(No Model.)

P. ABRAHAMSON.

OVEN DOOR.

No. 431,159. Patented July 1, 1890.

FIG. 1.

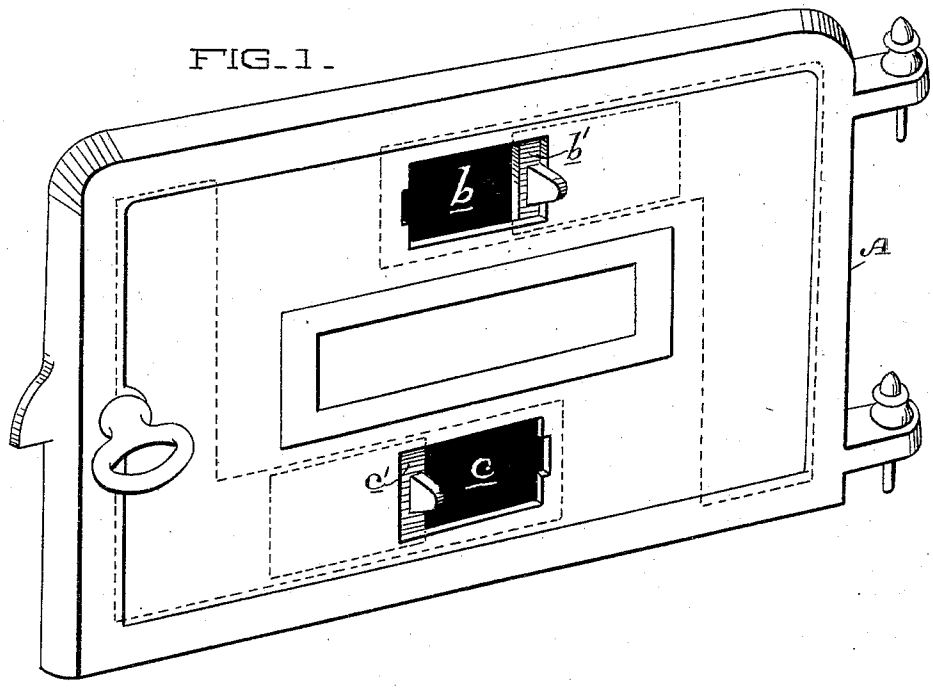
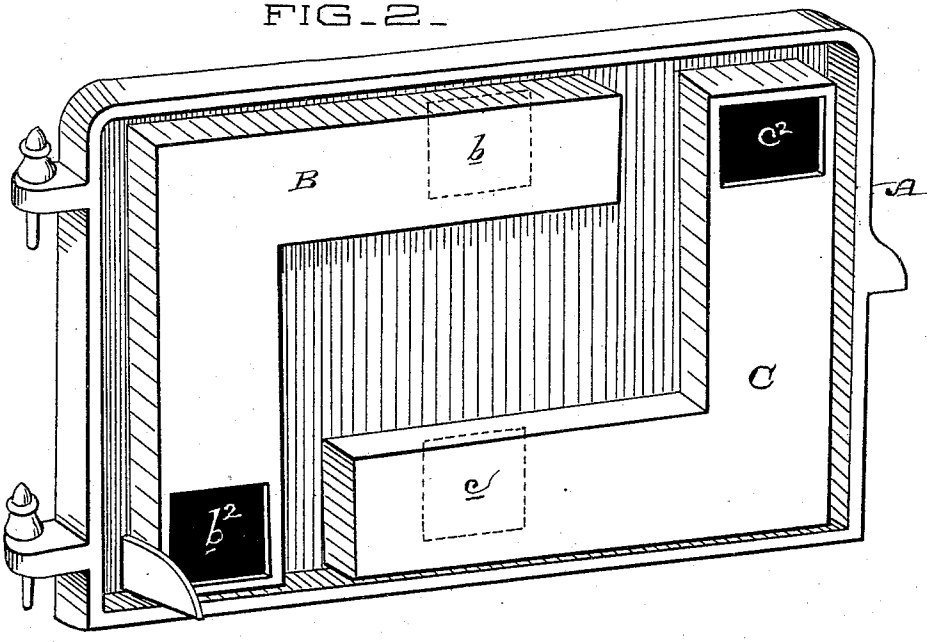


FIG. 2.



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UNITED STATES PATENT OFFICE.

PETER ABRAHAMSON, OF SAN FRANCISCO, CALIFORNIA.

OVEN-DOOR.

SPECIFICATION forming part of Letters Patent No. 431,159, dated July 1, 1890.

Application filed December 6, 1889. Serial No. 332,824. (No model.)

To all whom it may concern:

Be it known that I, PETER ABRAHAMSON, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Oven-Doors; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates, generally, to the class of heating and fire chambers, and especially to the doors therefor; and it consists in the novel arrangement and construction of the air-passages in the door, hereinafter fully described, and specifically pointed out in the claims.

The object of my invention is to provide for a thorough ventilation of the oven or other chamber, whereby its efficiency is greatly increased.

Though my invention is applicable to the door of any heating or fire chamber, I have herein shown in the accompanying drawings an oven-door constructed according to my invention.

Figure 1 is a view of the outer side of the door. Fig. 2 is a view of its inner side.

The door A is made of the ordinary shape, as shown, and adapted to be hung in the usual manner. On the inside of the door is formed or secured a hollow casing, (represented by B,) which extends from about the vertical center of the door along the upper portion thereof to one end, and thence down to its lower portion. A similar hollow casing C is secured or formed on the inner side of the door, which commences at a point about the vertical center of said door, and thence extends along the lower side to the other end, and thence upwardly to its upper portion. These casings thus form continuous passages.

Through the door is made an opening *b*, which is controlled by a sliding or other damper *b'*, and said opening communicates directly with the upper end of the casing or passage B. In the lower end of said casing or passage, on its inner side, is made an opening b^2, which communicates directly with the oven. In the door at its lower portion is made an opening *c*, which is controlled by a sliding or other damper *c'*, and which communicates with the lower end of the casing or passage C, and in the upper end of said casing or passage, on its inner side, is made an opening c^2, which communicates directly with the oven.

In operation the exterior cold air enters through the opening *b*, and thence traversing the entire length of the passage B is admitted into the oven through the opening b^2. The interior air of the oven passes into the passage C through its opening c^2 within, and thence throughout the entire length of said passage, and is discharged exteriorly through the opening *c*. By these means a perfect and complete ventilation of the oven is provided. The incoming air is not admitted to the oven in a cold condition, but by traversing a passage B, which by the course described is a long one, becomes sufficiently heated before it is admitted to the oven to avoid any appreciable cooling of the air within the oven, and likewise the length of the passage C provides for avoiding the discharge of heated air too soon. In my construction therefore I provide proper ventilating-passages, giving them the required length to avoid a too sudden influx or efflux of air, and at the same time conducting them in courses practical in such doors, and without interfering at all with their complete function.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A door for ovens and other heating and fire chambers, having oppositely-arranged hollow casings on its inner side, each casing having an opening communicating with the interior of the oven, and with damper-controlled openings in the door.

2. A door for ovens and other heating and fire chambers, having a hollow casing on its inner side, beginning at about the upper center of the door, thence extending along the upper side of the door to one end thereof, and thence down along said end to the lower portion of the door, a damper-controlled opening in said door communicating with the hollow casing at its upper end, an opening in the lower end of the casing into the oven, and an exhaust-passage leading from the oven through the door, substantially as herein described.

3. A door for ovens and other heating and fire chambers, having on its inner side a hollow casing forming an independent passage

extending from the upper central portion of said door to one end and down said end to its lower portion, a second hollow casing forming an independent passage extending from the lower central portion of said door to the other end and up said end to its upper portion, a damper-controlled opening through the door communicating with the upper end of the first passage, a damper-controlled opening through the door communicating with the lower end of the second passage, an opening in the lower end of the first passage communicating with the interior of the oven or chamber, and an opening in the upper end of the second passage communicating with the interior of the oven or chamber, substantially as herein described.

In witness whereof I have hereunto set my hand.

P. ABRAHAMSON.

Witnesses:
S. H. NOURSE,
H. C. LEE.