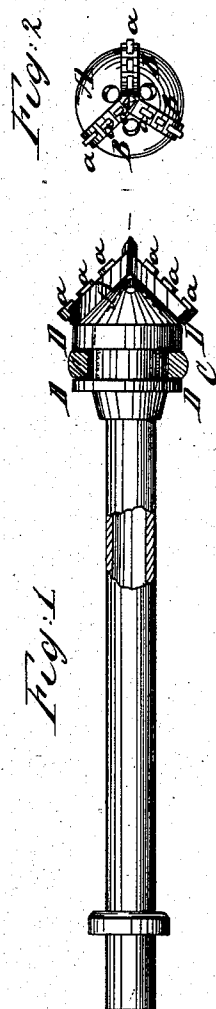


G. F. Case,
Diamond Rock Drill.
N^o 62,003. Patented Feb. 12, 1867.



Witnesses
Theo. Tusche
J. A. Service

Inventor
G. F. Case
Per Munn & Co
Attorneys

United States Patent Office.

G. F. CASE, OF NEW YORK, N. Y.

Letters Patent No. 62,008, dated February 12, 1867.

IMPROVED DRILL.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, G. F. CASE, of the city, county, and State of New York, have invented a new and useful improvement in Rock Drills; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The present invention relates to that class of drills in which diamonds are employed as the medium for cutting the rock, and it consists in arranging the diamonds in the head of the drill in two or more rows, and also in so setting them as to cut the entire surface of the rock embraced by the drill-head. In addition to the above, a loose guide-ring or collar is used upon the drill-rod or tool-head, for the purpose of relieving it from friction and consequent wear as it is worked or operated. In the accompanying plate of drawings my improvements in rock drills are illustrated—

Figure 1 being a side view of the drill-rod and its tool-head; and

Figure 2, an end view of the tool-head.

A, in the drawings, represents the tool-head, in which diamonds *a* are secured in three rows B, radial with the centre of the said head; these diamonds being set in such manner that those of one row will cut the space left in the rock not cut by the diamonds in the other row, whereby the whole surface of the rock will be cut by the drill as it is worked. C, a loose collar or ring, placed around the drill-rod just above the drill-head, between the shoulders D of which it is there secured so that it can play up and down upon the rod, but yet at the same time will be free to turn, whereby a great deal of friction from the working of the drill is obviated, consequently causing the drill to operate with greater freedom and ease.

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

A diamond drill, having its diamonds arranged in two or more rows, substantially as described.

I also claim, in combination with the above, the diamonds when so set as to cut the entire surface of the rock, substantially as described for the purpose specified.

I also claim the loose collar or ring upon the drill-rod, substantially as and for the purpose described.

The above specification of my invention signed by me this 12th day of November, 1866.

G. F. CASE.

Witnesses:

WM. F. McNAMARA,
ALBERT W. BROWN.