

G. S. DEANE.

Arch Bars and Supports for Constructing Furnaces for Evaporating Pans.

No. 69,781.

Patented Oct. 15, 1867.

Fig. 1

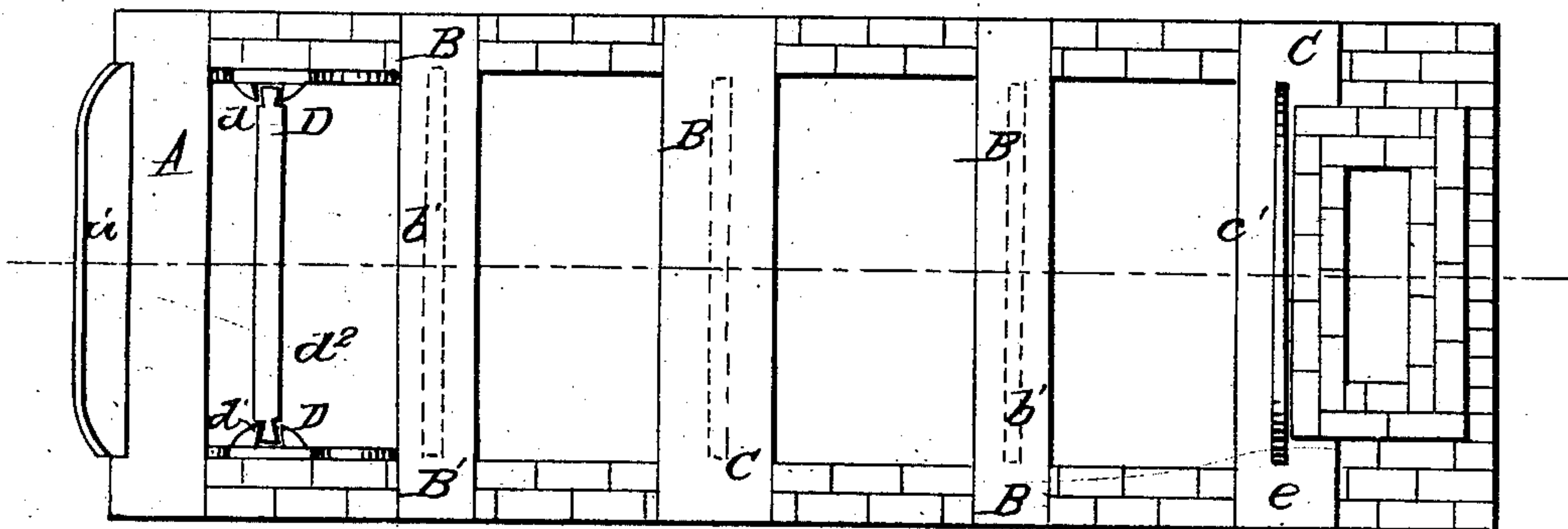


Fig. 2

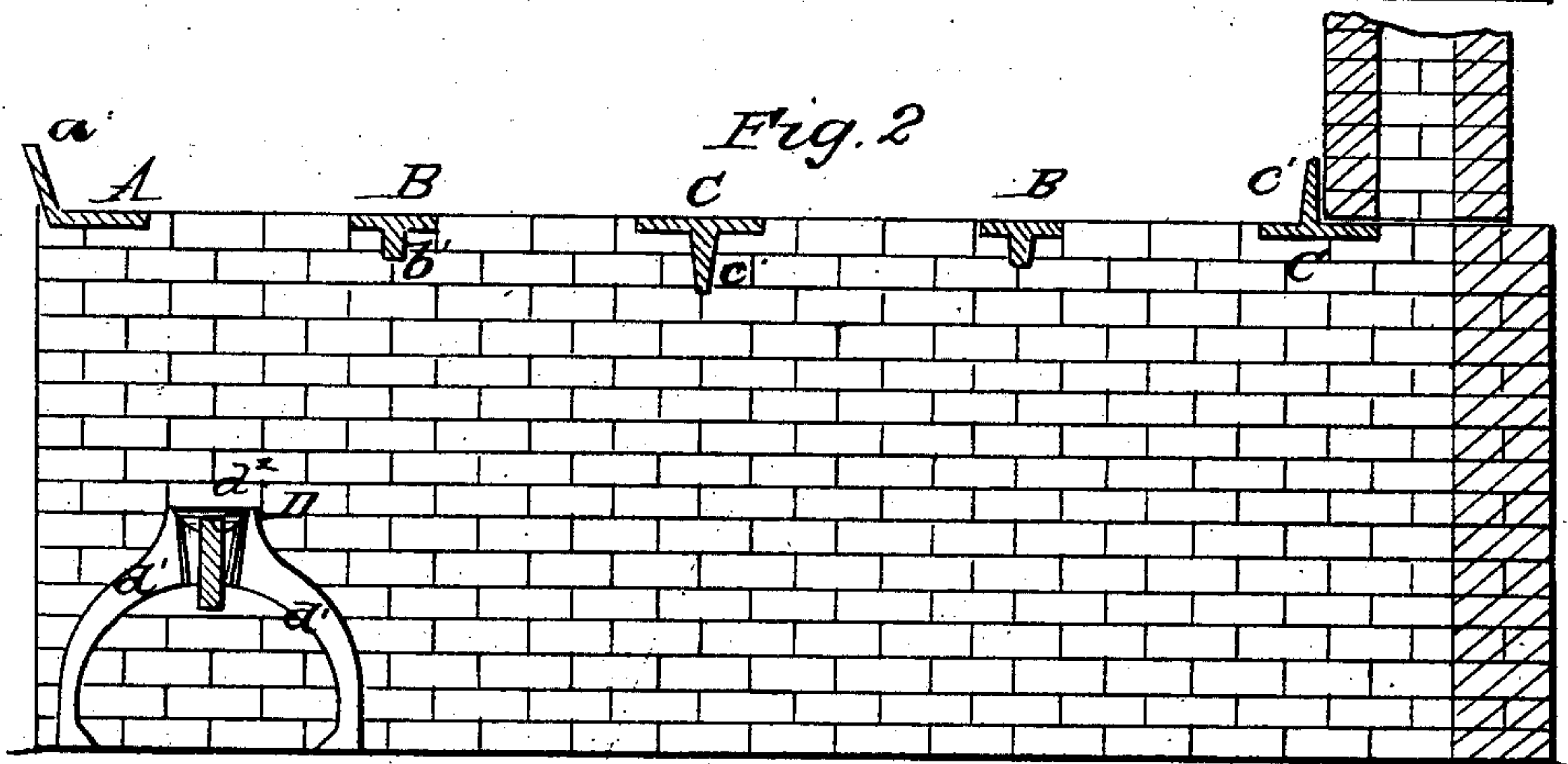
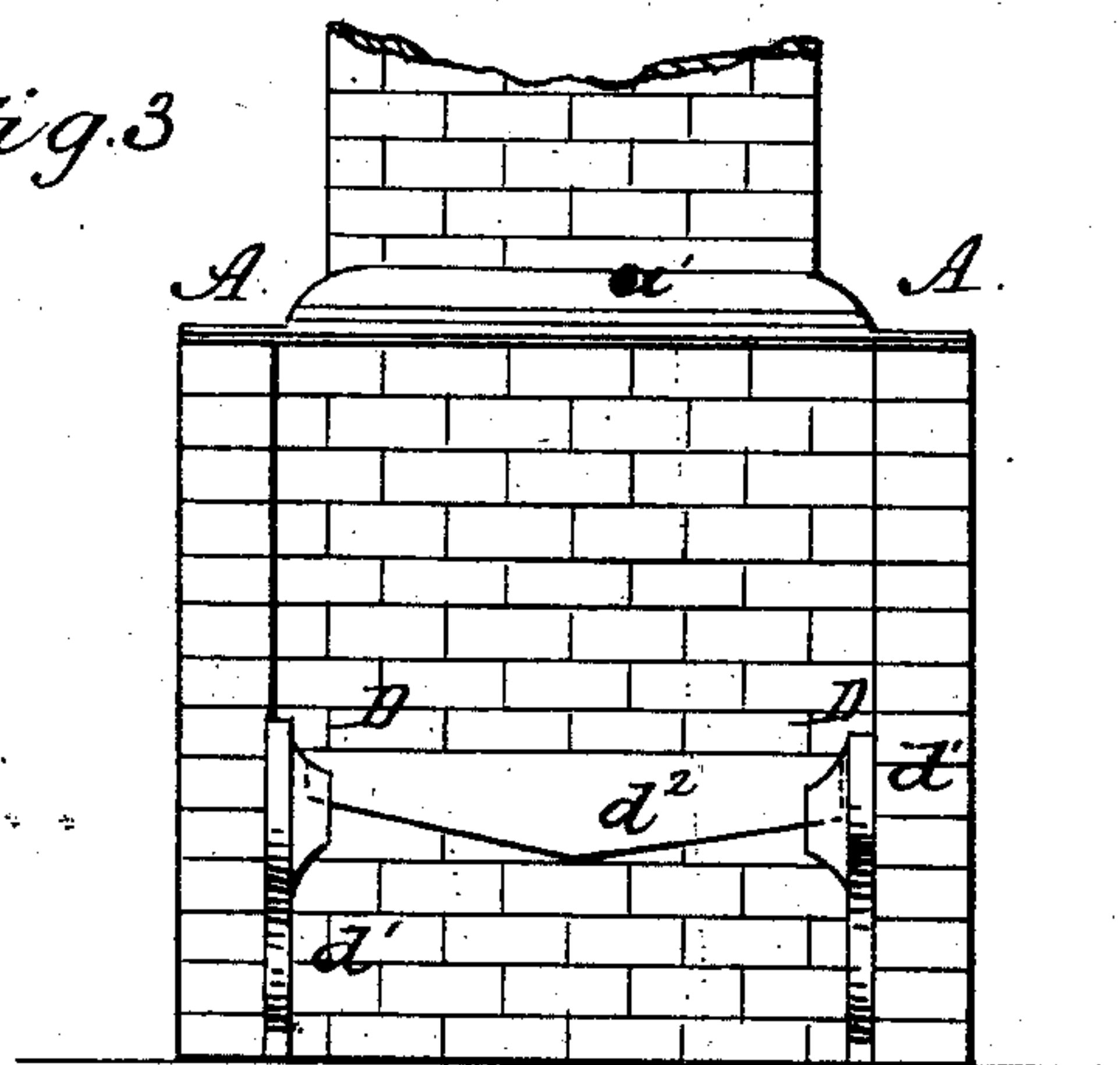


Fig. 3



WITNESSES

Thos. Fische  
J. A. Service

INVENTOR

G. S. Deane  
Per Munn & Co  
Attys

# United States Patent Office.

GAIUS S. DEANE, OF GRAND RAPIDS, MICHIGAN.

*Letters Patent No. 69,781, dated October 15, 1867.*

## IMPROVED ARCH-BARS AND SUPPORTS FOR CONSTRUCTING FURNACES FOR EVAPORATING-PANS.

*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, GAIUS S. DEANE, of Grand Rapids, in the county of Kent, and State of Michigan, have invented a new and improved Arch-Bars and Double Andirons for Evaporating Cane-Juice, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top view of an arch illustrating the use of my improved bars and andirons.

Figure 2 is a vertical longitudinal section of the same, taken through the line *x x*, fig. 1.

Figure 3 is a front view of the same.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish, and consists in, improved bars and andirons, designed especially for farmers' use in supporting their evaporating-pans and fire-wood in arches built by them in the sugar-bush for manufacturing sugar, but which are equally useful in other situations.

A is the front bar, which is made with an upwardly-projecting flange, *a'*, upon the front edge of its upper side, as shown in figs. 1, 2, and 3. This flange *a'* protects the pans from being injured while putting wood into the arch to replenish the fire. The bar A supports the front end of the pan, the middle part of which is supported by a narrow bar, B, having a strengthening-rib, *b'*, upon its under side, as shown in fig. 2. The bar C is made wide, so that the rear end of one pan and the forward end of the adjacent pan may both rest upon it. The bar C is also formed with a strengthening-rib, *c'*, as shown in fig. 2. The arches are usually built of such a length as to support two or more pans, and the bars B and C are arranged alternately, so as to support the middle and ends of the pans. At the rear end of the arch the bar C is inverted, so that the rib *c'* may project upwards; this allows the forward part of the said bar to support the rear end of the rear pan, and the rear part of said bar to be used to support the front wall of the chimney. D is the double andiron, the end frames *d'* of which are formed with dove-tailed grooves in their inner sides, into which fit dove-tailed tongues formed upon the ends of the cross-bar *d''*. Or, if desired, the end frames *d'* and cross-bars *d''* may be otherwise attached or formed solid with each other. The double andiron D is designed to be placed across the mouth of the furnace or arch to support the outer ends of the wood, the rear end of which is supported upon another similar andiron, or upon a bank of brick, clay, or earth placed in the arch for that purpose. In building such arches it is usual to fill in the rear part with earth nearly to the bottoms of the pans, so as to bring the heat close up to the pans and to promote the draught.

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

1. The bars A, B, and C, constructed substantially as herein shown and described, for the purpose of supporting evaporating-pans upon arches in making sugar, and for similar uses.
2. The double andiron D, constructed substantially as herein shown and described, and for the purpose set forth.

GAIUS S. DEANE.

Witnesses:

J. W. PEINE,

CHARLES H. DEANE.