(No Model.)

G. R. MOON.

BAKING OVEN.

No. 598,570. Patented Feb. 8, 1898.

FIG. 1

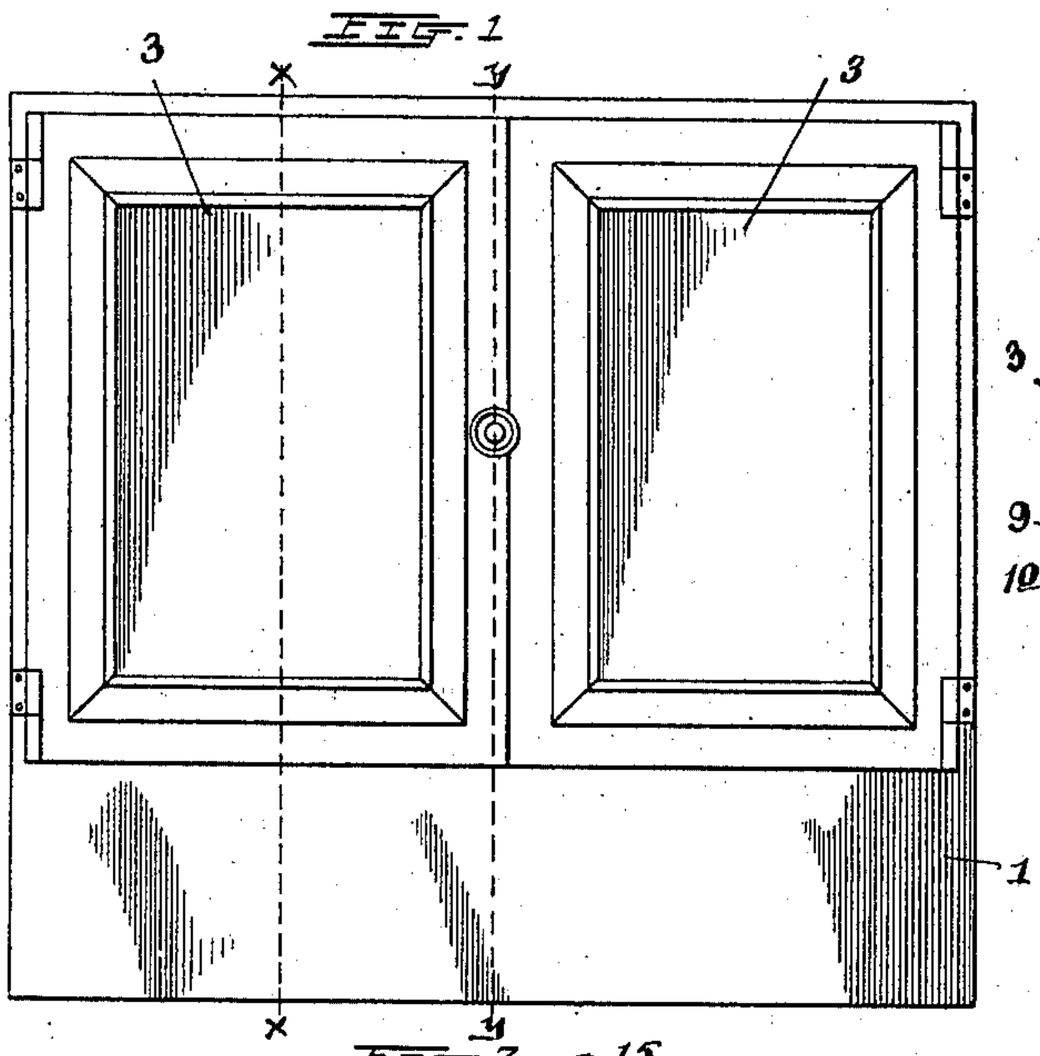


FIG. 2

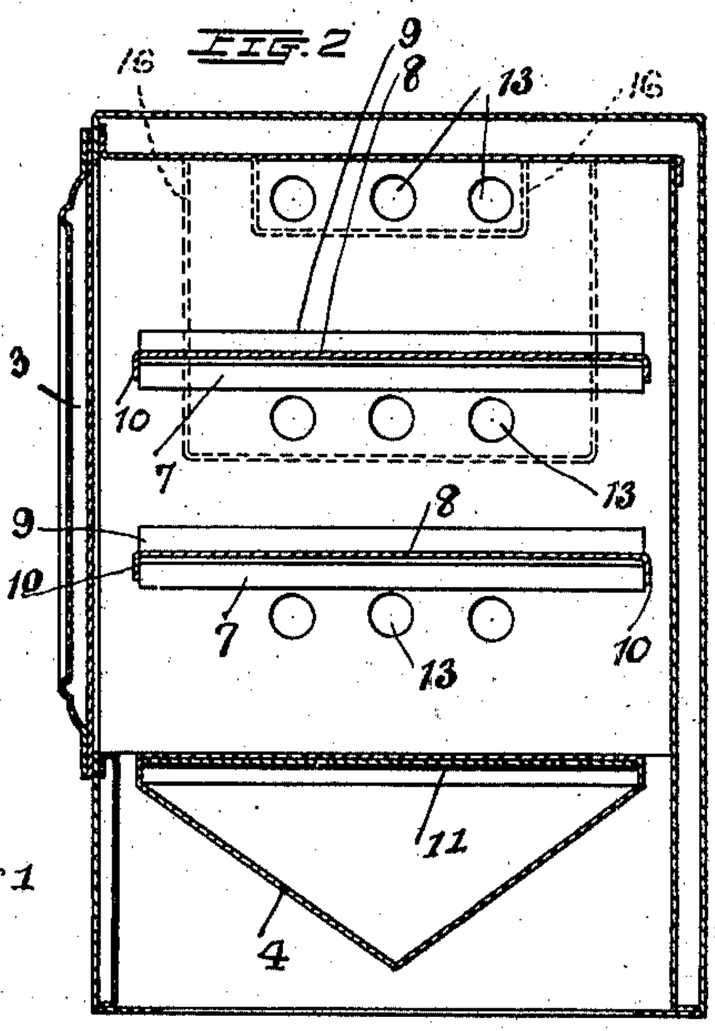


FIG. 3

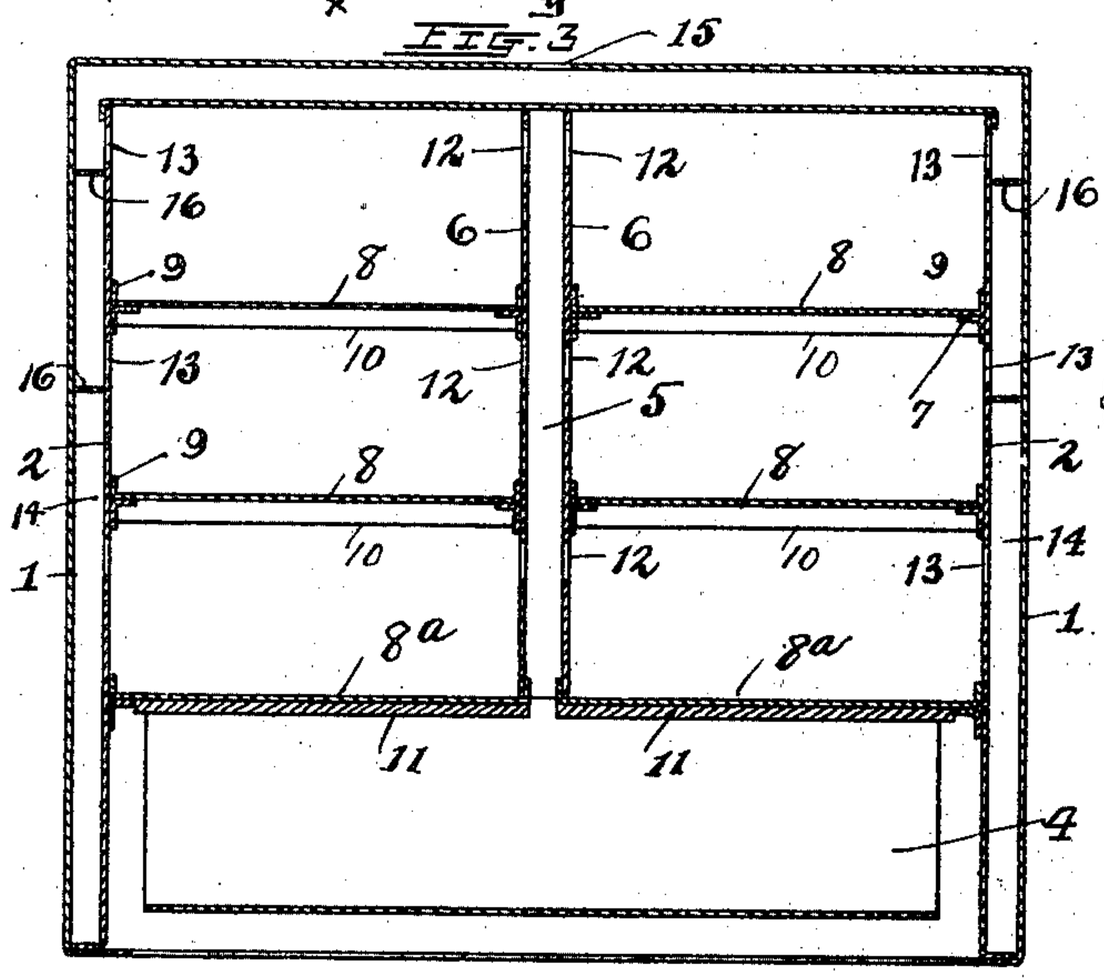
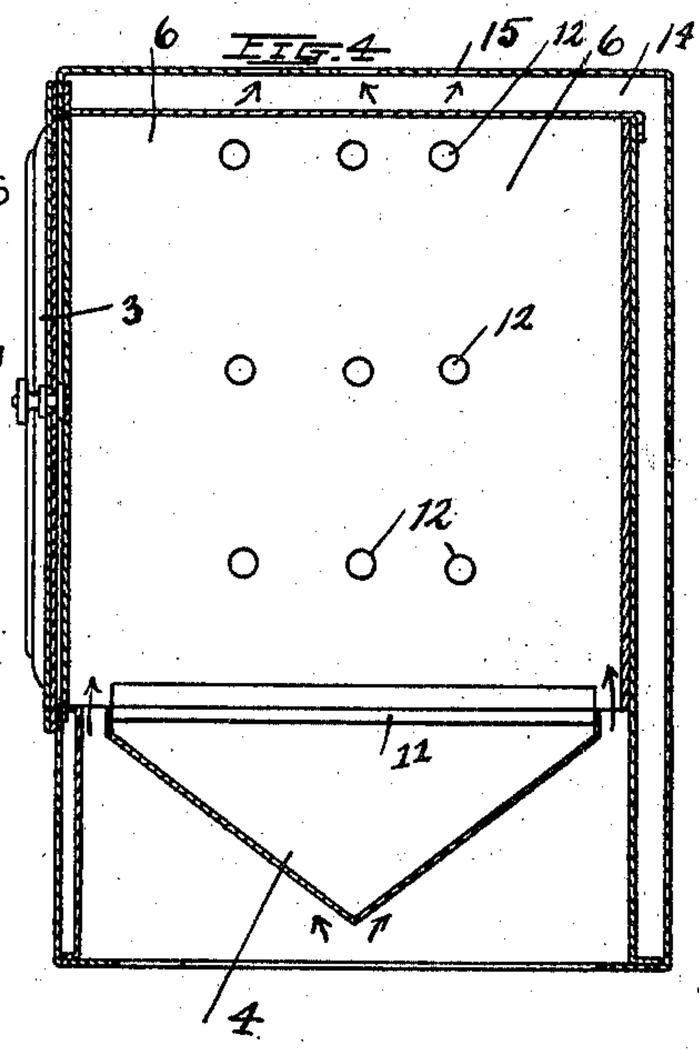


FIG. 4



WITNESSES:

J. H. Frank
A. L. Phelps

INVENTOR
George R Moon

BY
A. C. Shepherd
ATTORNEY

UNITED STATES PATENT OFFICE.

GEORGE R. MOON, OF COLUMBUS, OHIO.

BAKING-OVEN.

SPECIFICATION forming part of Letters Patent No. 598,570, dated February 8, 1898.

Application filed June 3, 1897. Serial No. 639,204. (No model.)

To all whom it may concern:

Be it known that I, GEORGE R. MOON, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Baking-Ovens, of which the following is a specification.

My invention relates to the improvement of baking-ovens of that class which are adapted for use in conjunction with gasolene or gas stoves or burners; and the objects of my invention are to provide an improved oven of this class of such construction as to equalize the distribution of heat about and through various compartments and to produce other improvements in details of construction and arrangement of parts, which will be more fully pointed out hereinafter. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of my improved oven. Fig. 2 is a sectional view on line *x x* of Fig. 1. Fig. 3 is a central sectional view at right angles to that shown in Fig. 2, and Fig. 4 is a sectional view on line *y y* of Fig. 1.

Similar numerals refer to similar parts throughout the several views.

In the construction of my improved oven I employ an exterior casing 1, within which is arranged an interior casing 2. The front side of the oven-body or double casing thus formed is provided with a doorway, which is adapted to be closed, preferably, by double doors 3.

Suspended in the otherwise open and lower end portions of the oven-body is a substantially V-shaped heat-receiving plate or deflector 4, which, as shown in the drawings, is of less width than said oven-body and open at the ends. The inner casing 2 above the deflector is, as shown, divided centrally and vertically by a vertical flue 5 which is formed between two vertical and parallel plates 6, which stand transversely to the deflector, and extend between the central portion of the deflector 4 and the upper side of the inner casing.

7 represents horizontal bracket or shoulder strips which are arranged at intervals on the inner sides of the end walls of the inner casing and on the outer sides of the flue-sheets 6. These oppositely-located bracket-strips are designed to support removable shelves 8. The shelves thus employed are, as indicated more clearly in Fig. 2 of the drawings, of less width than the width of the inner casing, and each of said shelves has formed therewith upturned side lips 9, which are adapted to bear against the casing and flue-walls in the manner shown in Fig. 3 of the drawings. The forward and rear sides or ends of each of the shelves 8 are flanged downward, as indicated at 10. By providing the shelves with the flanges and the lips they will assist in bracing the sides of the oven above and below the brackets, and the flanges at the ends engage with the ends of the brackets and hold the shelves in place and also retain the heat under the shelf in its passage from the flue at the center to the space between the end walls of the casing. The lower or bottom shelves 8^a bridge the upper side of the deflector on opposite sides of the flue 6 and extend from the central flue 5 to the inner casing 2 and thereby prevent any direct entrance of heat to the bottom of the oven except through the flue 5, and as the flue is arranged transversely of the deflector and substantially midway of the oven the heat must pass to the ends of the deflector and then back again half its length to the flue, from which it passes between the shelves to the space between the casings, thereby retaining the heat the greatest length of time under and within the oven. Beneath these lower shelves I preferably provide one or more layers of asbestos paper or other heat-non-conducting material 11. Below each of the shelves 8 and below the inner-casing top I provide the flue-plates 6 with the desired number of openings 12, which communicate with the flue 5. At opposite points in the side or end walls of the inner casing I provide the desired number of openings 13, said openings forming a communication between the interior of the inner casing and the flues 14, which are formed between said inner and outer casings. In the upper side of the external casing 1 I provide the desired number of openings 15, the latter being arranged, preferably, at the center of the length or width of the oven-body. Between the end walls of the inner and outer casings I provide, as indicated in section in Fig. 3 of the drawings and in dotted lines in Fig. 2, U-shaped partitions 16, the latter inclosing, respectively, the groups of

openings 13 which are above and below the upper shelves 8 of the oven.

In utilizing my invention the oven-body, formed as above described, is adapted to be seated over the burners of a gasolene or gas stove or other suitable heat-generating apparatus. The heat which rises therefrom comes into contact with the diverging bottom plates of the deflector 4 and, being equally distributed on opposite sides thereof, passes upward in front and rear of said deflector, thence circulating between the shelves. The heat, which also passes through the central flue 5, is carried outward into the compartments or between the shelves on opposite sides thereof. From the interior of the oven the heat escapes through the openings 13 into the side flues 14 and 16, thence over the top of the oven and out through the openings 15. It will readily be seen that the hollow partition or central flue 5, in conjunction with the side and end flues of the casing, will serve to uniformly heat the space contained within the casing, resulting in imparting a uniform heat to the bread or other articles to be baked upon said shelves.

It is obvious that the downturned end flanges 10 of the shelves will operate to slightly retard the upward draft of the heat and direct the latter downward.

The manner of supporting my improved shelves is such as to admit of their being readily detached from the casing when desired.

By employing the non-conducting sheets 11 it is obvious that the direct heat from the interior of the deflector is tempered, and the bottom shelves are therefore relieved from the effect of a direct and too high degree of heat.

It will be observed that an oven such as herein described may be produced in a reliable form at a low cost of manufacture and that the distribution of heat therefrom is such as to impart a substantially equal degree of heat to all parts of the bread which is supported therein, resulting in uniformly baking the same.

If considered desirable, it is evident that the shelves may be perforated or otherwise formed of open-work instead of being produced in the solid form shown and described.

It is obvious that the V-shaped deflector, being subjected to the direct heat of the burners from below, must be converted into a heat-reservoir and that the heated air thus produced is utilized by allowing it to escape into the lower open end of the central partition-flue and thence out through the perforations of the latter into the oven-body.

Having now fully described my invention, what I claim, and desire to secure by Letters Patent, is—

In an oven, the combination, with a double-walled casing, the inner end walls of which are provided with horizontally-arranged series of perforations and the outer wall being provided with an outlet at the top, of a series of U-shaped partitions between the end walls of the casing and inclosing the respective series of perforations, two shelves, each secured at its ends and at one edge to the inner casing near the bottom, the inner edges of said shelves being at a slight distance from each other, a deflector below the plates and arranged transversely to the space between them, a vertical flue-plate extending from the inner edge of each of the shelves to the top of the inner casing forming a flue and dividing the oven into compartments, said plates being each provided with horizontally-arranged series of perforations to correspond with the perforations in the inner end walls of the casing whereby the heat from the oven may pass through each compartment, horizontal brackets secured to the end walls and to the flue-plates between said series of perforations, and removable shelves upon the brackets, the sides of each of which are provided with upturned lips and the ends with downwardly-extending flanges, substantially as set forth.

GEORGE R. MOON.

In presence of—
C. C. SHEPHERD,
EDWARD M. TAYLOR.