

M. Keefer, Stone Drill.

N^o 84,883.

Patented Dec 15, 1868.

Fig: 1.

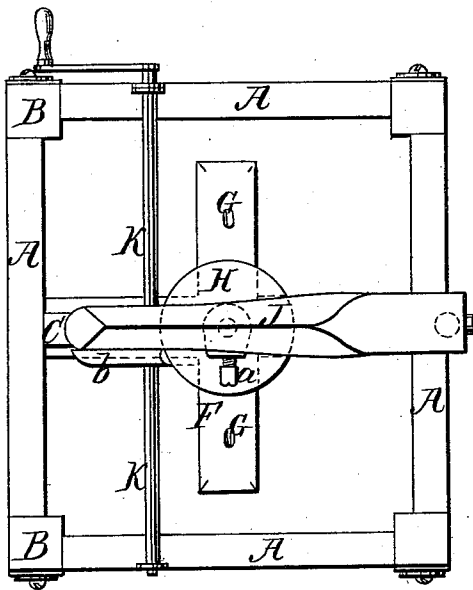
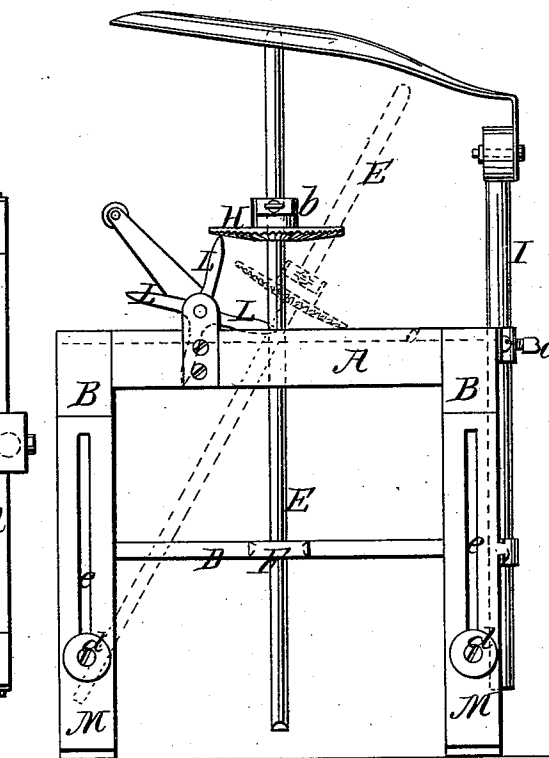


Fig: 2.



Witnesses;
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Inventor;
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By J. C. Shearer
his attorney.



MICHAEL KEEFER, OF MILLSTONE POINT, MARYLAND.

Letters Patent No. 84,883, dated December 15, 1868.

IMPROVED ROCK-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, MICHAEL KEEFER, of Millstone Point, in the county of Washington, and State of Maryland, have invented a new and useful Improvement in Rock-Drill; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, and the letters of reference marked thereon, like letters designating like parts in all the figures.

Figure 1 is a plan view, and

Figure 2 is a side elevation.

The nature of my invention consists in the peculiar construction of a machine for drilling stone, by means of which either a vertical or an oblique hole is drilled, and also by which the machine can be operated either on a plain or uneven surface by the adjustment of the legs.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

In the drawing—

A represents the horizontal frame, which rests on the legs B.

Between two sides of the frame A is a cross-piece, C, and directly under, and about midway between it and the lower end of the legs B, is another cross-piece, D, through which the drill-shaft E passes.

F represents another piece, which crosses the cross-piece D at its centre.

In the cross-pieces D and E is any desired number of oblique holes, G G.

On the drill-shaft E is a circular disk, H, the under side of which is serrated, the serrations radiating from its centre.

The disk H is adjustable on the drill-shaft, and is secured in any desired position by means of a thumb-screw, a, in a boss, b, on the upper side of the disk.

On one side of the frame A is a rod, I, which is adjustable, and held fast at any desired point by the thumb-screw c.

At the upper end of the rod I is a spring, J, which extends over the upper end of the drill-shaft E.

The rod I being round, can be turned, so as to remove the spring J from over the drill-shaft E.

Across the frame A is a shaft, K, on which are fixed the pointed arms L. The shaft and arms are rotated by a crank on one end of the said shaft.

To each of the legs B is attached a slotted extension-leg, M, which is secured to the leg B by a screw, d, which passes through the slot e.

Its operation is as follows:

The machine is placed over the stone to be drilled, and made to sit firmly, by the adjustment of the extension-legs M. If a vertical hole is to be drilled, the drill-shaft is set in the centre holes of the cross-pieces C and D. By turning the crank on the shaft K, the arms L are rotated, and their outer ends, bearing against the serrated disk H, raise and revolve it and the drill at the same time. As the upper end of the drill-shaft rests against the under side J, as soon as the end of one of the arms L, in its revolution, ceases to hold up the disk H, the drill is forced down, by means of the spring J, against the stone, and raised by the next one of the series of revolving arms. The force of the spring can be increased or diminished by raising or lowering the rod I. When it is desired to drill oblique holes, the drill is placed in one of the holes G, as represented in red in fig. 2 of the drawing.

Having thus fully described my invention,

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

1. The combination of the adjustable rod I, spring J, and drill-shaft E, with suitable guides for the drill, substantially in the manner and for the purpose described.

2. The cross-pieces D and F, with the oblique holes, in combination with the drill and spring, thus operating substantially as shown and described.

his
MICHAEL X KEEFER.
mark.

Witnesses:

H. H. KEDDY,
W. H. POST.