

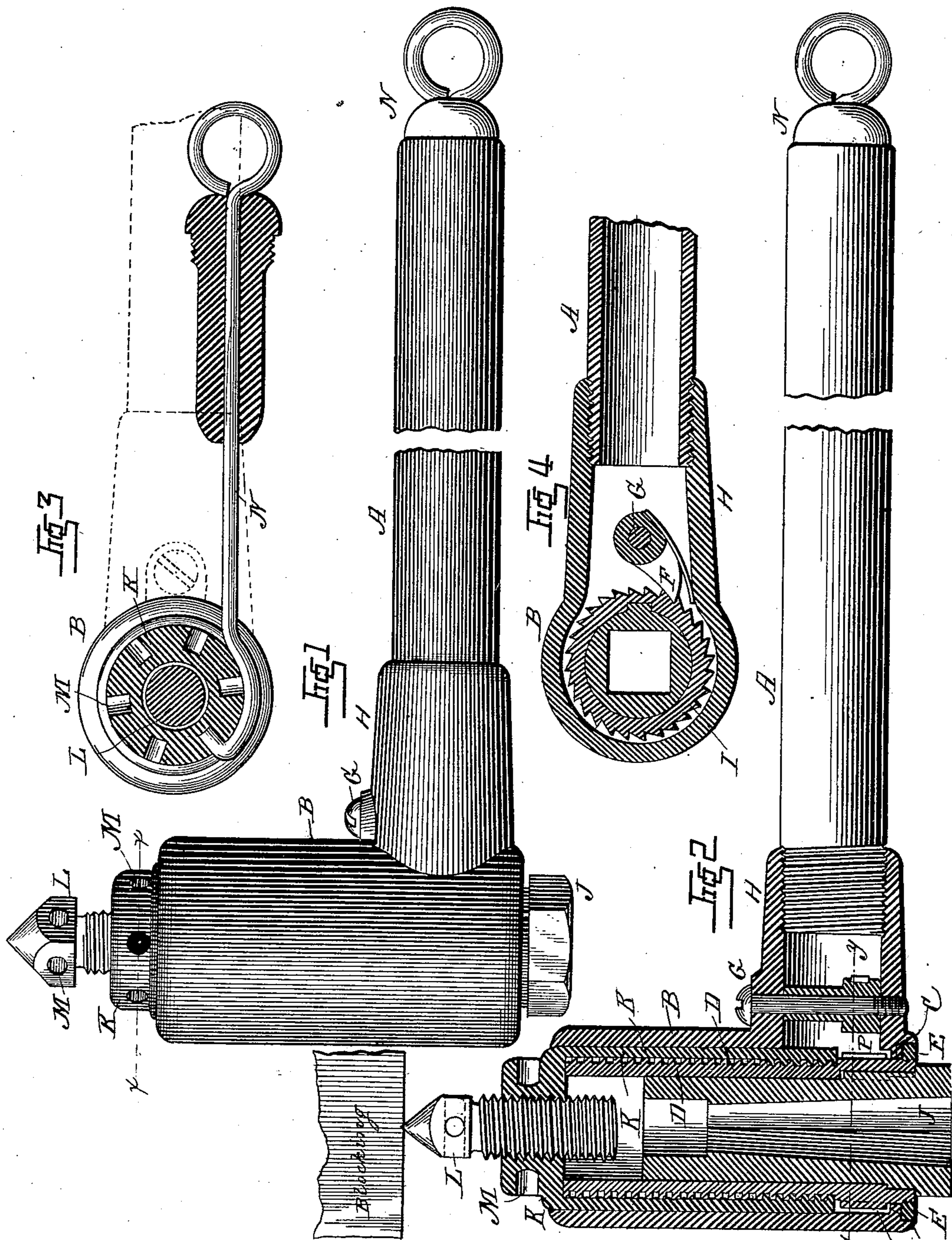
(No Model.)

O. S. WALKER.

RATCHET DRILL.

No. 282,809.

Patented Aug. 7, 1883.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

OAKLEY S. WALKER, OF CARTHAGE, NEW YORK.

## RATCHET-DRILL.

SPECIFICATION forming part of Letters Patent No. 282,809, dated August 7, 1883.

Application filed March 31, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, OAKLEY SMITH WALKER, of Carthage, in the county of Jefferson and State of New York, have invented a new and useful Improvement in Ratchet-Drills, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, forming part of this specification.

10 This invention relates to ratchet-drills for hand use; and the invention consists of the novel features of construction hereinafter described and claimed.

15 In the drawings, Figure 1 is an elevation of my improved ratchet-drill, partly broken away. Fig. 2 is a similar view, partly in section. Fig. 3 is a section on line *x x* of Fig. 1, showing the wrench applied; and Fig. 4 is a section on line *y y*, Fig. 2.

20 The lever A is provided with a hollow cylindrical boss, B, having an internal flange or collar, C, upon which is supported the ratchet-spindle D, and an annular nut, E, screwing on said spindle outside the said collar. A spring-pawl, F, pivoted on a pin, G, in the handle-socket H, is adapted to engage with the ratchet I on the spindle, to communicate an intermittent movement to the spindle in a single direction when the handle is operated. The spindle D is made hollow, and is provided with a key-seat to receive a key on the drill-stock J, which is carried in the said hollow spindle. The ratchet-spindle is provided with an external thread extending its whole length above the ratchet I, over which screws a feed-sleeve, K, which is adapted to pass down between said spindle and the inner surface of the boss B, whereby it shall serve as a bearing for the lever. The feed-sleeve is closed at its outer end, and is provided with a threaded perforation, into which is screwed an adjusting-screw, L. The screw L and sleeve K are provided with perforations M, by means of which a wrench, N, may be applied thereto for adjusting said parts. When the wrench is not in use, it may be screwed into the hollow handle or lever A for safe-keeping. The advantage of the screw L is that it is not only adapted for quick and convenient ad-

justment of the tool to its blockings, but will serve as a supplemental feed device when the main feed has been exhausted; and it is useful also for expelling the drill or drill-stock from the hollow ratchet-spindle. The long boss of the lever A extends the whole length of the spindle, and serves both as a guard for the feed-sleeve throughout its whole range of feed, and also as a bearing for the lever. With this construction the tool is not materially weakened at the middle when the feed-sleeve has been fed out to its greatest extent.

Where the space in which the drill is to work is wide, the feed-sleeve may be provided with an extension-sleeve adapted to screw thereon, and the supplemental feed-screw may be screwed into the end of such extension. By making the feed-sleeve about equal in length with the ratchet-spindle, as above described, it can be screwed down over the spindle to the ratchet, whereby the smallest possible compass may be secured in the tool.

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

1. A ratchet-drill having the working-lever provided with a boss or socket which forms a bearing for the feed mechanism, whereby the feed mechanism may be extended and utilized the full length of the drill-spindle, substantially as shown and described.

2. The combination of the hollow externally-threaded ratchet-spindle, the hollow internally-threaded feed-sleeve working over said spindle, and the supplemental feed or adjusting screw working in the said sleeve, substantially as shown and described.

3. The combination, with the ratchet-spindle and the feed-sleeve having the supplemental feed-screw, of the lever having the boss adapted to support the tool at the middle or weakest part when the feed-sleeve has been fed out its full length, substantially as shown and described.

OAKLEY SMITH WALKER.

Witnesses:

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