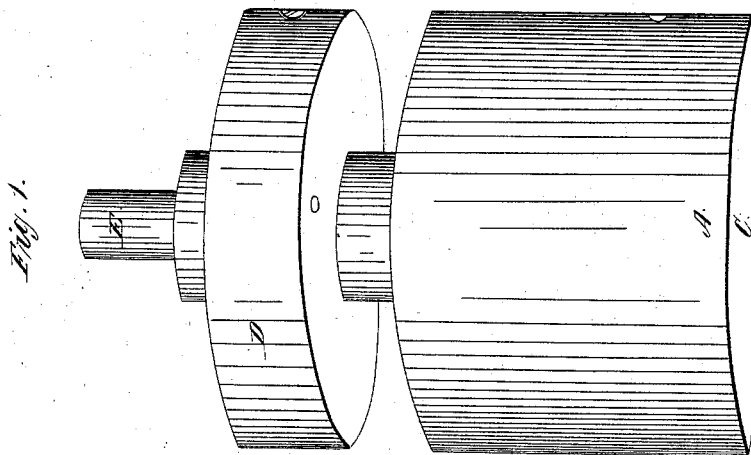
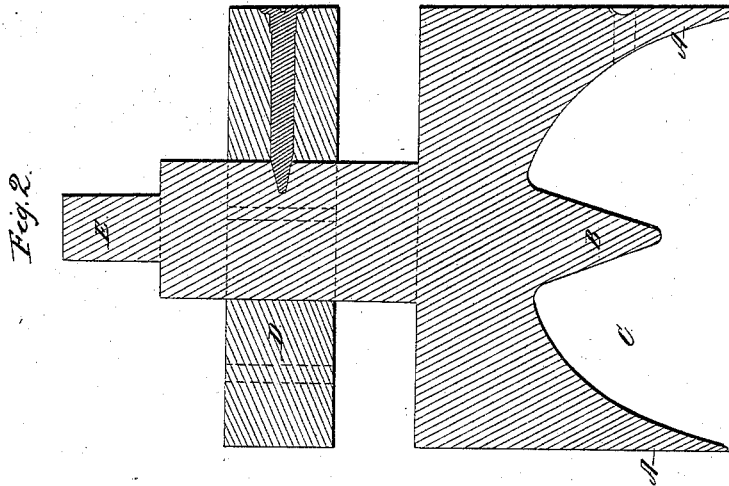


*J. C. Dickey,*  
*Rock Drill.*

*N<sup>o</sup> 47,805.*

*Patented May 23, 1865.*



*Witnesses:*

*Saml Bull*  
*Saml H. R. H. H. H.*

*Inventor:*

*Julius C. Dickey*

# UNITED STATES PATENT OFFICE.

JULIUS C. DICKEY, OF SARATOGA SPRINGS, NEW YORK.

## IMPROVED ROCK-DRILL.

Specification forming part of Letters Patent No. 47,805, dated May 23, 1865.

*To all whom it may concern:*

Be it known that I, JULIUS C. DICKEY, of Saratoga Springs, in the county of Saratoga and State of New York, have invented a new and Improved Mode of Constructing Rock-Drills for Boring Artesian Wells; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in making a rock-drill for boring artesian wells of a circular form with a circular cutting-edge, and also in combination with a guide to secure steadiness and effectiveness to the drill, the drill being made of steel or other known material.

Figure 1 is a perspective view, and Fig. 2 a longitudinal section through the same.

The drill A, I make with a circular cutting-edge and with a recess, C, as shown in Fig. 2. It is contemplated making this circular cutting-edge with sharp-pointed teeth, and making the hollow part C of the drill with pointed projections for the purpose of cutting and breaking up the quartz, &c. The projection B, Fig. 2, will be found sufficient for this purpose in most cases. It is contemplated making this projection B sufficiently long to extend to the bottom of the drill, and to make it pointed at the end or of a flat cutting-point. It is also contemplated making holes through the sides of the drill into the hollow part thereof, and to make the side of the drill with a slot or slots, through which the pulverized rock can pass upward and thereby free the drill from the accumulation of pulverized rock, the rock being cut, broken up, and pulverized by the action of the drill A, projection B, and the recess C. The guide D, I secure to the drill-rod at any desirable part of the rod. It

is contemplated using one or more of these guides D on the drill-rod. These guides D serve an important purpose in boring wells, as they secure an upright position to the drill-rod, prevent the drill from becoming wedged in between the rock and the side of the well, and force the drill to cut and crush the rock without reference to the position of the rock in the bottom of the well.

There is great difficulty in boring wells with the drills now in use when the rock does not lie entirely across the well, as the drill will glance off from the rock and become wedged in between the rock and the side of the well, the result of which is a great loss of time and tools, and in some cases a relinquishment of all effort to bore a well where one has been commenced. It is contemplated securing this guide D to the drill-rod secured to any other drill, for the purpose of securing effectiveness to the drill. By the use of this drill A, in combination with the guide D, I am enabled to bore a well in any location, without reference to the position or location of the rock. The guide D is perforated with holes, through which the pulverized rock can pass upward, the drill-rod being secured to the drill, as shown at letter E.

It is manifest that the form and arrangement of the parts may be somewhat varied without a departure from the spirit of my invention.

I claim—

The drill A, with a circular cutting-edge, in combination with the recess C, for the purposes set forth.

JULIUS C. DICKEY.

Witnesses:

SAM. T. BULL,  
JAMES F. R. HUDDER.