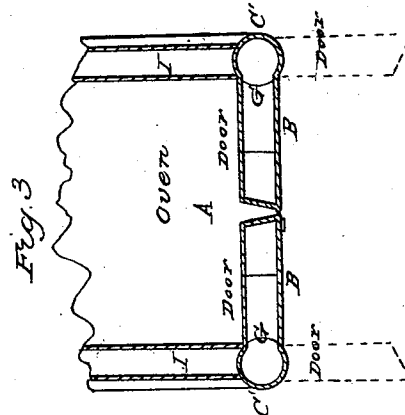
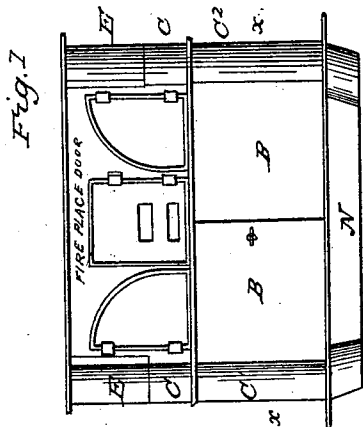
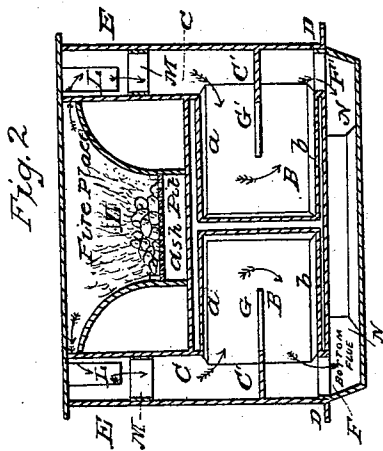


G. W. EDDY.
Domestic Oven.

No. 4,377.

Patented Feb. 10, 1846.



UNITED STATES PATENT OFFICE.

GEO. W. EDDY, OF WATERFORD, NEW YORK.

HOLLOW OVEN-DOOR.

Specification of Letters Patent No. 4,377, dated February 10, 1846.

To all whom it may concern:

Be it known that I, GEORGE W. EDDY, of Waterford, in the county of Saratoga and State of New York, have invented a new and useful Improvement in Oven-Doors or in the Application of Heat to Ovens for Baking or other Purposes; and I do hereby declare that the same is fully described and represented in the following specification and accompanying drawings and letters, figures, and references thereof.

The peculiar character or nature of my invention consists in making oven doors with hollow spaces or smoke flues within them, and with induction and eduction pipes or openings to said spaces or flues, whereby the smoke which is usually made to course in contact with the top, bottom or sides of an oven, or any or all of them may be carried and made to circulate through said spaces or flues in said doors and thereby heat the end or ends of said oven and in consequence thereof distribute the heat more uniformly over the exterior surface or interior part of said oven than can be effected in ovens constructed with one or more common plate doors at either or both ends thereof.

Figure 1 of the aforesaid drawings represents a front elevation of two flue doors as applied to the front part of the oven of a stove. Fig. 2 is a vertical and longitudinal section of them. Fig. 3 is a horizontal section of them and a part of the oven and stove in rear of them the same being taken on the line *x, y*, Fig. 1.

The said oven is to be supposed to have flues or passages in contact with its top and bottom or with them and its sides which (flues) may be arranged so as to receive the smoke and volatile products of combustion from the fire place and disseminate them in any convenient and proper manner against the exterior surfaces of the said parts of the oven.

In Fig. 3 A denotes the front part of an oven and B, B, (Figs. 1, 2, 3) two doors applied to it. Each of the said doors I make as a rectangular or other proper shaped box and unite it to a cylindrical tube C' as seen in Figs. 1, 2 and 3. I make the said tube where it is joined to the box to freely communicate with the interior thereof; that is to say the box opens into the tube, and I extend the tube somewhat below the bottom of the box B, and somewhat above the top

of the said box as seen at C, D in Fig. 2. The tube C' is to be made open at both ends. The upper end I make to communicate with the top flue or side flue of the oven or flue which extends from the fireplace over the oven and this I do by inserting within the top of the tube C' and for a short distance, the bottom of a cylindrical tube E, into which the top flue of the oven or fireplace over the same opens through a passage L see Fig. 2. In Fig. 2 the tubes C' and E are represented as being equal in their diameters, and when this is the case a short tube M should be inserted in and fixed to the bottom of the tube E and extend below it a short distance and into the tube C'. The lower end of the tube C' receives within it a short tube F which extends upward from the bottom flue N of the oven, the said tube F opening into the said bottom flue and into the tube C'. When the door B is opened the tubes F and M, constitute pivots or supports for it to turn or swing upon they being made of a suitable diameter and fitting so loosely within the tube C' as to admit of the same.

It will be obvious that instead of the tubes E and F being applied to the tube C' as above described, the ends of the tube C' may be made to enter and move within them. This is only a variation of the mode of making the turning supports of the doors. That part of the plate G which is within the tube C' may be made removable if desirable in order that proper access may be had to the part of the said tube below the partition in order to clean the same whenever necessary.

In each box B or oven door and pipe C' one or more plates G may be inserted in a horizontal or such other position as to cause the smoke which is made to enter the said door or box to circulate about within the same in any proper manner so as to thoroughly and equally heat that side of the box B, which is in contact with or partially incloses the internal space of the oven. In Fig. 2 the said plate G is represented as dividing the pipe C' and extending into the box B, about half the length thereof. The smoke during its passage from the flue over and in contact with the top of the oven, to that under and in contact with the bottom thereof or vice versa, I make to enter the top or bottom of the tube C' of each oven door and to circulate within the said door

and from thence to pass out of the other end of the tube C'.

When the smoke in passing from the fireplace is first made to impinge against the bottom of the oven and by suitable flues to circulate thoroughly against the same, it should next be carried through the oven door or doors or against the sides of the oven and from thence through the door or doors and into the flue or flues over the top of the oven. So, whenever the smoke after leaving the fireplace is first carried in contact with the top of the oven, it should be made in its passage from the top to the bottom of the oven to pass through the door or doors. Fig. 3 shows a portion of each of the side flues the same being denoted at I, I. The bottom flue is exhibited in Fig. 2 at N, and the fireplace at L over or on top of the oven.

I do not consider my improved oven door or doors as confined to any particular arrangement of flue passages around or in the vicinity of an oven; neither do I consider any peculiar position of the door or doors, that is, whether it or they may be hung

upon their turning bearings, so as to be moved in a horizontal, vertical or in any other direction as making part of my invention. In consequence thereof, I have not deemed it necessary to give any particular description or exhibit extensive drawings of any arrangement of side or bottom flues around an oven.

My improvement, and therefore, that which I claim and for which I ask for Letters Patent, consists in—

Combining a hollow oven door, or one with flues within it, with induction and eduction openings or passages in its turning bearings; the said openings being for the reception and discharge of smoke into and from the said door substantially in the manner and for the purpose as herein above set forth.

In testimony whereof, I have hereto set my signature, this eighth day of December A. D. 1845.

GEORGE W. EDDY.

Witnesses:

R. H. EDDY,
GEO. H. BAILEY.