E. Thayer,

Rock Splitter.

No. 103,940. Patented June 7. 1870.

Figure. 1—

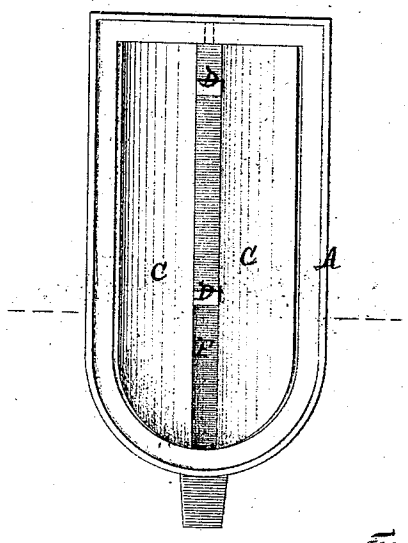


Figure. 2—

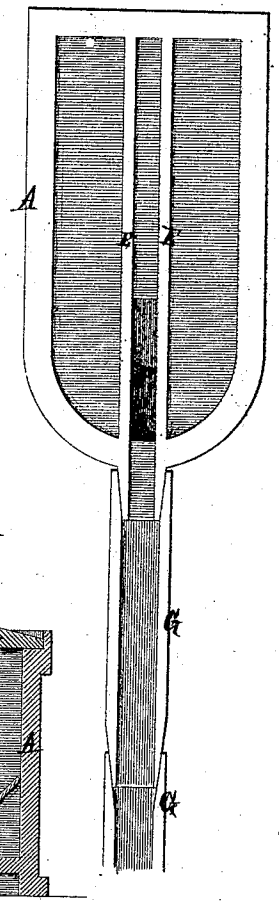
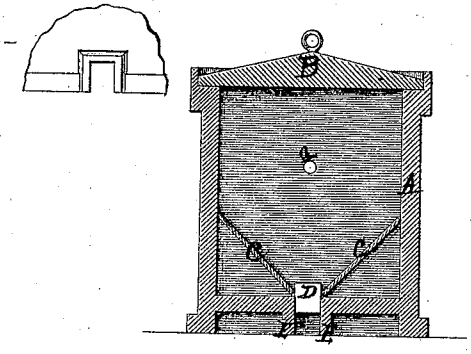


Figure 3—

Figure 4—



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Letters Patent No. 103,940, *dated June* 7, 1870.

IMPROVEMENT IN APPARATUS FOR SPLITTING ROCK.

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

To whom it may concern:

Be it known that I, EBER THAYER, of Union City, in the county of Branch and State of Michigan, have invented a new and useful Improvement in Apparatus for Splitting Rock; and I do hereby declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon, and being a part of this specification, in which—

Figure 1 is a plan view of my heat-generator with the top removed.

Figure 2 is a plan of the bottom of the same, showing the connection of the leaders.

Figure 3 is a transverse vertical section of the heat-generator, upon the dotted line in fig. 1.

Figure 4 is a sectional elevation of one end of the heat-generator, showing the opening through which the heat escapes to the leaders.

Like letters indicate like parts in each figure.

The nature of this invention relates to the construction of an apparatus for generating and conducting heat, in such a manner that the heat may be readily applied to the face of the rock to be broken, directly at the point, and along the line where it is desired to break it.

The invention consists in the arrangement of its several parts, as hereinafter fully described.

In the accompanying drawing—

A represents a case or heat-generator, made of any suitable material, and of the general shape shown, and it may be provided with a removable cover, B, or with suitable doors for the admission of draught and fuel in the end opposite the one where the heat and smoke escape.

C are diaphragms or reclining shelves, the lower edges of which rest against studs D in the bottom of the case, and conform to the internal shape of the case.

The object of these reclining shelves, whose outer edges rest against the sides of the case, as shown, is to confine the fire and heat to the center of the case, and directly in line with the outlet.

E are ribs upon the bottom of the case, extending longitudinally the whole length thereof, and forming a channel into which the heat escapes through the opening F in the bottom of the case.

G are leaders, consisting of boxes of three sides, and provided with slip or stove-pipe joints, as shown, these leaders being laid with the open side downward, and connected together, and, with the heat generator, conduct the heat upon the desired line, upon the face of the rock to be split.

A fire having been made in the case, which has been placed in a suitable position, the leaders are connected with the case as described, and laid upon the face of the rock along the line where it is desired to split or break the same, thereby concentrating the heat upon said line, and facilitating the splitting of the rock.

It will be noticed that a small hole, *a*, is made through the end of the generator opposite the discharge end. This is done to insert the tongue of a bellows, or its known equivalent, by means of which the heat is forced downward to the outlet, and through the same into the leaders.

Should the face of the rock be uneven, so that the bottom of the leaders will not touch at all points, the interstices may be filled with clay, to prevent the escape of the heat and confine it within the leaders.

Clay, or its equivalent, may be used to make a tight joint where the top B fits onto the shell of the generator.

The opening F may be at either end of the generator, the ribs E of which are so constructed as to form a continuation of the leaders under the generator.

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

The rock-splitter above described, consisting of the case A, provided with the removable cover B, the diaphragms C, the stud D, the ribs E, the opening F, and the conductors G, when these several parts are constructed and arranged as described, and for the purpose set forth.

EBER THAYER.

Witnesses:

E. PERRY,

O. C. RICKARD.