(No Model.)

J. HENGEN.

ROCK DRILL.

No. 560,500. Patented May 19, 1896.

Fig. 1.

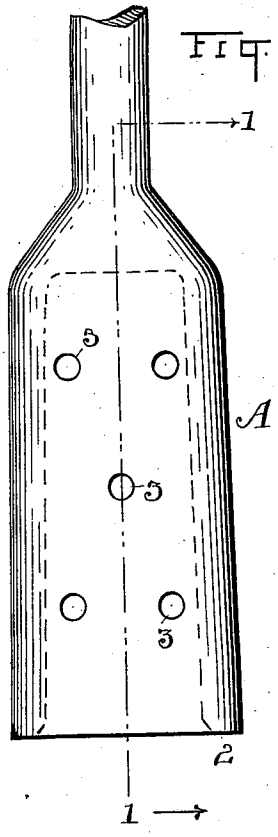


Fig. 2.

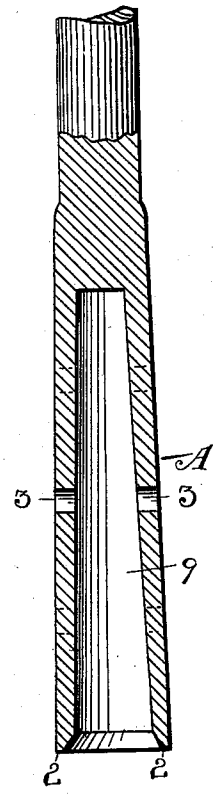
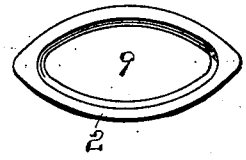


Fig. 3.



ATTEST.
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UNITED STATES PATENT OFFICE.

JACOB HENGEN, OF NORTH AMHERST, OHIO.

ROCK-DRILL.

SPECIFICATION forming part of Letters Patent No. 560,500, dated May 19, 1896.

Application filed May 3, 1894. Serial No. 510,002. (No model.)

To all whom it may concern:

Be it known that I, JACOB HENGEN, a citizen of the United States, residing at North Amherst, in the county of Lorain and State of Ohio, have invented certain new and useful Improvements in Rock-Drills; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in rock-drills; and the present invention is more particularly an improvement on the drill disclosed in Letters Patent No. 371,679, granted to George M. Githens October 18, 1887; and it consists in a hollow and tapering rock-drill whose lower end is approximately flat and has the form in cross-section externally and internally of two ellipses, the outer longer in proportion to its width than the inner and pointed at its ends, the metal between the sides of the ellipses sloping inward and that portion between their ends being flat.

In the accompanying drawings, Figure 1 is a view in side elevation. Fig. 2 is a section on line 1 1 of Fig. 1, and Fig. 3 is a bottom plan view.

A represents the drill, as shown in Figs. 1 and 2. This drill tapers gradually from the extreme lower end upward to afford clearance at the sides. This drill is hollow, as shown at 9, and it is provided with one or more openings 2 2 for the escape of air, sand, and water.

At the lower end or mouth the drill is approximately straight, and, as shown in Fig. 3, it is in the form externally and internally of two ellipses, the outer of which is longer than the inner in proportion to its width, whereby the metal intervening is comparatively narrow at the sides and is broader at the ends. The side edges slope inward to form cutting edges, as shown at 2 2, and the flat ends form extended bearings. When thus constructed, the drill cuts fast, straight, and does not stick in the hole formed. The drill is cheap and is easily sharpened or re-dressed by simply heating it for two or three inches, inserting a punch, and swaging.

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

A hollow and tapering rock-drill whose lower end is approximately flat and has the form in cross-section externally and internally of two ellipses, the outer longer in proportion to its width than the inner, and pointed at its ends, the metal between the sides of the ellipses sloping inward and that portion between their ends flat, as and for the purposes set forth.

Witness my hand to the foregoing specification this 30th day of April, 1894.

JACOB HENGEN.

Witnesses:

W. M. REMINGTON,

R. W. KELCH.