

(No Model.)

H. W. HAMMOND.
Rock Drill Bar.

No. 237,013.

Patented Jan. 25, 1881.

Fig. 2.

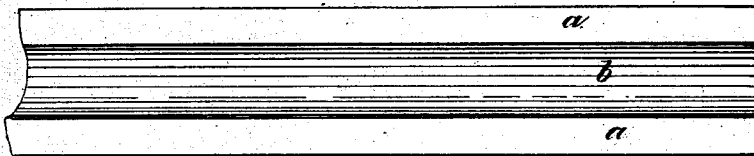


Fig. 1.

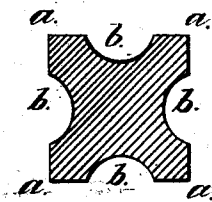


Fig. 3.

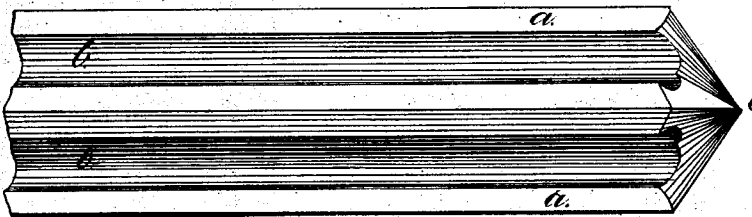
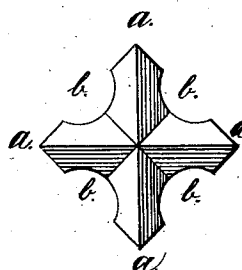


Fig. 4.



WITNESSES.

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HENRY W. HAMMOND, OF LONDON, COUNTY OF MIDDLESEX, ENGLAND.

ROCK-DRILL BAR.

SPECIFICATION forming part of Letters Patent No. 237,013, dated January 25, 1881.

Application filed August 19, 1880. (No model.)

To all whom it may concern:

Be it known that I, HENRY WOODCROFT HAMMOND, of 27 Southampton Buildings, Chancery Lane, London, County of Middlesex, England, civil and mechanical engineer, have invented as an article of manufacture a new and Improved Form of Steel Bar for Mining and other Drills, of which the following is a full, clear, and exact description, reference being had to the drawings, which form part of this specification.

The improved bar I propose to call "Hammond's bonanza rolled drill-bar."

It has been customary heretofore to forge the end or point of the ordinary steel bar into a special shape of drill required for mining, quarrying, or other purposes. This method is not only expensive and slow, but has been found to be open to other objections, such as "clogging" and loss of time in reforging for every few inches of the drill worn away. To obviate these defects it has been proposed to roll bars of steel into certain shapes which are deemed suitable for drills, and to this class of drill-steel my invention relates.

Figure 1 represents a section of my improved form of bar. Fig. 2 represents a side elevation or plan of Fig. 1. Fig. 3 represents a side elevation of the drilling end of my improved bar. Fig. 4 represents an end view of Fig. 3.

a a a a represent the cutting-edges; *b b b b*, the semicircular recesses in the drill-bar, by which the powdered material escapes from the drill-hole during work, thus preventing the clogging of the drill.

The drill-bar is rolled by suitable rolls, and

therefore presents throughout its entire length the configuration required for the drill, the penetrating point C being ground, filed, or forged to shape, as desired, the shank being formed in the usual manner, or the end may be fitted or keyed in a coupling of suitable section, if deemed preferable.

Drills made in the manner and of the shape herein shown and described present four cutting-edges of the finest and best description, the body of the drill at the same time being excessively strong, thereby presenting greater resistance to the so-called action of "springing" so common in drills formed in the ordinary manner.

One of the great advantages of my form of bar is the small amount of surface which requires to be ground, forged, or filed to produce a fine penetrating point. It is also evident that this improved bar is applicable for boring, turning, and analogous purposes.

I am aware that rolled steel bars of cross-like and triangular shape without sharp edges are shown in patent granted June 8, 1880, to W. A. Sweet for drills; and such I do not now claim; but

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

As a new article of manufacture, a rolled steel drill-bar of the shape shown, having edges *a a a a* and semicircular recesses *b b b b*, substantially as specified.

HENRY WOODCROFT HAMMOND.

Witnesses:

PHILIP M. JUSTICE,
ALLEN P. JONES.