

O. B. Latham,
Rock Drill and Reamer.

No 49,281.

Patented Aug. 8, 1865.

Fig. 1.

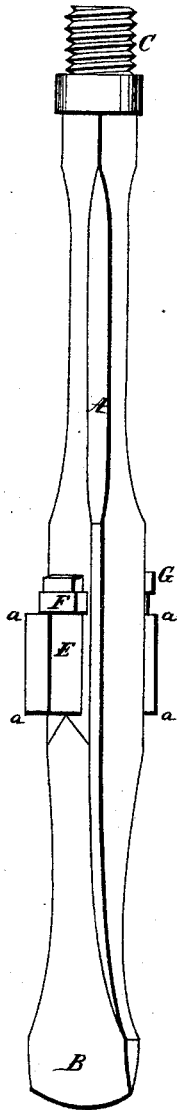


Fig. 2.

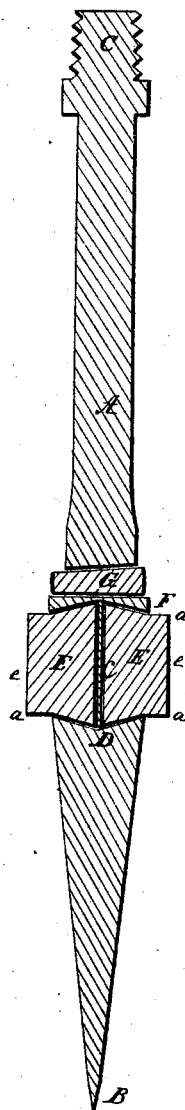
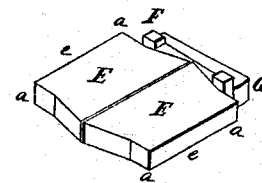


Fig. 3.



Witnesses:
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Inventor:
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UNITED STATES PATENT OFFICE.

O. B. LATHAM, OF SENECA FALLS, NEW YORK.

IMPROVEMENT IN ROCK-DRILLS.

Specification forming part of Letters Patent No. 49,281, dated August 8, 1865.

To all whom it may concern:

Be it known that I, O. B. LATHAM, of Seneca Falls, in the county of Seneca and State of New York, have invented new and useful Improvements in Rock-Drills for Sinking Wells and like purposes; and I do hereby declare that the following is a full and complete description of the construction and operation of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view. Fig. 2 is a vertical section, and Fig. 3 a perspective view of the reamers.

This drill, in its general form and structure, resembles those in common use, consisting of the body A, bit B, and screw-shank C.

At right angles to the edge of the bit I make a mortise through the body A, about four or five inches, or more, according to the size of the drill, above the edge of the bit B. The lower end of this mortise is dovetailing, being deepest in the center, as shown at D in Fig. 2.

E in the several views represents the reamers. These consist of tempered pieces of steel or other material, each section of which is made so that either end will accurately fit one-half of the mortise, as shown in Fig. 2—that is, when both sections of the reamer are placed in the mortise the inner and longer faces will meet at the center of the body of the drill. These reamers E extend outward from the body of the drill so that their united width from *e* to *e* shall be equal to or a little more than the width of the edge of the bit B. The outer corners of the reamers are formed at right angles, as shown at *a*, both above and below, so that they can be reversed in their position, and thus pre-

senting a sharp angle when the lower one becomes worn, the lower end of the reamer being always exposed to the most friction. In this way the same reamers become self-sharpening, and can be frequently turned so as to present a good cutting angle, the wear upon the outer faces being compensated for by the introduction of thin pieces of metal placed between the sections, as shown at *c* in Fig. 2.

The reamers are held in place by a gib, F, the lower face of which is fitted to the end of the reamers E, as shown in Figs. 2 and 3. Both ends of the gib have T-heads, as shown in Fig. 3, which embrace both sides of the body of the drill, thus making it secure. The gib is held in place by a key, G, in the usual manner.

It will be observed by reference to the shape of the mortise at the lower end and the shape of the lower face of the gib that the reamers will always adjust themselves to their central position. The reamers thus constructed act upon the sides of the bore both in rising and falling, but mostly, of course, in their descent. The reamers thus constructed also act as a guide to the drill, and prevent the forming of a triangular hole, even should they not perform the office of reaming out the bore.

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

Constructing the reamer with cutting-angles both above and below, making them reversible and adjustable in the body of the drill, substantially as specified.

OBADIAH B. LATHAM.

Witnesses:

EDM. F. BROWN,
S. J. BOWEN.