D. MOORE.

Baker's Oven.

No. 99,694. Patented Feb. 8, 1870.

Fig. 1.

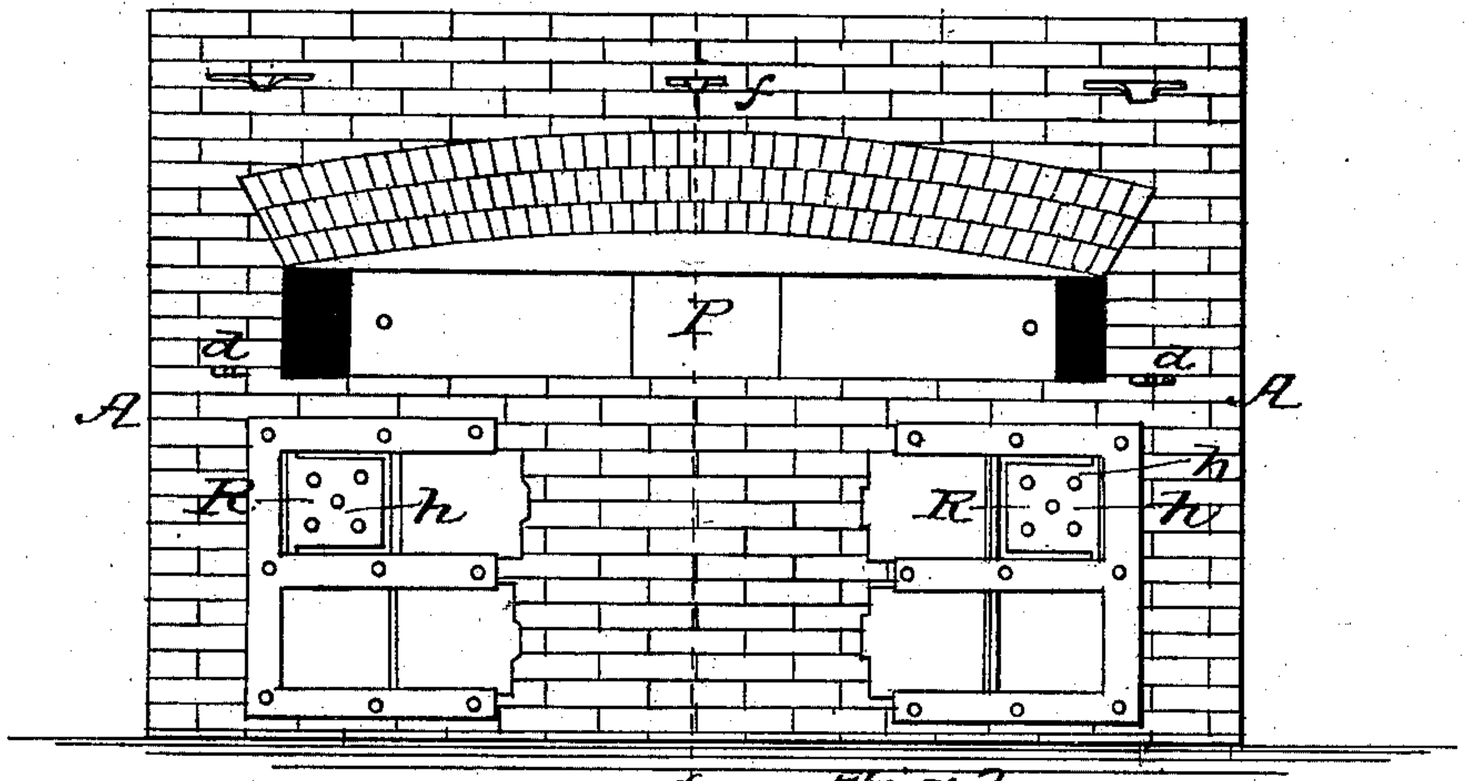


Fig. 2.

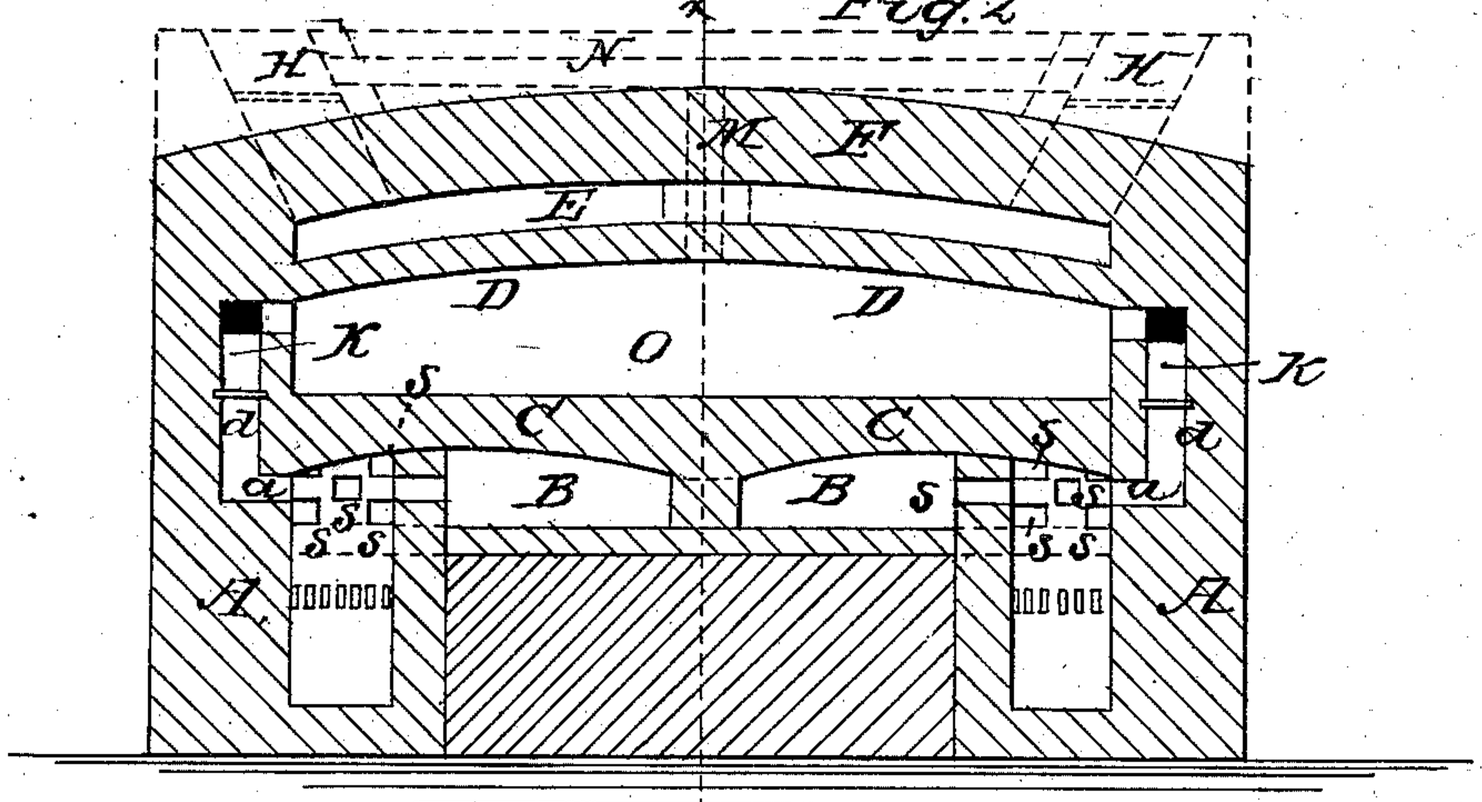
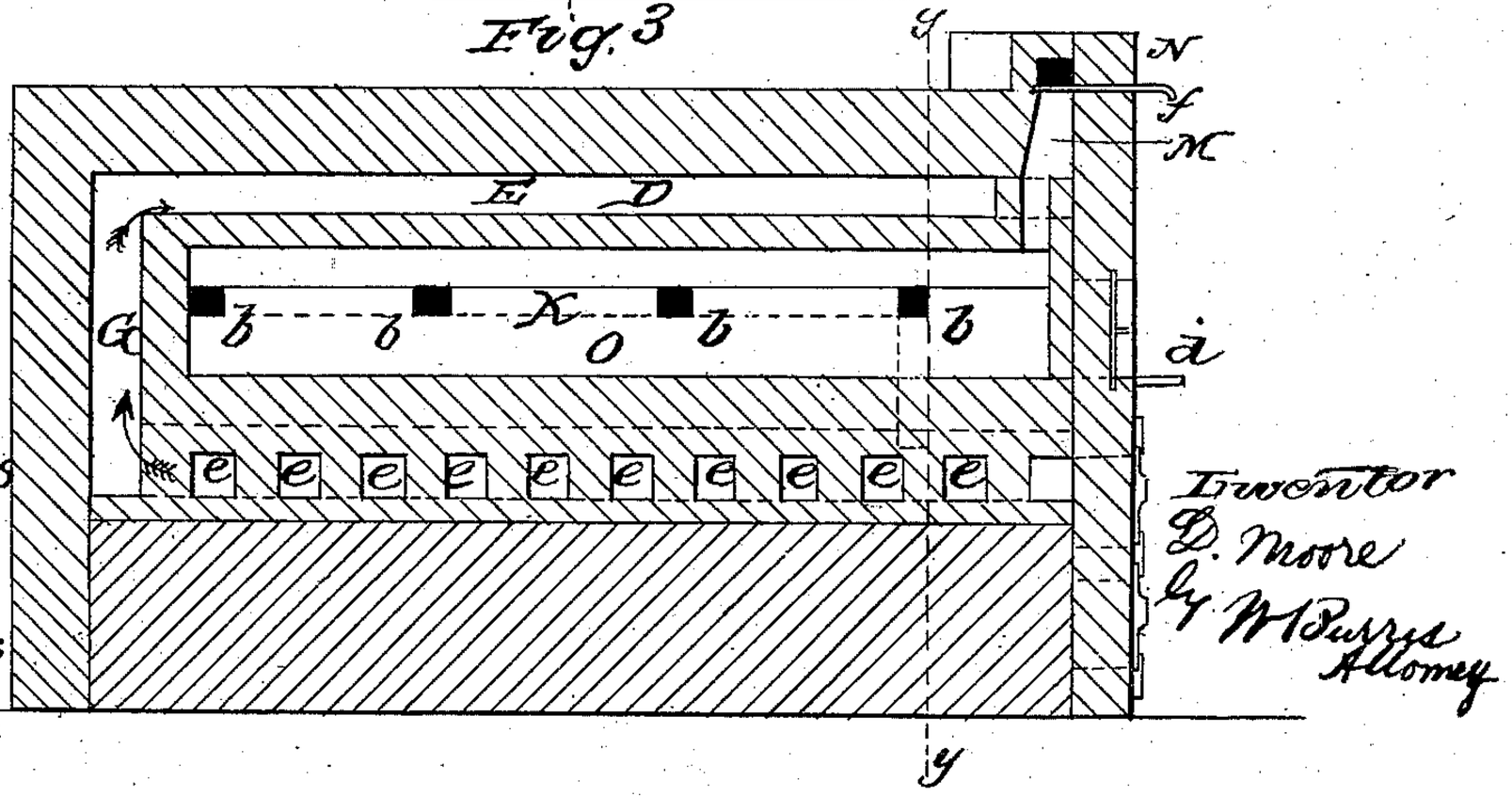


Fig. 3.



Witnesses
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DANIEL MOORE, OF DAVENPORT, IOWA.

Letters Patent No. 99,694, *dated February* 8, 1870.

IMPROVEMENT IN OVENS.

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, DANIEL MOORE, of the city of Davenport, in the county of Scott, and State of Iowa, have invented a new and improved Bake-Oven; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a front elevation;

Figure 2 is a transverse section, as indicated by line *y y* of fig. 3; and

Figure 3 is a vertical longitudinal section, as indicated by the line *x x* of fig. 2.

Like letters in the different figures of the drawings indicate like parts.

This invention is designed as an improvement of my bake-oven patented June 1, 1869, experience having shown that the expansion and contraction of the iron plates used in that oven loosens the brick-work; and

The nature of this invention consists—

First, of an inner oven, entirely of brick, having hot-air chambers formed by brick arches below and above the oven.

Second, of hot-air flues, built in the outside walls, communicating with the furnaces and the interior of the oven, and of ventilating-flues leading from the interior of the oven to the chimneys.

A A represent the outside walls, of brick;

B B, the hot-air chambers, formed by the double arches C C under the oven O;

D is an arch, forming the crown of the oven;

E, the hot-air chamber above the oven; and

F, the top arch.

The double arches C C are made of fire-brick, the other arches of good common brick.

All the arches spring from the outside walls; the double arches C C at the top of the furnaces, arch D twelve inches above the bottom of the oven, and arch F four inches above the top of arch D.

The space between the outside walls and between the furnaces is filled with dirt and sand, and paved with fire-brick, so that the top of the pavement will come just below the draught-holes in the back and sides of the furnaces, thus forming a durable bottom for the hot-air chambers B B; (see fig. 2.)

The top of the double arches C C is levelled up with sand, and paved with brick, forming the level bottom of the oven, as seen in fig. 2.

G is a hot-air chamber, at the back of the oven, about four inches deep, and extending the entire width and depth of the oven, and communicating with the hot-air chambers B B below, and chamber E above the oven, as shown in fig. 3.

H H are exit-flues, built in the front wall, and communicating with chamber E, as shown by dotted lines in fig. 2.

K K represent hot-air flues, built in and extending along the side walls from the back ends of the furnaces to the back end of the oven, as seen in figs. 2 and 3, and connecting with the furnaces by the openings four inches square—*a a*, as seen in fig. 2, and *b b b b*, as seen in fig. 3; the flues being provided with dampers *d d*, for conducting and regulating the passage of heat from the furnaces directly to the interior of the oven.

M is a ventilating-passage or flue, through the crown of the oven, at the front end thereof, as shown in fig. 3, and connecting with a horizontal flue, N, which is built in the front wall, and connects with the chimneys H H, as shown in fig. 3, and dotted lines in fig. 2.

Chambers B B are made to communicate with each other by the openings *e e e*, as seen in fig. 3, for the purpose of allowing the heat to pass from one to the other, in order that the entire bottom of the oven may be equally heated.

The dotted line above the openings *e e e*, seen in fig. 3, represents the crown of chambers B B on each side of these openings.

Flues, connecting the furnaces directly with the chimneys, and provided with dampers, are made and arranged, and the draught and heat are regulated in a manner similar to my former patent.

Chamber E connects, by proper flues, directly with chimneys H H.

The oven-doors are arranged to slide in grooves in a cast-iron frame, which is built in the front brick walls, the frame being made with centre stationary partition-plate P.

The outside doors and door-frames of the furnaces are made and arranged similar to those of my former oven.

R R are inside furnace-doors, made with draught-holes *h h*, as seen in fig. 1.

The heat passes out of the furnaces through draught-holes S S S in the sides and back ends thereof, into and through chambers B B under the oven, up chamber G at the back end of the oven, and over the top of the oven through chamber E, as indicated by the arrows shown in fig. 3; and by drawing out dampers *d d* the heat is conducted through openings and flues *a a*, K K, and *b b b*, directly to the interior of the oven; and by drawing out damper *f* any smoke or steam which may be in the oven is allowed to escape through the ventilating-flues M and N into the chimneys H H.

Having thus fully described my invention,

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

1. The arrangement of the furnaces with openings S S, the oven O, chambers B B, formed by arches C C below the oven, arches D F and chamber E above the oven, chamber G at back end of the oven, and exit-flues H H in front, substantially as described.

2. The arrangement of the hot-air flues K K with dampers *d d* in the outside wall, communicating with the interior of the oven, and of the ventilating-flues M and N, substantially in the manner and for the purpose herein described.

DANIEL MOORE.

Witnesses:
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