be it known that I, PARMER DORSEY, a citizen of the United States, residing at Hutchinson, in the county of Reno and State of Kansas, have invented certain new and useful Improvements in Bit-Stocks; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to screw drivers, and has for its object to provide a tool of that kind, which is specially adapted for heavy work.

In accomplishing this object I have provided a screw driver having an improved ratchet mechanism, whereby the ordinary ratchet effect may be produced, and which further provides a lever device for use on extremely heavy work.

A further object of my invention is to provide the improved details of structure hereinafter described and pointed out in the claims, the preferred embodiment of the structure being illustrated in the accompanying drawings, in which:—

Figure I is a perspective view of a screw driver embodying my invention, the lever being extended in position for use. Fig. II is a sectional detail view showing the lever housed in the handle. Fig. III is a cross section on the line III—III of Fig. II. Fig. IV is a cross section of a modified form of shank with a ratchet wheel thereon. Fig. V is a detail view of the ratchet head. Fig. VI is a detail view of same from the opposite side, showing also portions of the shank and lever.

Referring more in detail to the parts:—1 designates the main handle, having a ferrule 2, provided with an inwardly projecting sleeve 3, in which is rotatably mounted the reduced cylindrical part 4 of the shank 5, the part 4 being provided with a head 6 which engages the rear end of sleeve 3 and prevents withdrawal of the shank from the handle.

In the preferred or cylindrical form, the shank 5 is provided with a longitudinal groove 7, for receiving a lip on the ratchet

wheel presently described. Slidably on the shank is a ratchet head 8, having a transverse slot 8', in which is a ratchet wheel 9, which latter is provided with a lip 9' that is projected into the shank groove 7 and keys said wheel thereto, as shown in Fig. III.

Fixed in the head 8 are a pair of pins 10, upon each of which is pivoted a pawl 12. Pawls 12 are pressed toward the ratchet wheel by springs 13, and have outwardly projecting heels 14, adapted for engagement by a slide 15 which is rotatably mounted on the ratchet head. Slide 15 has an opening 16 into which the pawls 14 are projected so that they may be engaged by the edges of the slide and moved into or out of engagement with the ratchet. Slide 15 is also provided with a slot 17 through which a stud 18 projects, said stud serving as a combined stop and guide for the sleeve. On the ratchet head 8 is lug 19, having a recess 19' in which is located a transverse pin 20, on which is pivoted a lever 21.

The handle 1 is provided with a bore 22 which is adapted to receive the greater part of the lever 21, and the lug 19 is cut away to permit the lever to be turned parallel with the shank, and inserted into the bore 22.

When the lever is projected into the handle bore it holds the head 8 against rotation and the tool may be used as an ordinary ratchet screw driver, the handle 1 turning upon the part 4 during alternate movements thereof, while the head 8 turns upon the shank, 5.

When it is necessary to drive a large screw or to extract a very tight one, the head 8 is moved outwardly to free the lever 21 from its socket, and the lever is used for operating the ratchet head with one hand while the handle 1 is held with the other.

If the shank be square, as shown at 23 in Fig. IV, it is obvious that the bore of the ratchet head must be large enough to permit rotation of the head upon the shank.

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

1. A screw driver comprising a handle portion having a shank socket and having a longitudinal bore located wholly within the handle portion, a shank having one end revolvably mounted in the socket in said handle

portion, and a lever device comprising a head adjustable on the shank and a handle pivotally connected with the head and adapted for projection into the bore in the main handle, so that it is wholly inclosed therein, substantially as set forth.

2. A screw driver comprising a handle portion, having a shank socket and a bore separate from, but parallel with the shank socket; a shank revolubly mounted in said socket; and a lever device comprising a head adapted for longitudinal adjustment on said shank, and a handle member pivotally connected with said head and adapted for projection into the bore in said main handle, so that it is wholly inclosed therein

substantially as and for the purpose set forth.

3. In a ratchet tool, a shank, a handle rotatable upon the shank, said handle having a longitudinal, eccentric bore; a ratchet head mounted upon the shank, and a lever attached to the ratchet head; the free end of said lever being adapted to be housed wholly within said eccentric bore.

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

PARMER DORSEY.

Witnesses:

MYRTLE M. JACKSON,
K. M. IMBODEN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."