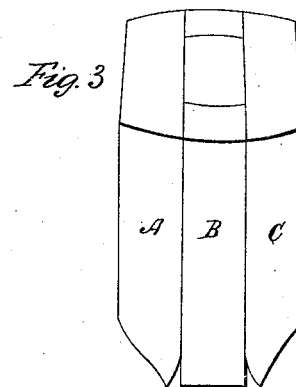
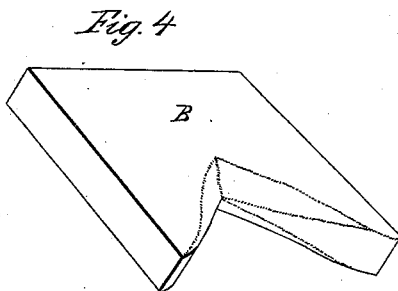
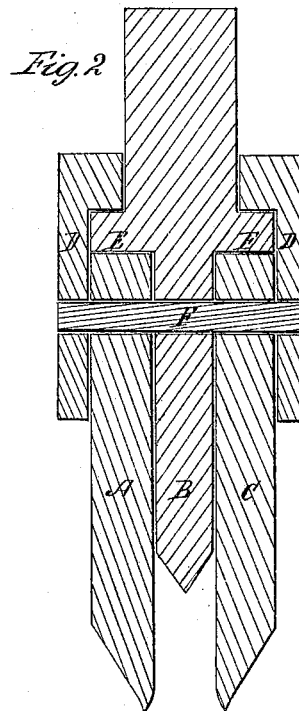
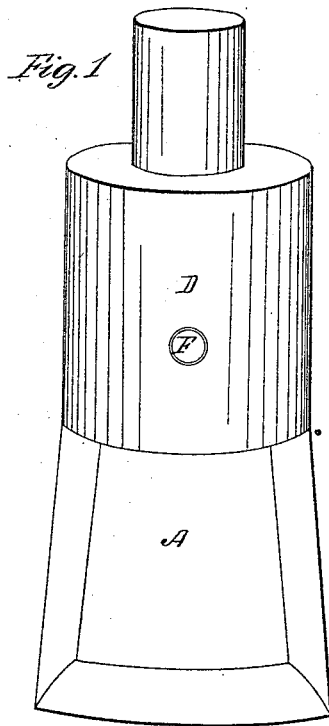


J. C. Dickey,
Rock Drill,

No 53,586,

Patented Apr. 3, 1866.



Witnesses;
W. H. Winston
Wm. Brewster

Inventor;
Julius C. Dickey

UNITED STATES PATENT OFFICE.

JULIUS C. DICKEY, OF NEW YORK, N. Y.

IMPROVEMENT IN ROCK-DRILLS.

Specification forming part of Letters Patent No. **53,586**, dated April 3, 1866.

To all whom it may concern:

Be it known that I, JULIUS C. DICKEY, of New York, in the county of New York and State of New York, have invented a new and Improved Mode of Constructing Rock-Drills for Boring Oil-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.

Figure 1 is a perspective view, Fig. 2 a longitudinal section, Fig. 3 a cross-section, and Fig. 4 a perspective view, of drill-bit B.

The drill-bits A, B, and C are incased in the cylindrical cap D, the bit B being made with shoulders E E, against which the bits A and C rest, the several bits being secured in cap D by means of the bolt F and the drill-rod, which is screwed onto bit B above cap D.

I make bit B with a cutting-edge in its center, as shown in Figs. 2 and 4, and make the outside ends of said bit with a cutting-edge, so as to cut in an opposite direction from the center of the bit and act as a reamer.

I contemplate making the distance between the bits A and C greater at their outside ends than in the center of the bits, so that the drill will work more freely should it be liable to clog between the bits.

In some cases I make the lower ends of bits A and C the form of the well, or nearly so, so as to act as a reamer, in which case I make bit B somewhat similar to bits A and C.

I also contemplate securing these bits in a cylinder or cap made on the end of a drill-rod.

I increase the number of bits in proportion to the size of the well to be bored. They are very readily disconnected from cap D, when necessary to sharpen them, by unscrewing the drill-rod and removing bolt F.

The use of cap D may be dispensed with by making a hole in shoulders E E to receive a tenon made on the ends of bits A and C, said bits A and C being secured in their place by a bolt passing through said tenon, or a nut screwed onto the tenon above the shoulders, or in any other substantial manner.

Above the drill, on the drill-rod, I contemplate securing a circular piece of metal, about the size of the well, made of cast or wrought iron, with slots in the sides of the same, for the purpose of making the drill work steady and perpendicular in the well.

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

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

The central drill-bit, B, made to answer the purpose of a reamer, in combination with the drill-bits A and C, substantially as set forth.

JULIUS C. DICKEY.

Witnesses:

M. M. LIVINGSTON,
WM. TREURN.