

G. A. JASPER.
Bone-Black Retort.

No. 65,389.

Patented June 4, 1867.

Fig. 2.

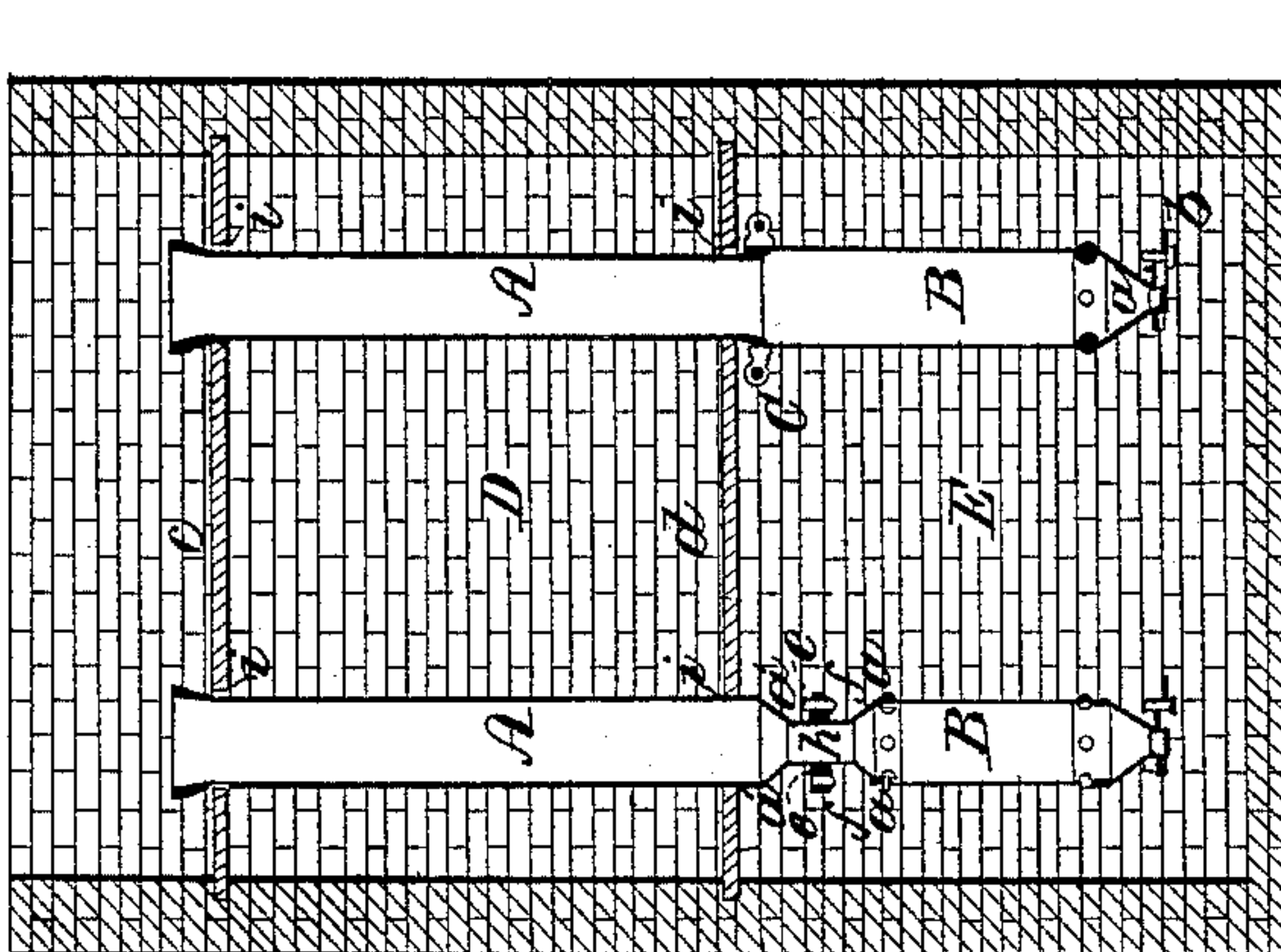


Fig. 3.

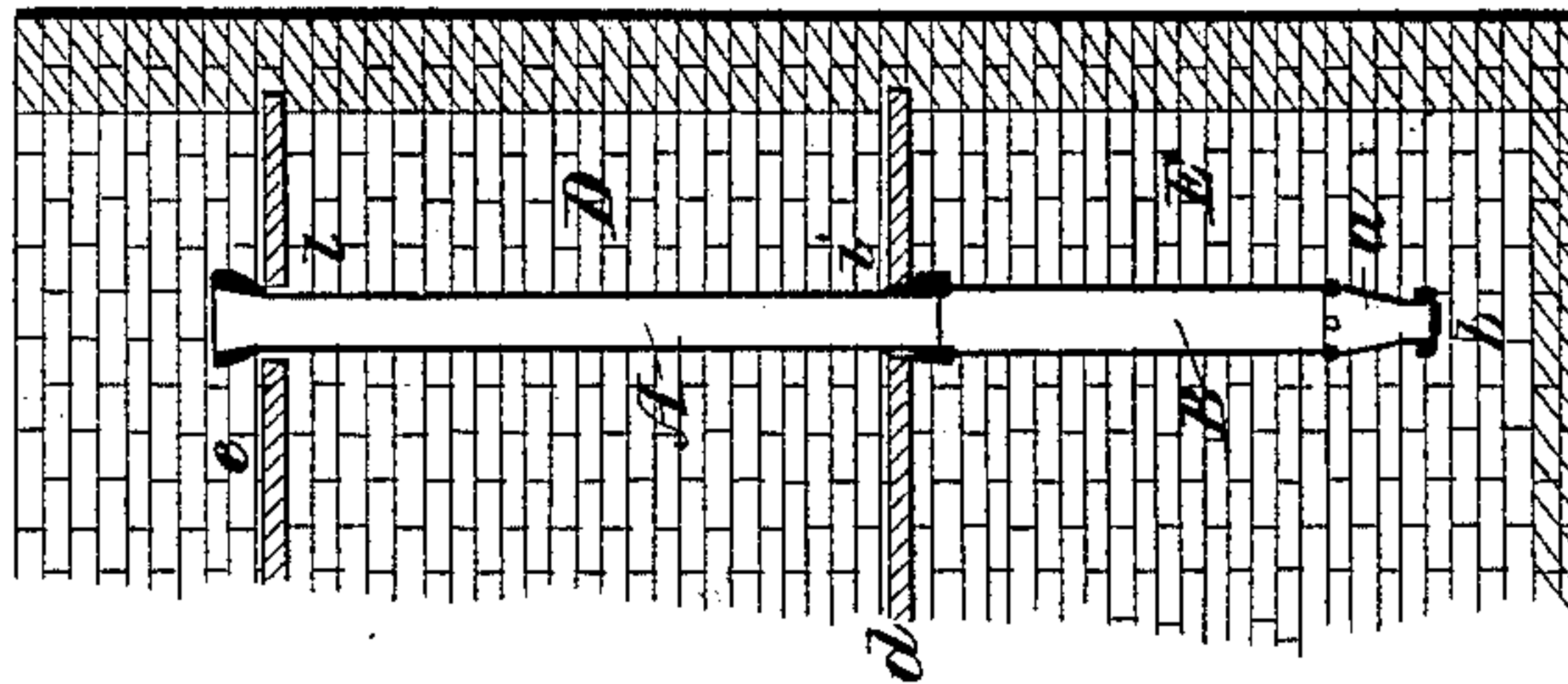


Fig. 4.

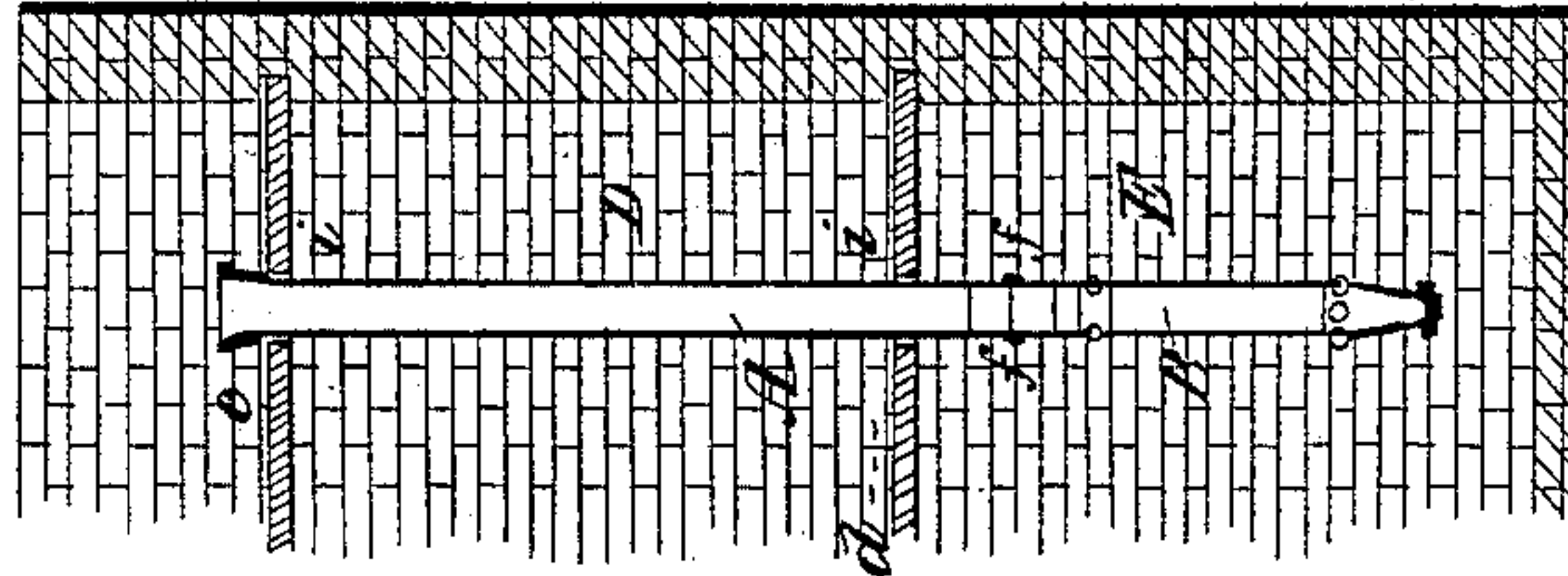
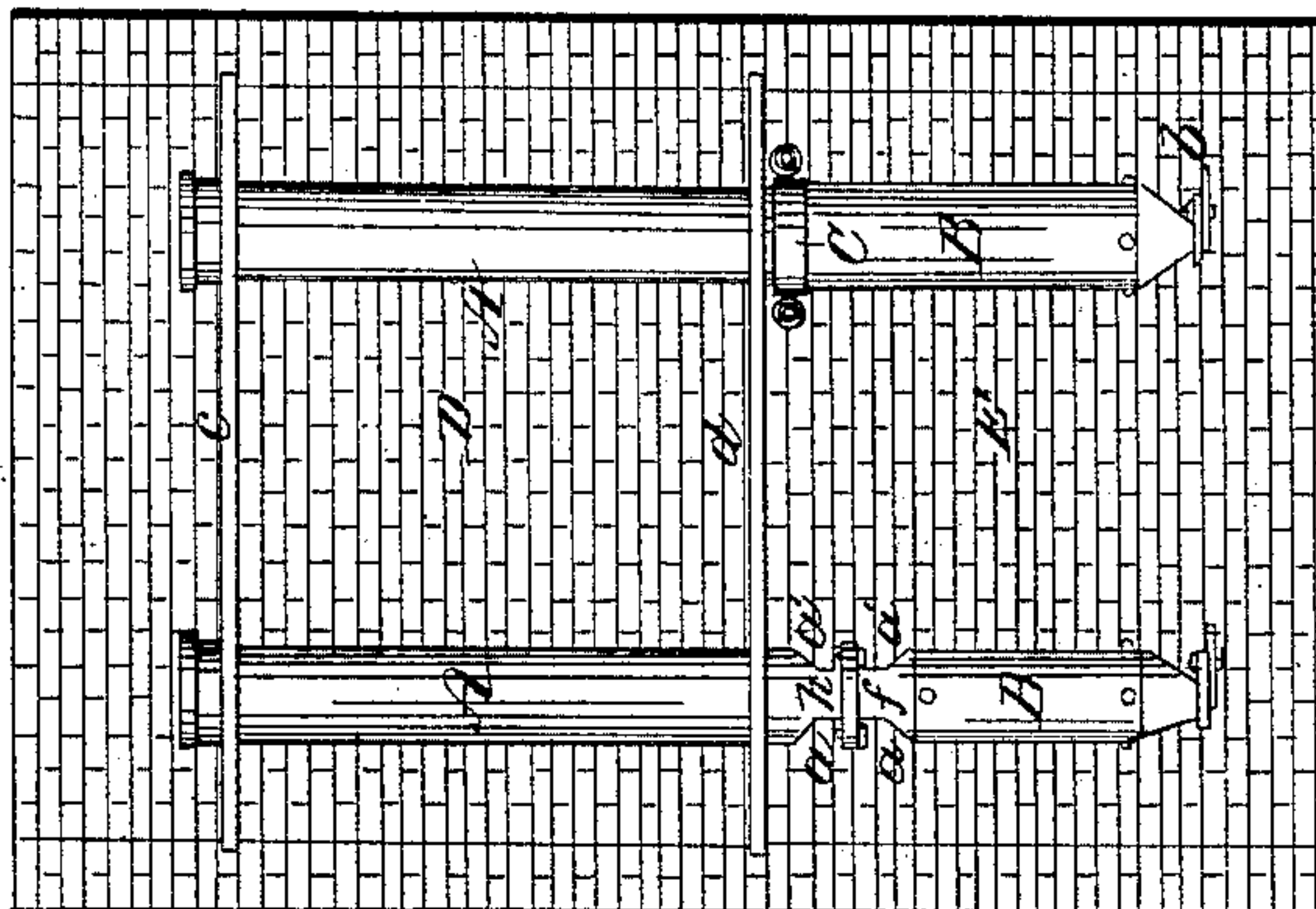


Fig. 1.



Witnesses.
Samuel W. Piper
Geo. H. Andrews

Inventor.
Gustavus A. Jasper.
by his attorney
R. H. Eddy

United States Patent Office

GUSTAVUS A. JASPER, OF CHARLESTOWN, MASSACHUSETTS.

Letters Patent No. 65,389, dated June 4, 1867.

IMPROVEMENT IN RETORTS FOR REVIVIFYING BONE CHARCOAL.

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

TO ALL PERSONS TO WHOM THESE PRESENTS SHALL COME:

Be it known that I, GUSTAVUS A. JASPER, of Charlestown, in the county of Middlesex, and State of Massachusetts, have invented a new and useful Improvement in Retorts for Revivifying Bone Charcoal; and I do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which-

Figure 1 is a front elevation of two retorts, and their supporting-plates and heating and discharging chambers, one of such retorts being of the ordinary form and construction, and the other having my improvement applied to it.

Figure 2 is a vertical section, taken through the two retorts.

Figure 3 is a transverse and vertical section of that, as heretofore made.

Figure 4 is a transverse and vertical section of my improved retort.

The retort, as commonly constructed, is composed of two tubular sections, A B, the foot or lower part of one being inserted in the mouth or upper end of the other. They are held together by a clamp, C, embracing the lower section, and operating to compress it upon the lower section. Both ends of the upper section are open, but the lower end of the lower section is provided with a discharging mouth, *a*, having a slide or gate, *b*, adjusted to it. Several of the upper sections of such retorts, when they are in use, are arranged vertically within an oven or heating-chamber, D, and pass down through the top and bottom plates *c d* thereof, the lower sections of the retort being within a discharging-chamber, E, arranged beneath the heating-chamber or fire-space D. As the upper sections of the retorts in course of time become destroyed or materially injured by the great heat to which they are subjected, they require to be so formed as to render it an easy matter to draw them out of the holes *i i* made for their reception in the plates *c d*, in order that others or new sections may be substituted for them, and connected with the coolers or lower sections.

The mode of making the two sections A B, and connecting them by means of the clamp C, is very objectionable, as it renders them very liable to become detached from one another while in use, particularly when an attendant, in opening or closing the gate, or by rapping on the lower section in order to facilitate the discharge of its contents, moves the lower section more or less laterally relatively to the upper section. The upper section must be suffered to play freely through the holes in the plates, in order that its expansion or contraction by heat, or the expansion or contraction of the oven or furnace in which the section may be, may not do injury to it.

In carrying out my improvement I contract the lower end or part of the upper section A' of the retort, or form it with a neck, as shown at *h*, and extend from such at its lower extremity two ears or projections *e e*. I also form the upper end of the section B' in a similar manner, or with a socket-piece, *f*, (in lieu of the two ears,) to receive the lower end of the section A', with its two ears *e e*, in manner as represented in the drawings. I next connect the two sections A' B' by means of screw-bolts and nuts, the bolts being inserted in the spaces *a' a'*, which are on opposite sides of the neck, and thence through the lips *e e*, or the same and the socket-piece *f*. I would observe that the projection of the lips *e e* from the neck of the retort should not be so great as to prevent the upper section from being introduced into and removed from the holes in the support-plates *c d*. The recesses *a' a'* enable the bolts to be put in place or removed from the ears. The above method of forming the two sections, and connecting them by screw-bolts or screws and nuts, is one of much value and importance, as it prevents them from becoming disengaged while in use. It enables the upper section, when disconnected from the lower one, to be withdrawn from or inserted in the orifices of its support-plates, and when connected to it, to expand or contract without detriment to the connection.

I claim, therefore, as my invention, the improvement in the construction of either or both of the two retort sections A' B', as described, in order that they may be connected by screw-bolts or screws and nuts, as set forth, and the upper section A' be rendered capable of being inserted into and withdrawn from the support-plates *c d*, as explained, each section under such improvement being contracted or made with a neck, *h*, and provided with ears *e e*, or their equivalent or equivalents, substantially as specified.

GUSTAVUS A. JASPER.

Witnesses:

R. H. EDDY,

F. P. HALE, Jr.