

E. E. QUIMBY.  
BONE-BLACK RETORT.

No. 188,029.

Patented March 6, 1877.

Figure 1.

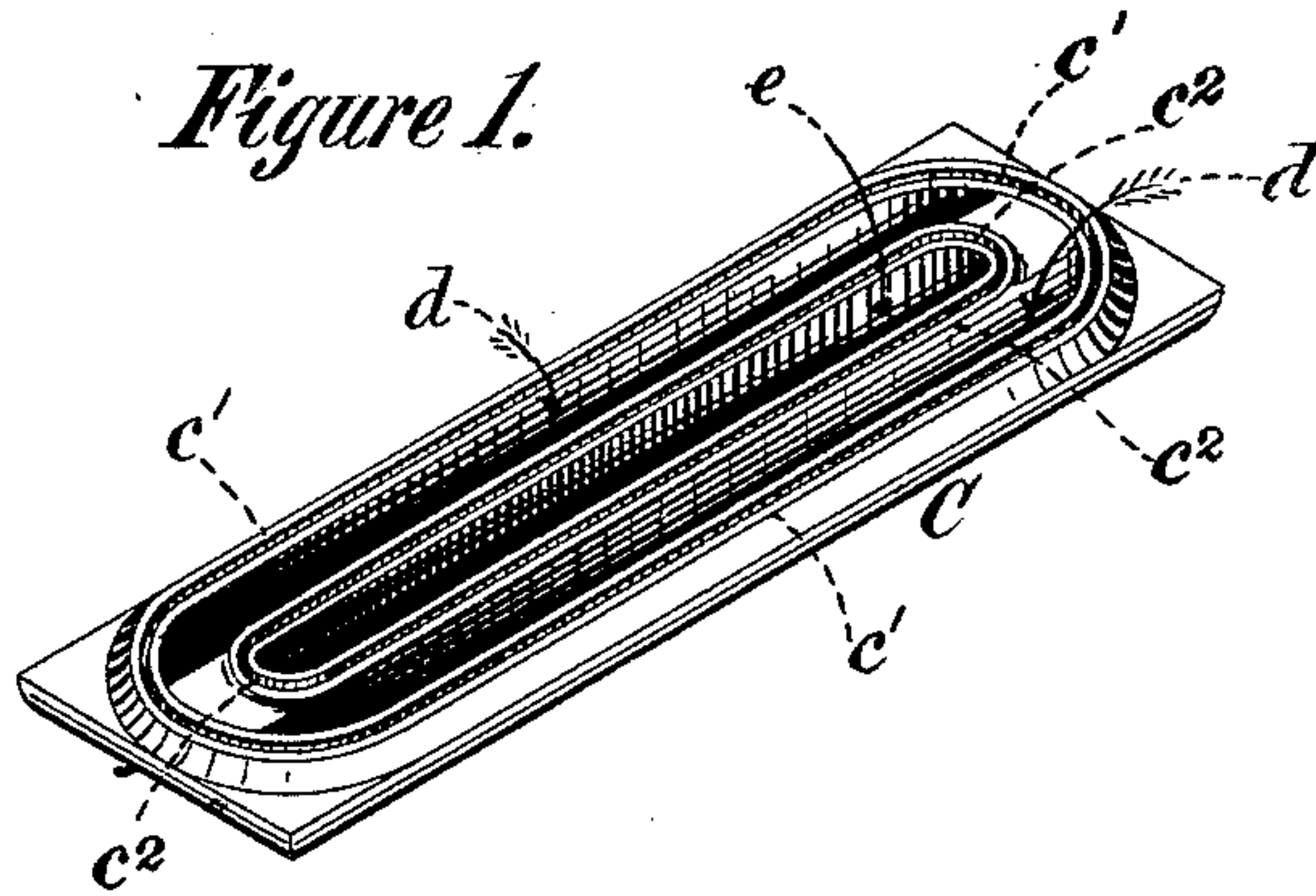


Figure 2.

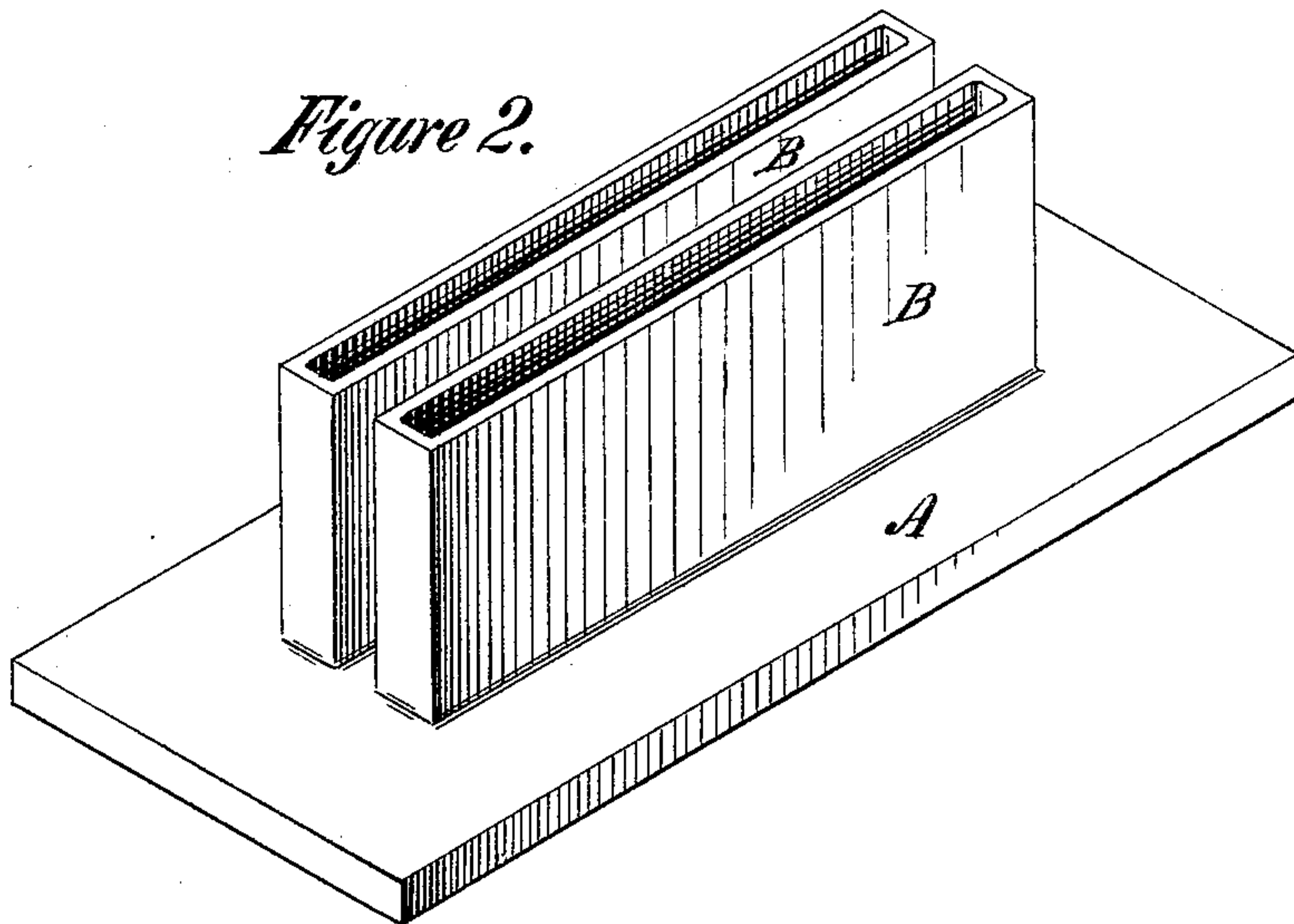
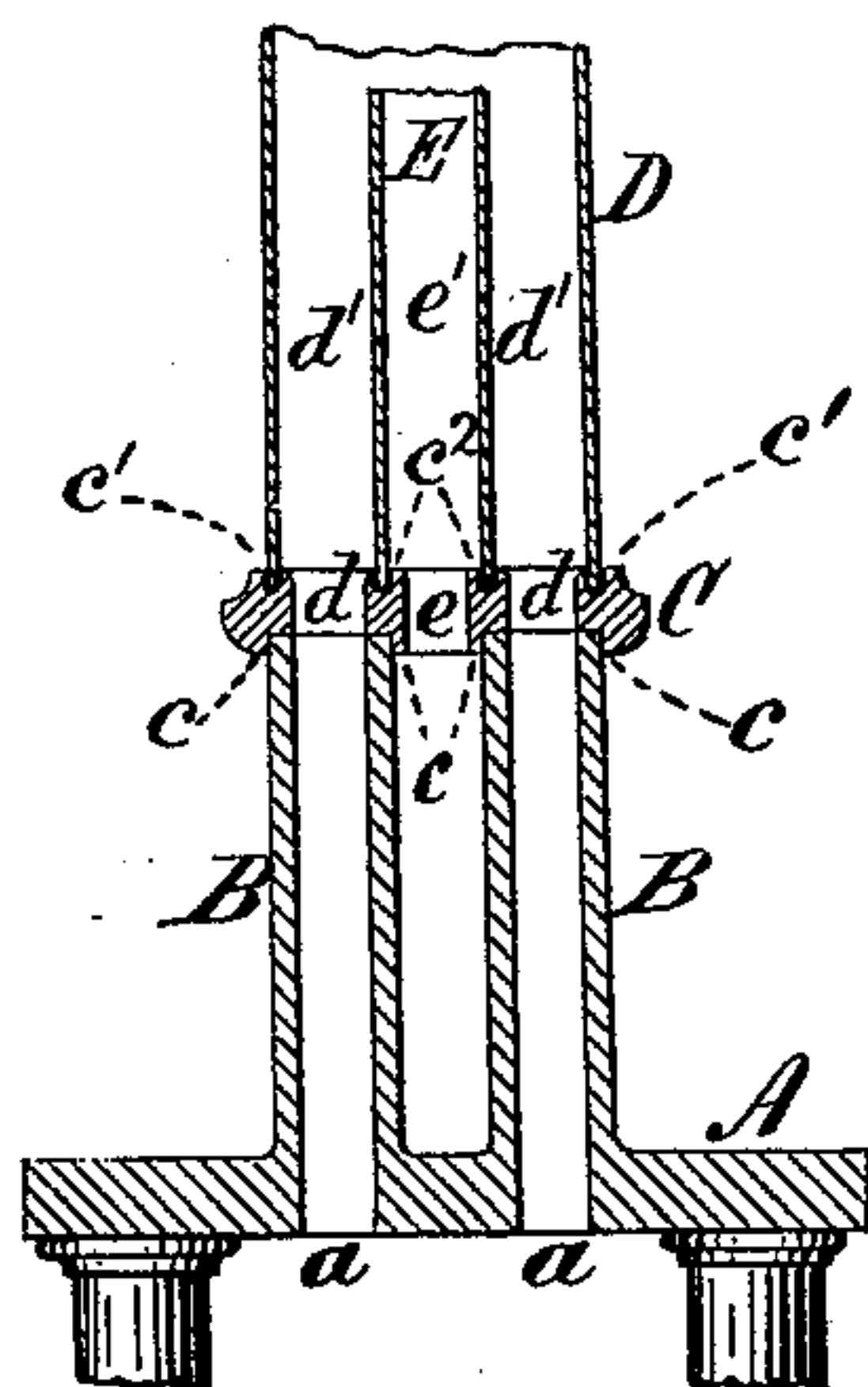


Figure 3.



Witnesses:

*Geo. H. Miatt*

*Edw. Payson*

Inventor:  
*Edw. E. Quimby*

# UNITED STATES PATENT OFFICE.

EDWARD E. QUIMBY, OF ORANGE, ASSIGNOR TO THE F. O. MATTHIESSEN  
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## IMPROVEMENT IN BONE-BLACK RETORTS.

Specification forming part of Letters Patent No. **188,029**, dated March 6, 1877; application filed  
February 17, 1877.

*To all whom it may concern:*

Be it known that I, EDWARD E. QUIMBY, of Orange, New Jersey, have invented an Improvement in Retorts for Revivifying Bone-Black, of which the following is a specification:

My invention relates to the construction of the bases of that class of bone black revivifiers which are composed of retorts having inner heating-pipes arranged in a heating-chamber; and my invention consists in providing for the support of each retort by casting upon the bed-plate of the heating-chamber a pair of hollow columns of suitable height, which support a base-plate provided upon its upper surface with grooves or flanges to respectively receive the lower end of the retort and the lower end of the inner pipe. The base-plate has a central aperture conforming to the shape of a cross-section of the interior of the inner pipe, and two or more apertures on either side of the central aperture, for permitting the bone-black contained in the annular space between the inner heating-pipe and the retort to fall down into the hollow columns and through corresponding apertures in the bed-plate. The products of combustion are admitted into the interior pipe through the spaces between the columns and through the central aperture in the base-plate.

The accompanying drawings exhibit my improved mode of construction as applied to a retort composed of a flattened tube containing a correspondingly-flattened inner pipe.

Figure 1 is an isometrical view of the base-plate, showing the grooves or flanges which receive the bottoms of the retort and inner pipe, respectively. Fig. 2 is an isometrical view of the hollow columns cast upon the bed-plate of the heating-chamber. Fig. 3 is a transverse vertical section of the hollow columns, the base-plate, and a portion of the retort and the inner pipe, showing the several parts in their proper connection.

The drawings exhibit a portion of the bed-plate A of the heating-chamber, provided with the usual perforations *a a*, coinciding in their positions with the spaces in the interior of the hollow columns B B. The base-plate C is provided upon its under side with flanges *c*, which fit around the upper ends of the hollow columns. The upper surface of the base-plate is provided with flanges *c*<sup>1</sup> for engaging the lower end of the retort D, and with flanges *c*<sup>2</sup> for engaging the lower end of the inner pipe E. The base-plate has a central aperture, *e*, which is the channel of communication between the interior of the pipe E and the space between the hollow columns. The base-plate also has the two apertures *d d*, which afford the channel of communication between the interiors of the hollow columns and the annular space *d'*, between the shell of the retort and the inner pipe, in which the bone-black to be revivified is contained. The heated air and products of combustion circulate through the heating-chamber around the exterior of the retort, and, entering between the hollow columns B, make their exit through the central aperture *e*, into the interior *e'* of the inner pipe E.

My invention has the advantages of simplicity and solidity of construction, the latter advantage arising from the fact that the two systems of joints on the upper and lower sides of the base-plate, respectively, are made in parallel planes at a very short distance from each other.

I claim as my invention—

In a retort for revivifying bone-black, substantially such as described, the hollow columns B, cast upon the bed-plate of the heating-chamber, substantially as and for the purposes set forth.

EDW. E. QUIMBY.

Witnesses:

MARY L. ADAMS,  
GEO. W. MIATT.