J. C. STEBER.
Ratchet-Drill.

No. 212,066. Patented Feb. 4, 1879.

Fig. 1

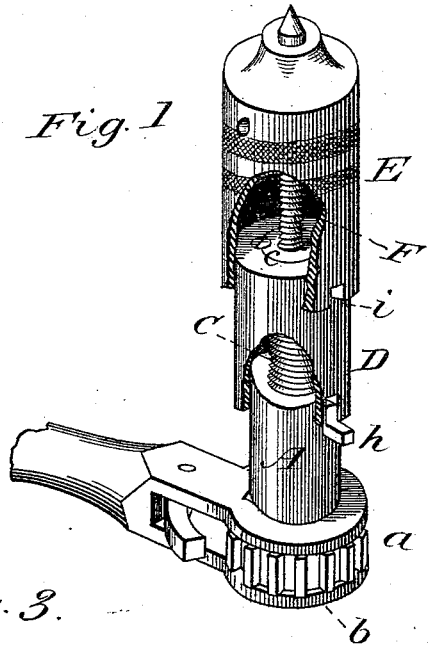
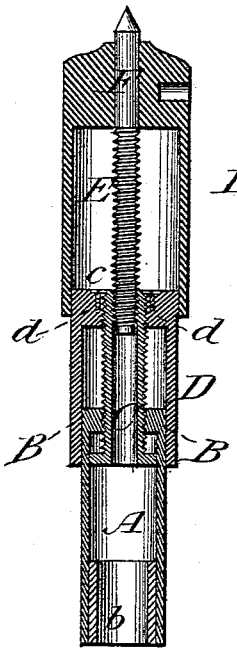


Fig. 3.



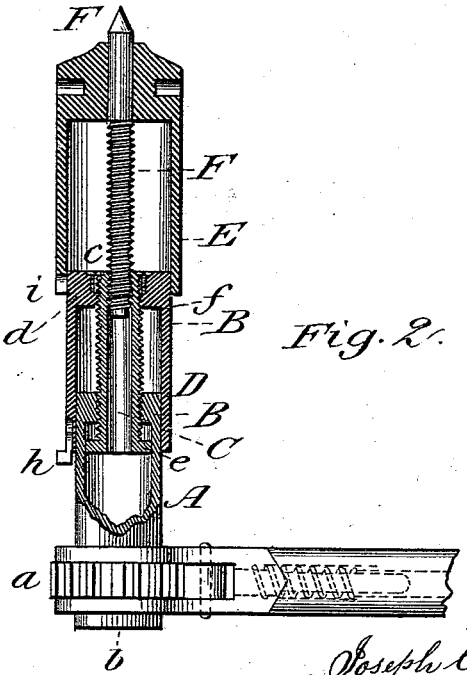


Fig. 2.

Attest:
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UNITED STATES PATENT OFFICE.

JOSEPH C. STEBER, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN RATCHET-DRILLS.

Specification forming part of Letters Patent No. **212,066**, dated February 4, 1879; application filed July 22, 1878.

To all whom it may concern:

Be it known that I, JOSEPH C. STEBER, of the city and county of San Francisco, in the State of California, have invented a certain new and useful Improvement in Ratchet-Drills; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and the figures and letters of reference therein, making part of this specification.

My invention relates to an improved construction of that class of extension ratchet-drills in which the parts are formed of telescopic sections having motion one upon the other, for the purpose of giving the drill the capacity to work in different situations where either a long or a short drill is required.

By my improved construction of drill, as hereinafter more fully described, the same tool can be used for different kinds of work, whether in an open or a contracted space, and the strength and compactness of the parts are greatly increased.

The invention consists in the peculiar construction and combinations of the parts, as hereinafter pointed out.

In the said drawings, Figure 1 is a side view of my improvement. Fig. 2 is a central longitudinal section. Fig. 3 is a detail view.

A represents a sleeve, having the ratchet *a* secured around it at one end for the handle, and a socket, *b*, for the drill-bit, and fixed to its opposite end a screw-nut, B. This sleeve is hollow, and fits over a hollow screw, C, and inside of a larger sleeve, D, to which the screw C is secured at one end, at *c*. The screw C is screw-threaded for a portion of its length on the interior surface at *d*, and for its entire length on the exterior surface. Upon this screw the nut B of the sleeve A travels between the two shoulders *e f*, one at the top of the sleeve D and the other at the bottom of the screw C, that act to limit its movements to the extent of the length of the screw and to prevent the parts from separating.

The outer sleeve, E, fits and works over the sleeve D, and is provided with a central spindle, F, fixed to its bottom, and screw-threaded to work through the nut *d*.

These three parts A D E move one upon the other, and give a greater or less length of drill, as required.

The part A moves out from within the sleeve D by the action of the screw-thread upon the outside of the hollow screw C and the fixed nut B, secured to the bottom end of the sleeve A, while the sleeve D moves out from the sleeve E by the operation of the screw-spindle F, fixed to the bottom of the latter sleeve.

The two sleeves D E are provided with a catch, *h*, by which they are locked and caused to travel together upon the inner sleeve, A, either in or out; but by sliding this catch out from the slot *i* in the outer sleeve these two parts are given a separate motion, and one is free to move upon the other.

The construction and combination of these parts enable the length of drill to be quickly regulated and the drill-bit fed down as the work proceeds, while the tool is capable of adjustment to suit the location where the holes are to be drilled.

I am aware that I am not the first to make a ratchet-drill capable of extension, and therefore do not broadly claim that feature as original with me; but,

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

1. A ratchet-drill composed of the following parts or members: the inner hollow sleeves A D E, fitting and moving one upon the other, the hollow screw C, with exterior screw-threaded surface and interior screw-thread, *d*, the screw-nut B, fixed to the sleeve A, and the screw-spindle F, fixed to the sleeve E, constructed and combined together substantially as described.

2. In an extension ratchet-drill, substantially as described, the combination, with the sleeve D, having the hollow screw C secured to it at one end, of the sleeve A, with its screw-nut B arranged to work upon the outer screw-threaded surface and between the two stops *e f*, substantially as described and set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 13th day of June, 1878.

JOSEPH C. STEBER. [L. S.]

Witnesses:
D. SELLECK,
EDWARD E. OSBORN.