(No Model.)

2 Sheets—Sheet 1.

W. W. WILLIAMS.

BAKER'S OVEN.

No. 582,330. Patented May 11, 1897.

Fig. 1.

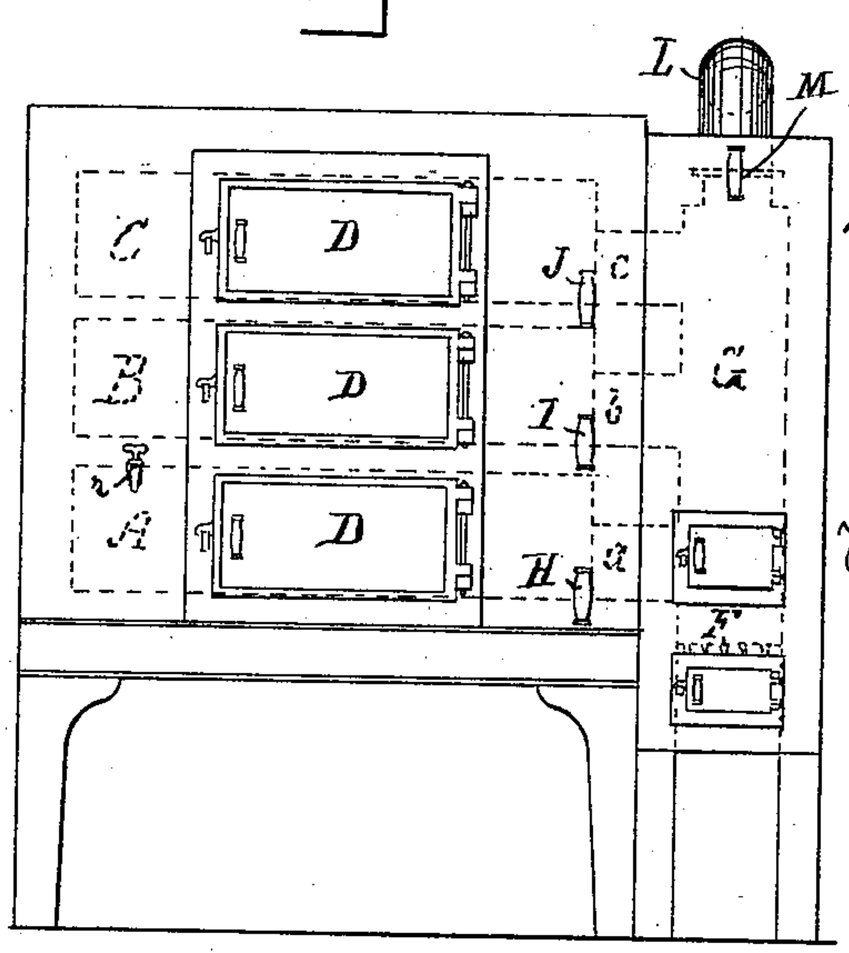


Fig. 2.

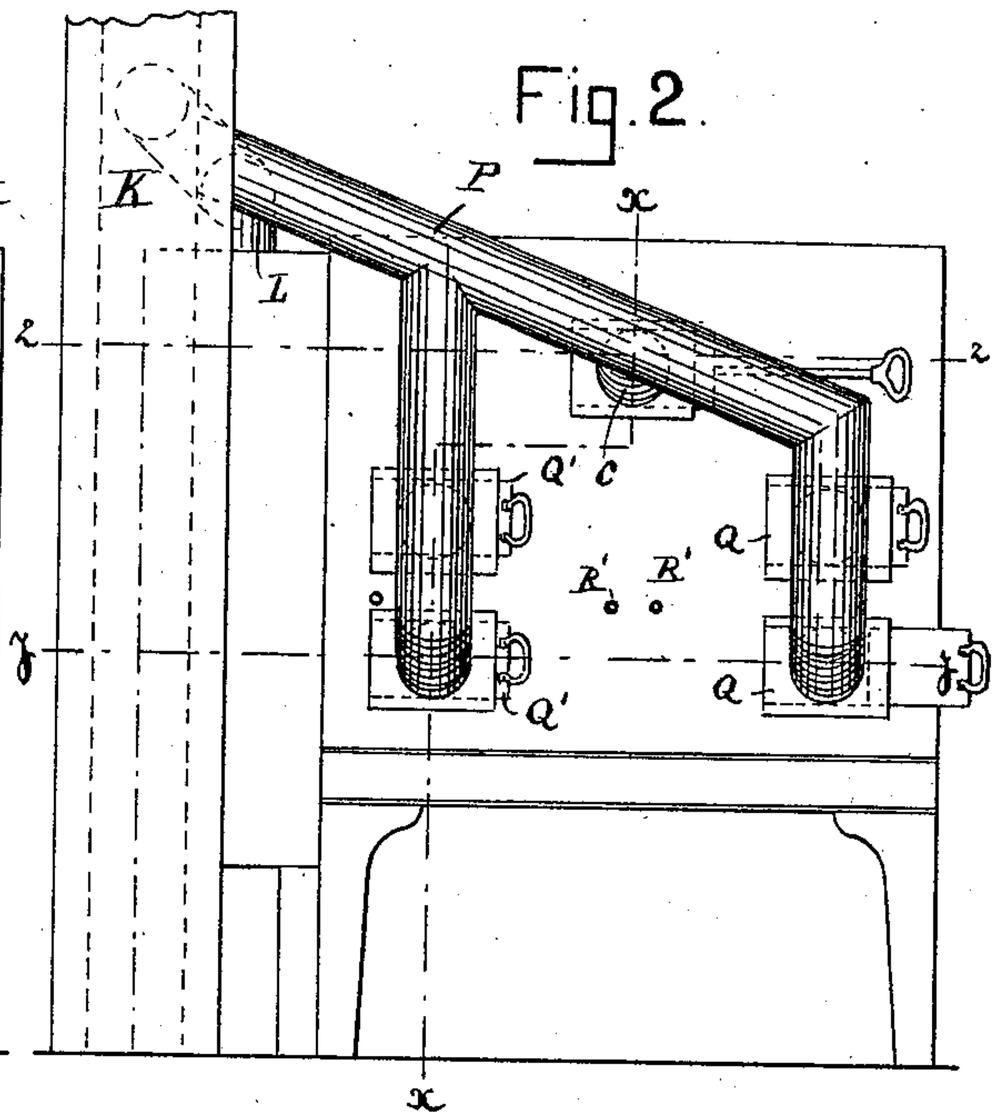
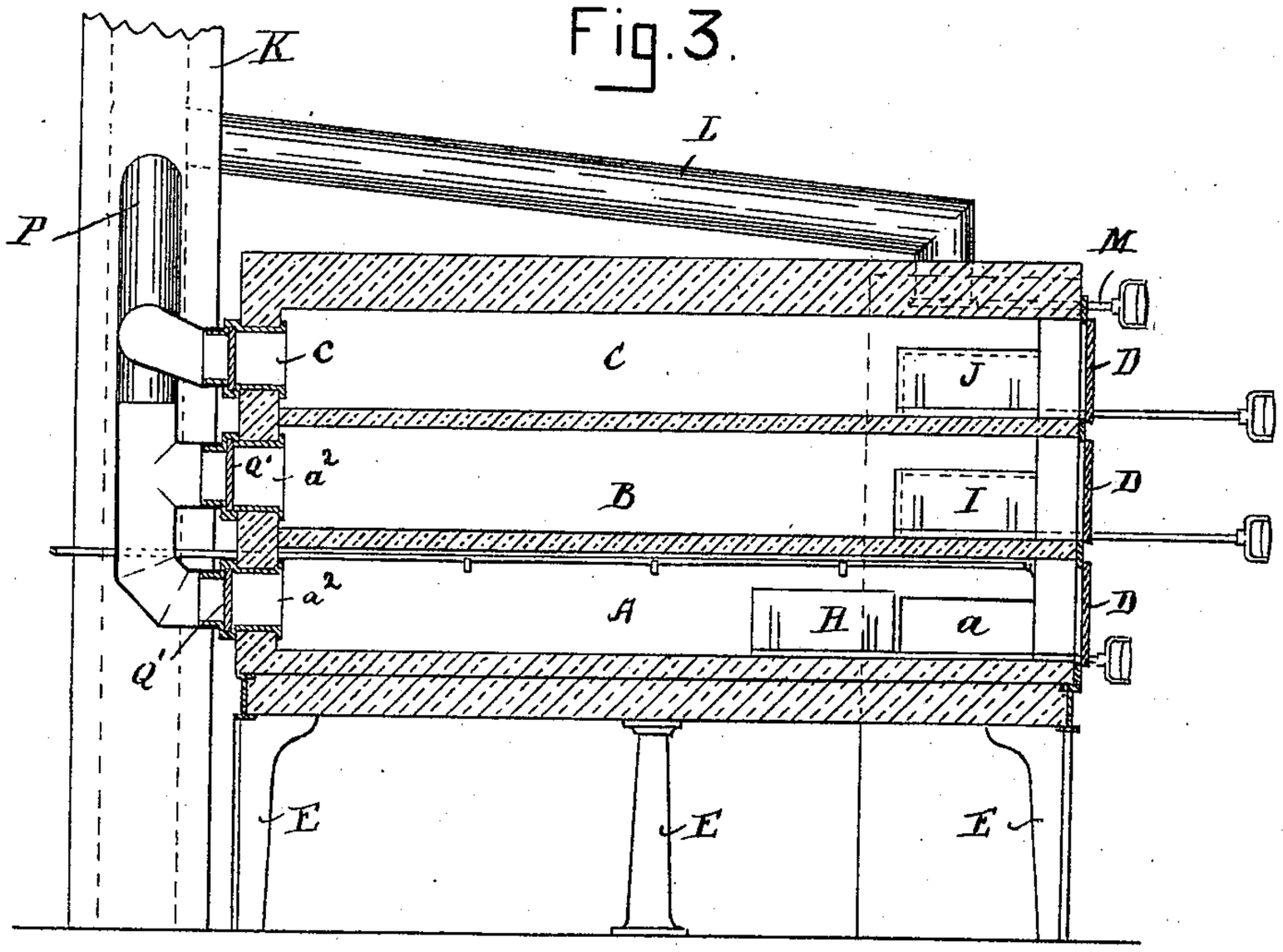


Fig. 3.



Witnesses.
Winifred L. Kenrick.
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Attorney.

(No Model.)

2 Sheets—Sheet 2.

W. W. WILLIAMS.

BAKER'S OVEN.

No. 582,330. Patented May 11, 1897.

Fig. 4.

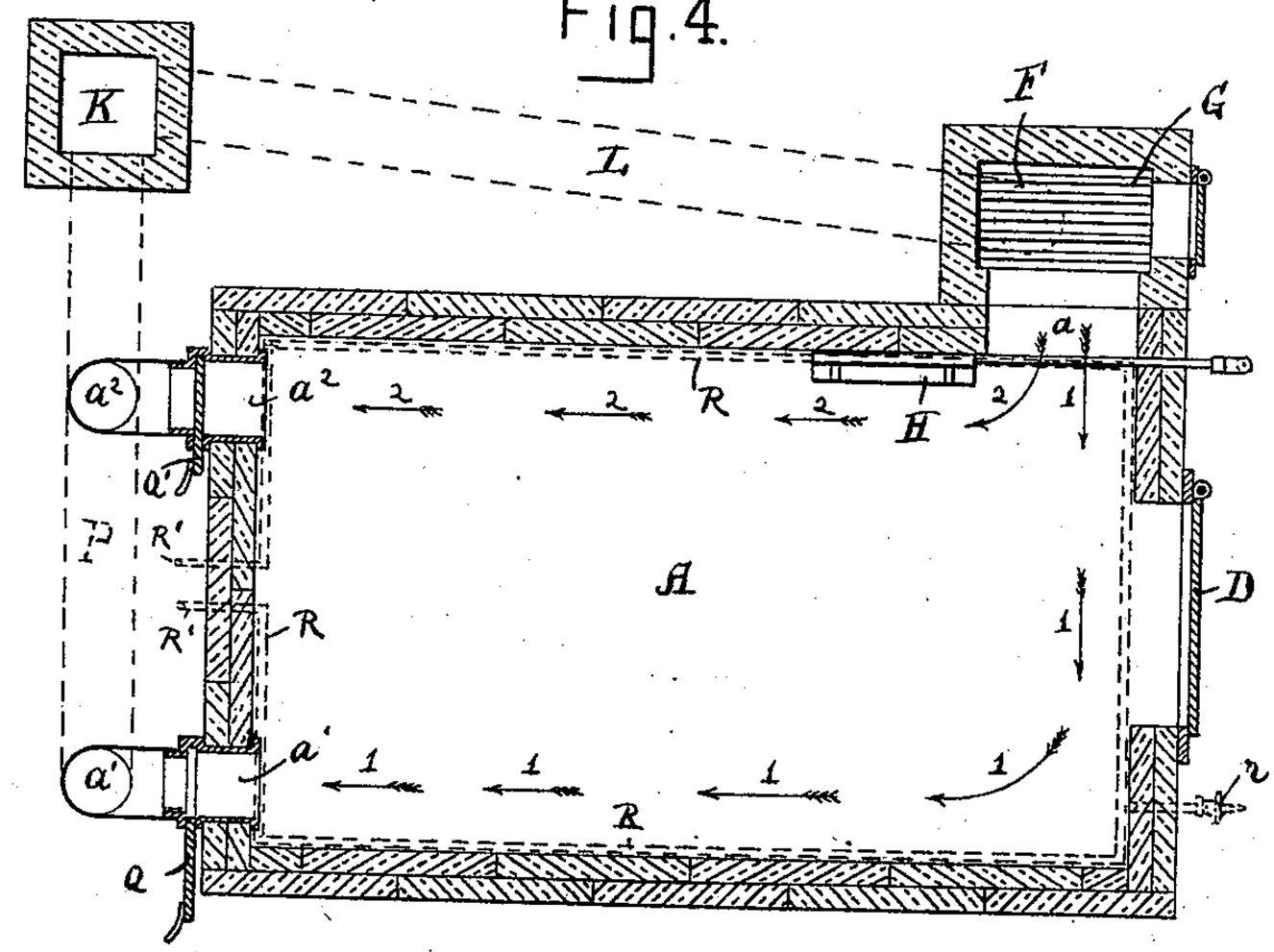


Fig. 5.

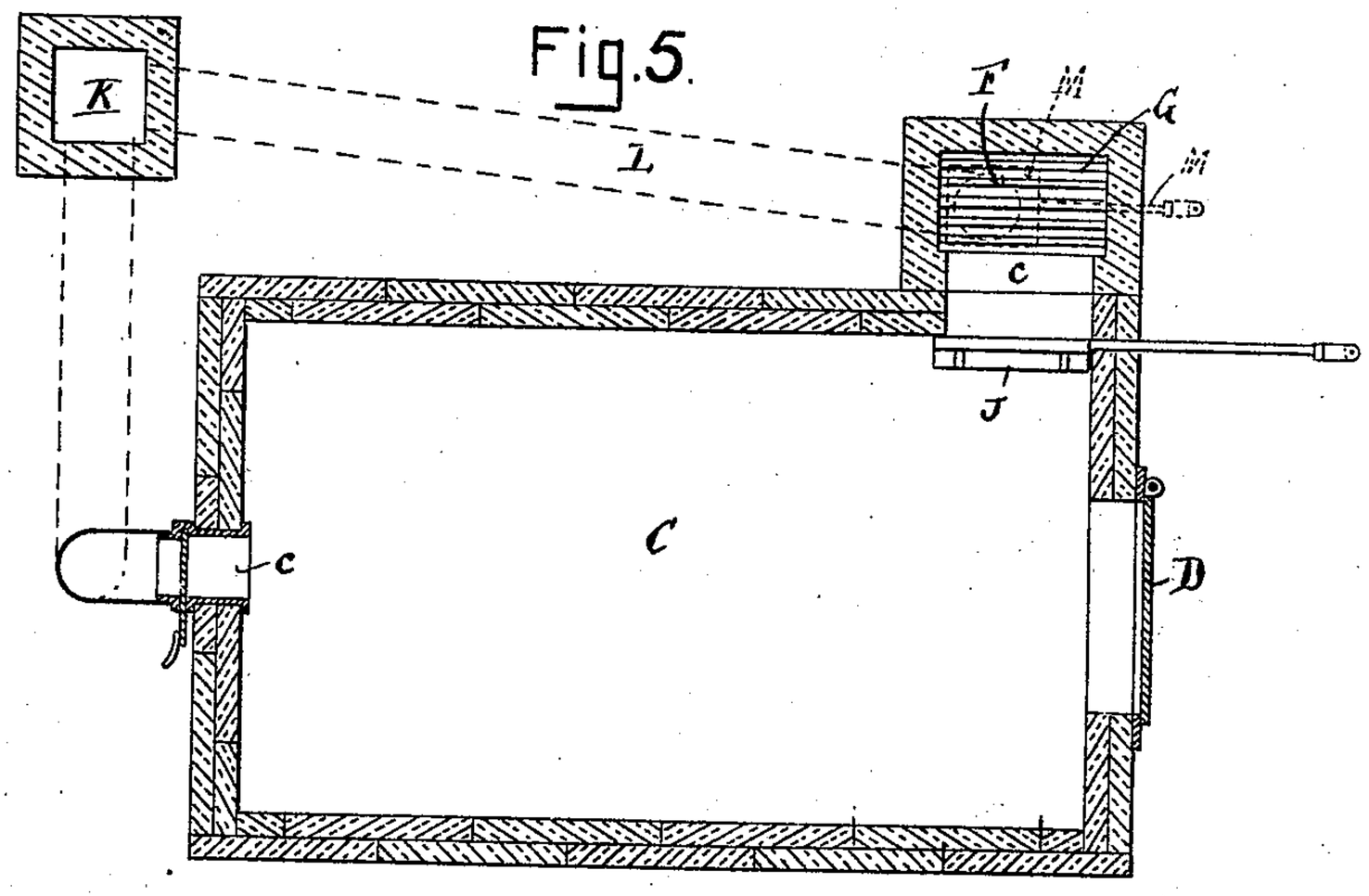
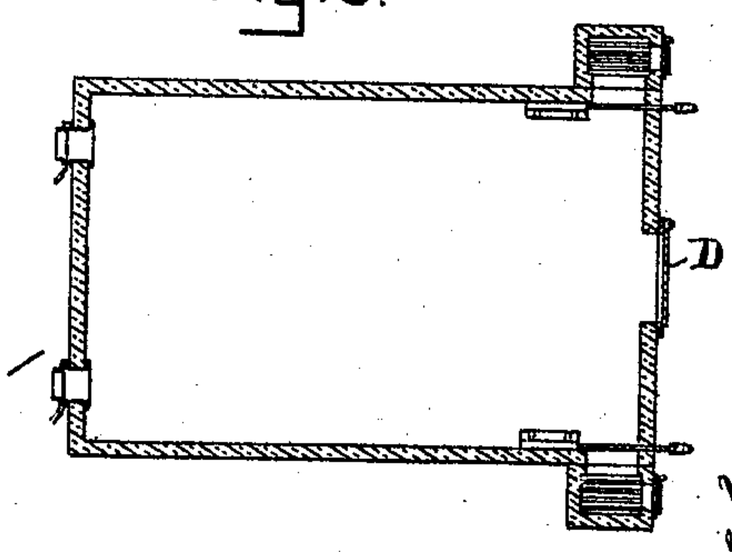


Fig. 6.



Witnesses.
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Laura E. Hayward

Inventor.
Waldo W. Williams
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Attorney.

UNITED STATES PATENT OFFICE.

WALDO W. WILLIAMS, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO ABRAM HOFFECKER, OF SAME PLACE.

BAKER'S OVEN.

SPECIFICATION forming part of Letters Patent No. 582,330, dated May 11, 1897.

Application filed November 22, 1895. Serial No. 569,777. (No model.)

To all whom it may concern:

Be it known that I, WALDO W. WILLIAMS, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Bakers' Ovens, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to bakers' ovens, the object being to produce an oven that can be heated evenly all over.

The invention consists in the general construction of the oven, the arrangement and location of the fire-grate and dampers, as hereinafter fully described, and pointed out in the claims.

Referring to the accompanying drawings, Figure 1 represents a front view of a baker's oven embodying my invention. Fig. 2 is a back view of same. Fig. 3 is a longitudinal vertical section taken on line *x x* of Fig. 2. Fig. 4 is a longitudinal section taken on line *y y* of Fig. 2. Fig. 5 is a horizontal section taken on line *z z* of Fig. 2, and Fig. 6 is a horizontal section of a large oven heated by a fire on each side.

I prefer to construct the oven with three compartments A B C, so that different articles requiring various temperatures can be baked at one and the same time. Thus the lower compartment A can be used for bread, the second, B, for cakes and the like, and the upper compartment C for brown bread or other articles requiring a slow oven. Each of said compartments is provided with a door D of ordinary construction, and the bottom of the oven is supported upon standards E or bricked up, as desired.

On one side of the oven is built a compartment containing a fireplace F, over which is a chamber G that communicates with the compartments A B C by passages *a b c*, which are opened or closed by dampers H I J, according to which compartment or compartments it is desired to have the heat pass. The upper part of the chamber G is in connection with a chimney K by a pipe L, which is closed by a damper M, when it is desired to have the heat pass through any of the compartments A B C. The object of this arrangement is that when the fire is first lighted the dampers H I J are closed and the damper M opened. Thus all the smoke and other products of combustion pass off directly to the chimney K. Thus the baking-compartments are kept clean after the fire has burned through and the smoke passed off. Then the damper M is closed and the damper to the desired baking-compartment opened, the heat passing into same, and in order to obtain an even heat all over the compartments A B two flues a' a^2 are arranged at the rear of said compartments, each flue being in connection with the chimney K by suitable pipes. In the drawings all the flues are shown entering a main pipe P, but separate pipes for each flue or pair of flues may be employed. Each flue is fitted with a damper Q Q', so that by closing one of the said dampers in the compartment and opening the other the heat is caused to travel from the fireplace to the flue the damper of which is open, thus heating one side of said baking-compartment. Then by closing that damper and opening the other the heat travels from the fire to said flue, thus heating the other side of the oven. For example, the lower compartment, as shown in Fig. 4, having the damper Q withdrawn, so as to open the flue a', the damper Q' being closed, then the heat from the fire travels in the direction of the arrows 1, thus causing the heat to travel on the side of the oven farthest from the fire. Now by reversing the dampers—that is to say, closing the damper Q and withdrawing the damper Q'—the heat is caused to travel on the opposite side of the oven in the direction of the arrows 2. Thus an even heat is obtained all over the oven. The same operation takes place to heat the compartment B. Of course when one compartment is being heated the dampers admitting heat from the fire to the other compartments are closed.

The upper compartment C has only one flue *c* at its rear end, which flue is intended more to carry off any superfluous moisture that may arise when baking brown bread or such like articles. This compartment is preferably provided with a communication to the heating-compartment G and fitted with a

damper J; but in some cases this may be dispensed with, the heat from the central compartment B being in most cases sufficient to give the required heat to the top compartment C.

In constructing the oven I form the walls of the baking-compartments of two layers of tiles, said tiles being of a width equal to the depth of the compartment and said layers being arranged to break joint, as shown in Figs. 4 and 5. By this construction the bread will not be injured if placed in the compartment so that it comes into contact with said walls. Thus a larger area of baking-surface is obtained.

In a bake-house hot water is always required for setting the sponge and the like. Hitherto this water had to be obtained from a source independent of the oven. To overcome this difficulty, I arrange around the top portion of the lower compartment a water-pipe R, (see Figs. 3 and 4,) the ends R′ of which connect with a suitable water-reservoir, (not shown in the drawings,) so as to form a circulation, the said pipe R′ being tapped and a short piece of pipe carried through the wall of the oven in any convenient place and fitted with a faucet *r*. Thus water passing through said pipes becomes sufficiently heated for all required purposes, and a constant supply of hot water is always at hand.

Should a very large oven be required, then it can be heated by a fire on each side, as shown in Fig. 6, the flues, dampers, and other parts being arranged as before described.

Although I have shown and prefer to construct the oven with three baking-compartments, it is obvious that an oven with only one or two compartments might be employed, as my invention does not consist in the number of compartments but in the method of heating the same.

What I claim is—

1. A baker's oven consisting of a baking-compartment, a fireplace on the side of same, an aperture to admit heat to said compartment, a damper to open or close said aperture, two flues in the rear wall of said baking-compartment, one on each side, and dampers whereby either of said flues can be opened or closed whereby the heat can be caused to pass across the baking-compartment first in one direction and then in another direction whereby the whole of the compartment will be evenly heated as required substantially as and for the purposes set forth.

2. A baker's oven consisting of one or more baking-compartments each having an aperture to admit the heat from the fire and two flues in its rear wall, pipes leading from said flues to a chimney and dampers in said flues whereby the direction of the heat through said baking-compartments is caused to pass first to one side and then to the other side in combination with a fireplace on one side, a heating-chamber above same, a pipe or flue leading from the top of the heating-chamber, a damper for opening and closing said pipe or flue, whereby the heat can be directed into the baking-compartments or allowed to escape to the chimney substantially as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 11th day of November, A. D. 1895.

WALDO W. WILLIAMS.

Witnesses:
CHAS. STEERE,
EDWIN PLANTA.