

T. MAYES.
Baker's Oven.

No. 210,045.

FIG. 1. Patented Nov. 19, 1878.

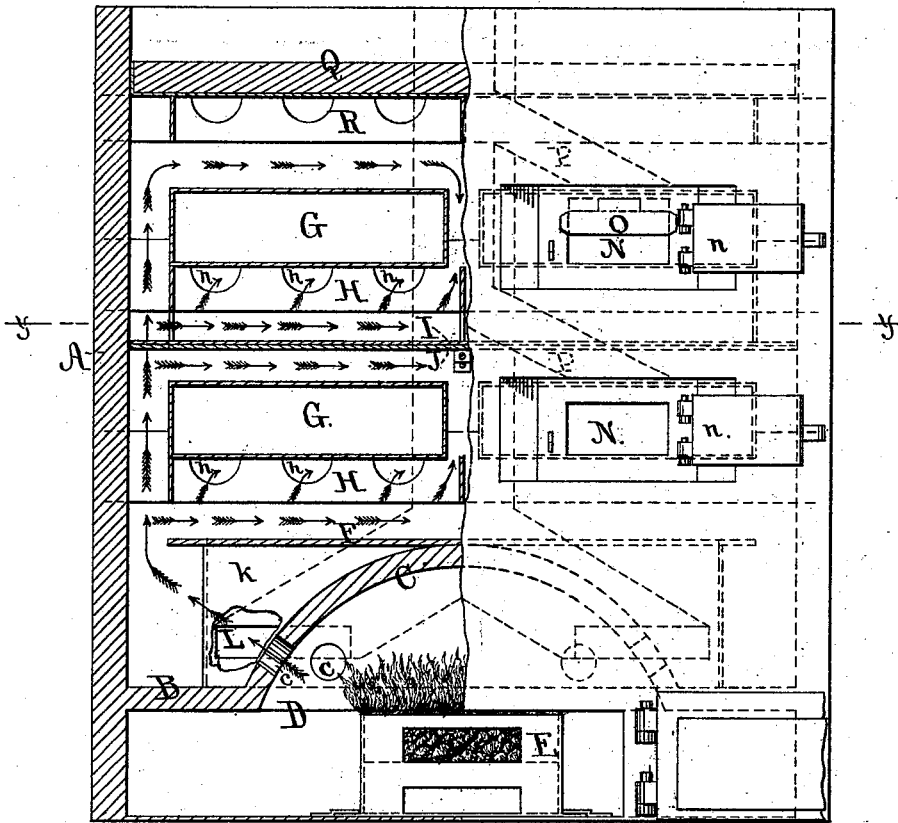
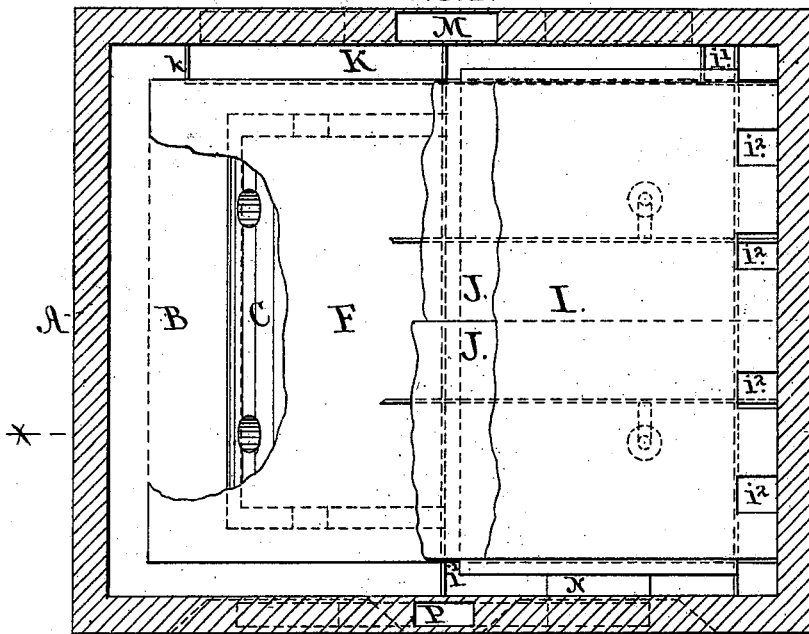


FIG. 2.



Witnesses.

William H. D. Sweet
C. J. Mattison

Thomas Mayes
by Wm. H. Low, Attorney.

Inventor.

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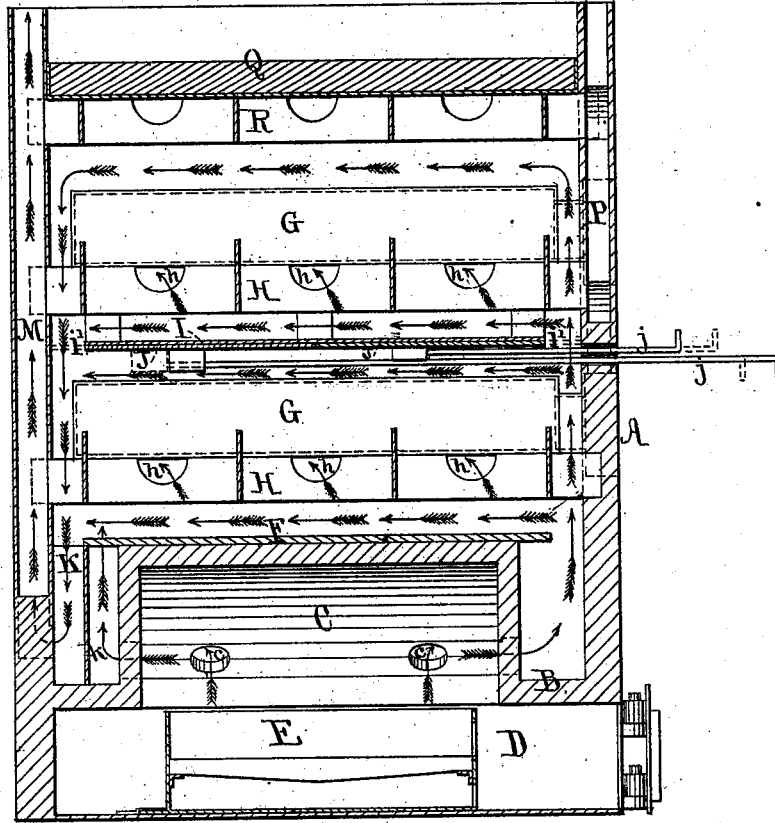


FIG. 3.

Witnesses.

William H. D. Sweet
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UNITED STATES PATENT OFFICE.

THOMAS MAYES, OF ALBANY, NEW YORK.

IMPROVEMENT IN BAKERS' OVENS.

Specification forming part of Letters Patent No. **210,045**, dated November 19, 1878; application filed October 27, 1876.

To all whom it may concern:

Be it known that I, THOMAS MAYES, of the city and county of Albany, and State of New York, have invented certain new and useful Improvements in Bakers' Ovens, of which the following is a full and exact description, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a front elevation of my oven, showing one side in section through the line *x x*, Fig. 2; Fig. 2, a horizontal section at the line *y y*, Fig. 1, having a portion of its intermediate parts broken away to show the arch over the fire-box; and Fig. 3, a transverse vertical section through its center.

My invention relates to ovens for baker's uses; and consists in the peculiar construction and combination of its parts, as hereinafter shown and described.

As shown in the drawings, A represents the exterior casing, which may be made of brick or of metal, protected by non-conducting material, to prevent the escape of heat. Within it, and near its bottom, is a horizontal partition, B, provided with an arched portion, C, which separates the fire-chamber D from the upper chamber of the structure wherein the ovens are placed.

The arched portion C, which I preferably make of fire-brick, is placed over the detachable fire-box E, which contains the burning fuel, and which may be removed from the chamber D when an excess of heat in the upper chamber requires it. A series of openings, *c*, formed in the arch C affords the means for the heated gases to pass from the fire-chamber into the upper chamber, containing the ovens. A deflecting-plate, F, is fixed over the top of the arch, either in contact therewith or a little distance therefrom, for the purpose of deflecting the heated gases to the outer parts of the chamber. The more intense heat naturally accumulating at the top of the arch passes through it and radiates through the upper chamber.

The ovens G may be made either of metal or of hollow brick, in such manner that the gaseous and other impurities from the burning fuel cannot penetrate into them; and for

the purpose of economizing space they are arranged in tiers, one above another. They are sustained in their places by means of the bearing-bars H, which are provided with openings *h*, to allow for the free circulation of heat at all points beneath the ovens.

Between each two tiers of ovens a horizontal division-plate, I, is fixed, as shown in the drawings, so as to leave a free space above and below it for the circulation of heat. It is constructed so as to leave an opening, *i*¹, between it and the front and rear walls of the casing A, and with a series of openings, *i*², at each end of it. These openings *i*¹ and *i*² are governed by sliding dampers J, which are provided at their ends with openings corresponding with the openings *i*² of the division-plate I, and are operated by the rods *j*, projecting through the front of the casing A. By means of these dampers the heat surrounding the upper tier of ovens may be regulated at pleasure; or by closing the dampers the upper ovens may be shut off from the heat and not used except when occasion requires. In this manner a great saving of fuel is effected when the full capacity of the ovens is not demanded.

A flue, K, is formed at the back of the upper chamber by means of the wall *k*, leading from which are the flue-openings L, communicating with the escape-flue M.

The oven-mouths N are provided with the usual doors *n*, and, for the purpose of preventing an excessive waste of heat while baking cake, pastry, or other small articles, with the detachable check-plates O, which keep the upper portion of the oven-mouths closed while the doors are opened, and thereby retain the hottest portion of the air in the oven, which would otherwise escape into the atmosphere.

Over each oven-mouth an opening is made leading into the flues P, through which the steam escaping from the ovens passes off into the atmosphere.

The top of the casing Q is made of any suitable non-conducting material, and is supported by the bearing-bars R.

The circulation of the currents of heat is indicated by the arrows on the drawings.

Instead of the four ovens shown in the

drawings, any greater or lesser number may be arranged in a like manner when desirable.

I claim as my invention—

1. The combination, with the casing A, having a partition, B, arch C, provided with the opening *c*, and deflecting-plate F, of the detachable fire-box E, ovens G, division-plate I, dampers J, and flues K, L, and M, as and for the purpose herein set forth.

2. The combination of the ovens G with the flues P, as and for the purpose herein specified.

3. In combination with the ovens G, the bearing-bars H, provided with the openings *h*, as and for the purpose herein specified.

THOMAS MAYES.

Witnesses:

WILLIAM H. LOW,
GEORGE LINDSLEY.