

J.M. Whartnaby.

Rock Drill.

N^o 94854.

Patented Sept. 14. 1869.

Fig. 1.

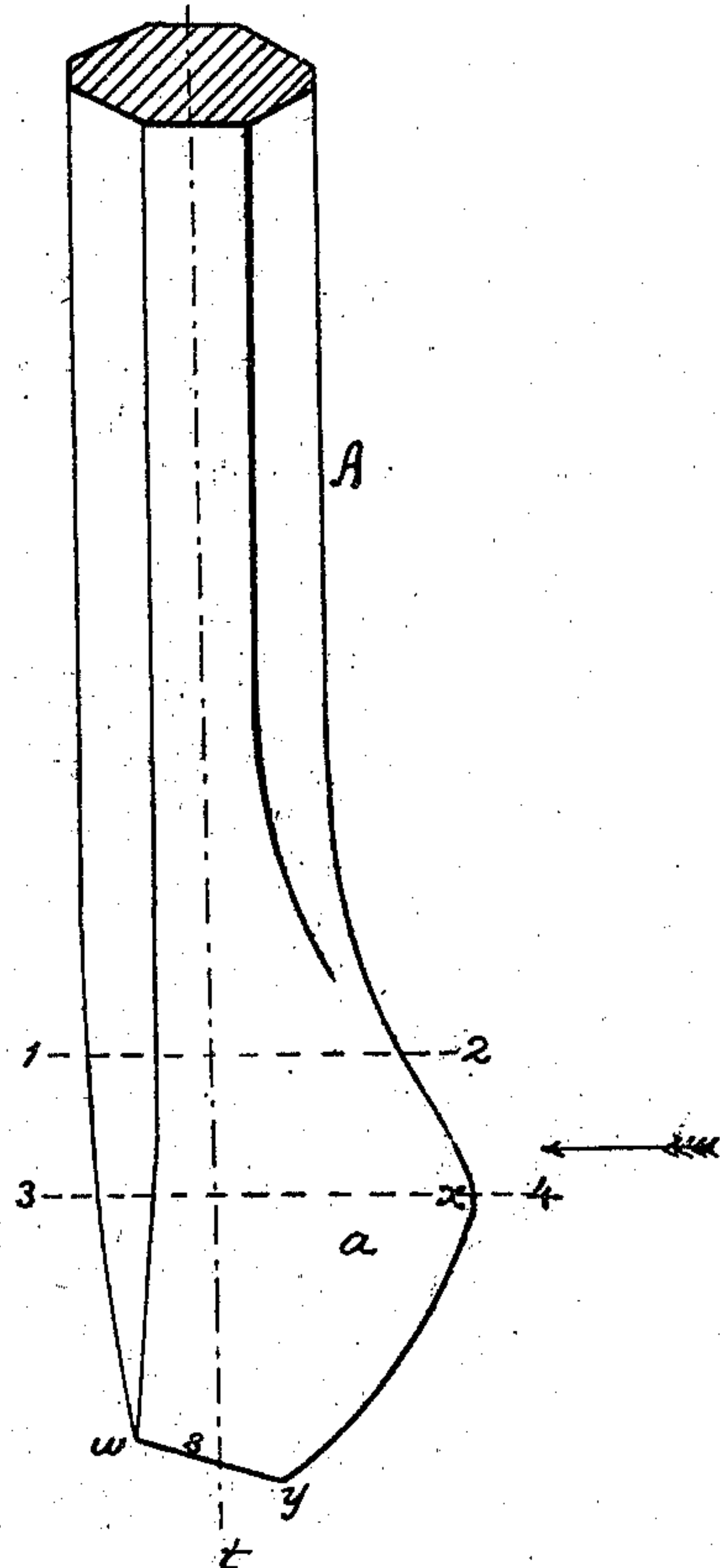


Fig. 2.

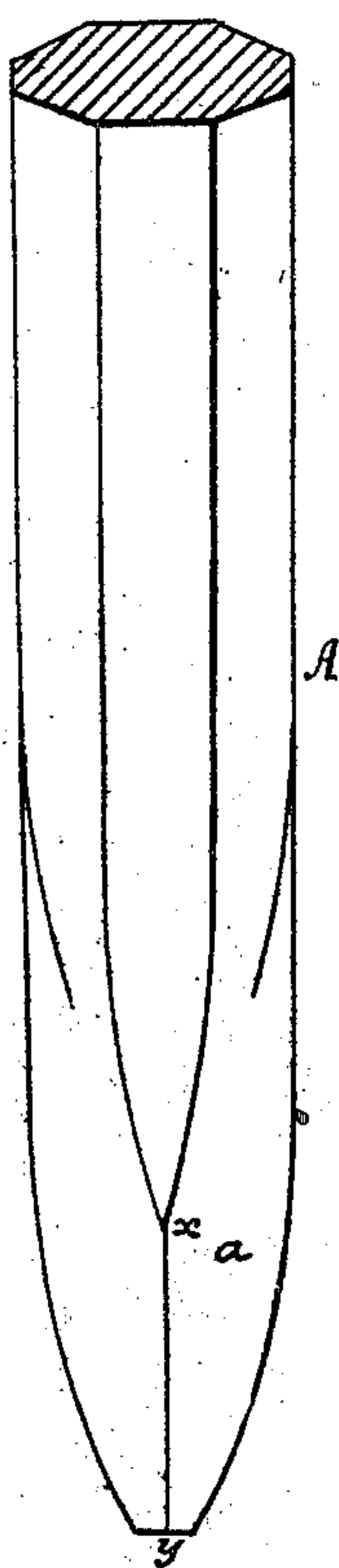


Fig. 3.

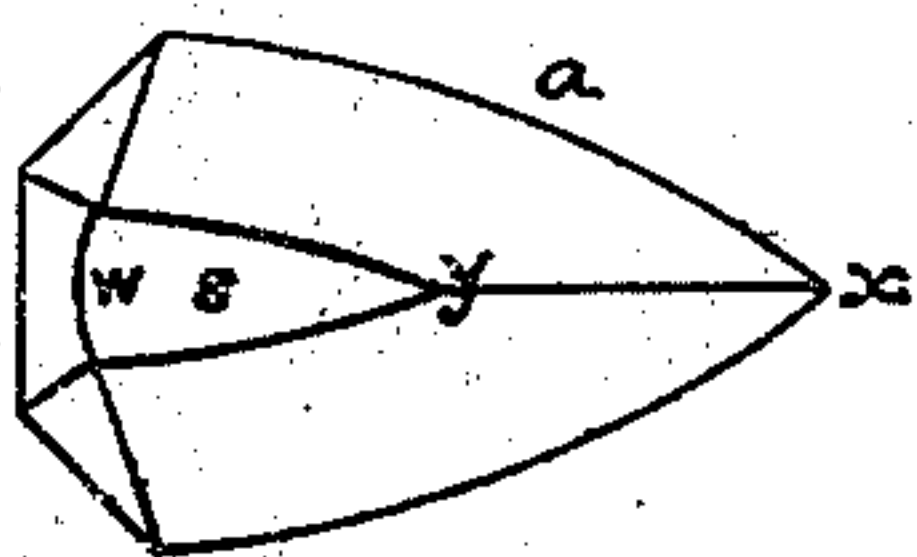


Fig. 4.

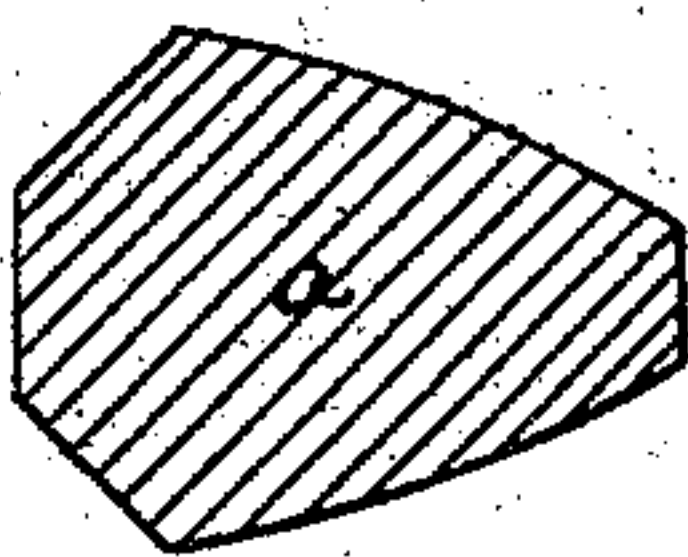


Fig. 5.

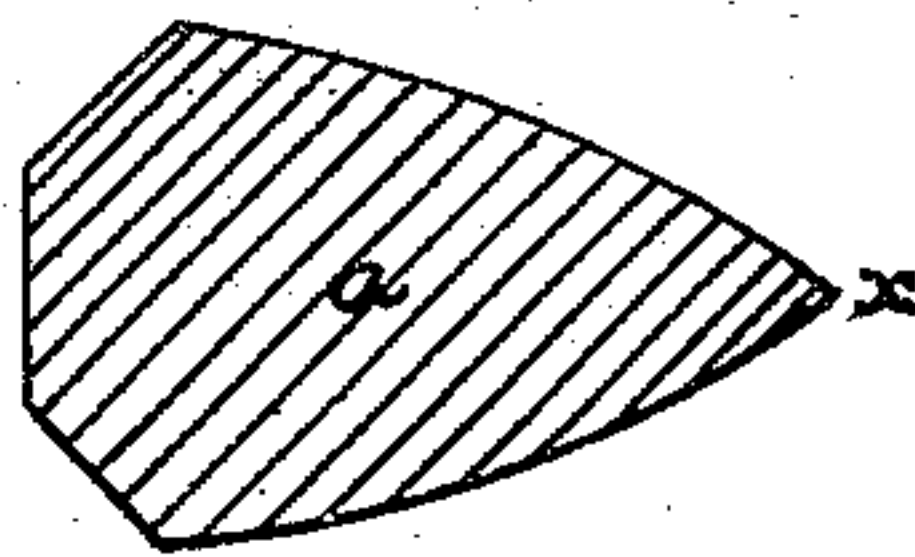


Fig. 6.



Witnesses.

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JOHN M. WHARTNABY, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF
AND SAMUEL P. FAUNCE, OF SAME PLACE, ASSIGNORS TO SAID WHARTNABY
AND FRANCIS SCHNECHTER.

Letters Patent No. 94,854, dated September 14, 1869.

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, JOHN M. WHARTNABY, of Philadelphia, Pennsylvania, have invented an Improvement in Rock-Drills; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention consists of a drill, having an inclined end and a vertical or inclined cutting-edge, as fully described hereafter, so that on striking the rock the cutting-edge will be forced laterally toward the sides of the opening, thus enlarging the latter, and producing an opening of a diameter much greater than that of the drill at its widest part.

In order to enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation, reference being had to the accompanying drawing, which forms a part of this specification, and in which—

Figure 1 is a side view of my improved rock-drill;

Figure 2, an edge view, looking in the direction of the arrow, fig. 1;

Figure 3, an inverted end view;

Figure 4, a section on the line 1-2, fig. 1;

Figure 5, a section on the line 3-4, fig. 1; and

Figure 6, a modification.

The "stock" of the drill consists of a steel bar, A, which, in the present instance, is octagonal in its cross-section; and at one side of the stock, at its lower end, is an enlargement or projection, *a*.

The edge of the projection *a* is curved from the stock to the most prominent portion or point *x*, and from the latter to a point, *y*, at the end *s* of the drill, which is inclined downward from the heel *w* to the said point *y*, for a purpose described hereafter.

The back of the drill is slightly curved from the

stock to the "heel" *w*, and the "cheeks" or sides of the projection *a* are rounded or bevelled, so as to meet on the line *x y*, forming a cutting-edge, which is inclined, in respect to the axis *t t* of the stock, as shown in the drawing.

The inclined end *s* of the drill, instead of being sharpened as in ordinary drills, is perfectly flat, so that when it strikes the rock, the drill, in consequence of this inclination of its end, will be directed from its vertical course laterally, in the direction of the cutting-edge *x y*, which is thus brought against the rock so as to chip the sides, instead of the bottom only, of the opening, an opening of greater diameter than that of the drill at its widest point being thus produced.

It will be apparent that the operation of the drill will depend upon the inclination of the end *s*, and of that of the cutting-edge *x y*. If, for instance, it is only desired to "ream" or enlarge an opening already bored, a drill, with a vertical or nearly vertical cutting-edge, may be used, as shown in fig. 6.

Without confining myself to the precise construction shown and described,

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

A rock-drill, having an inclined end, and an inclined or vertical cutting-edge, substantially as and for the purpose described.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

JOHN M. WHARTNABY.

Witnesses:

JOHN WHITE,
HARRY SMITH.