

No. 792,439.

PATENTED JUNE 13, 1905.

G. R. MOON.  
OVEN.

APPLICATION FILED OCT. 17, 1904.

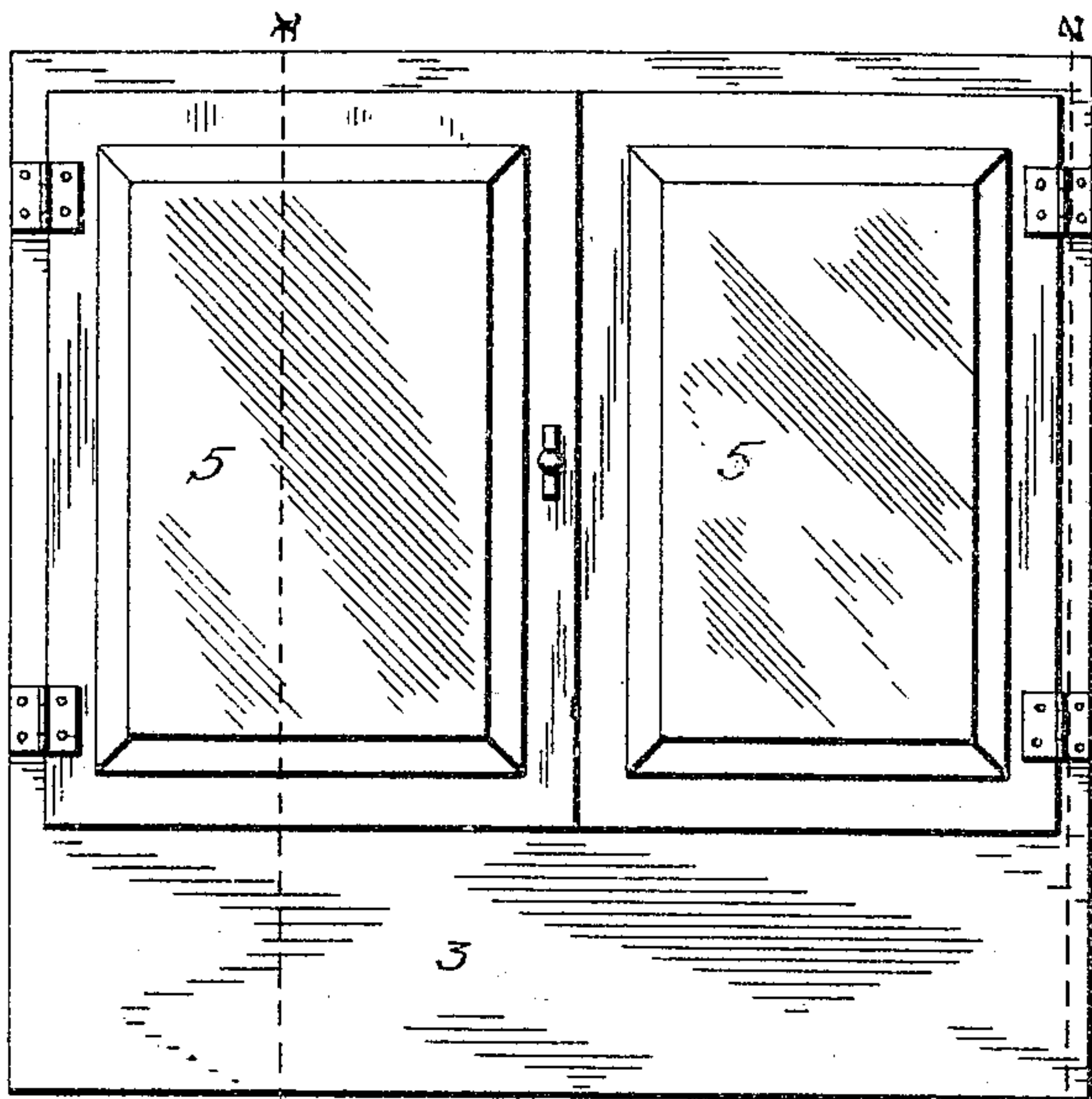


Fig. 1.

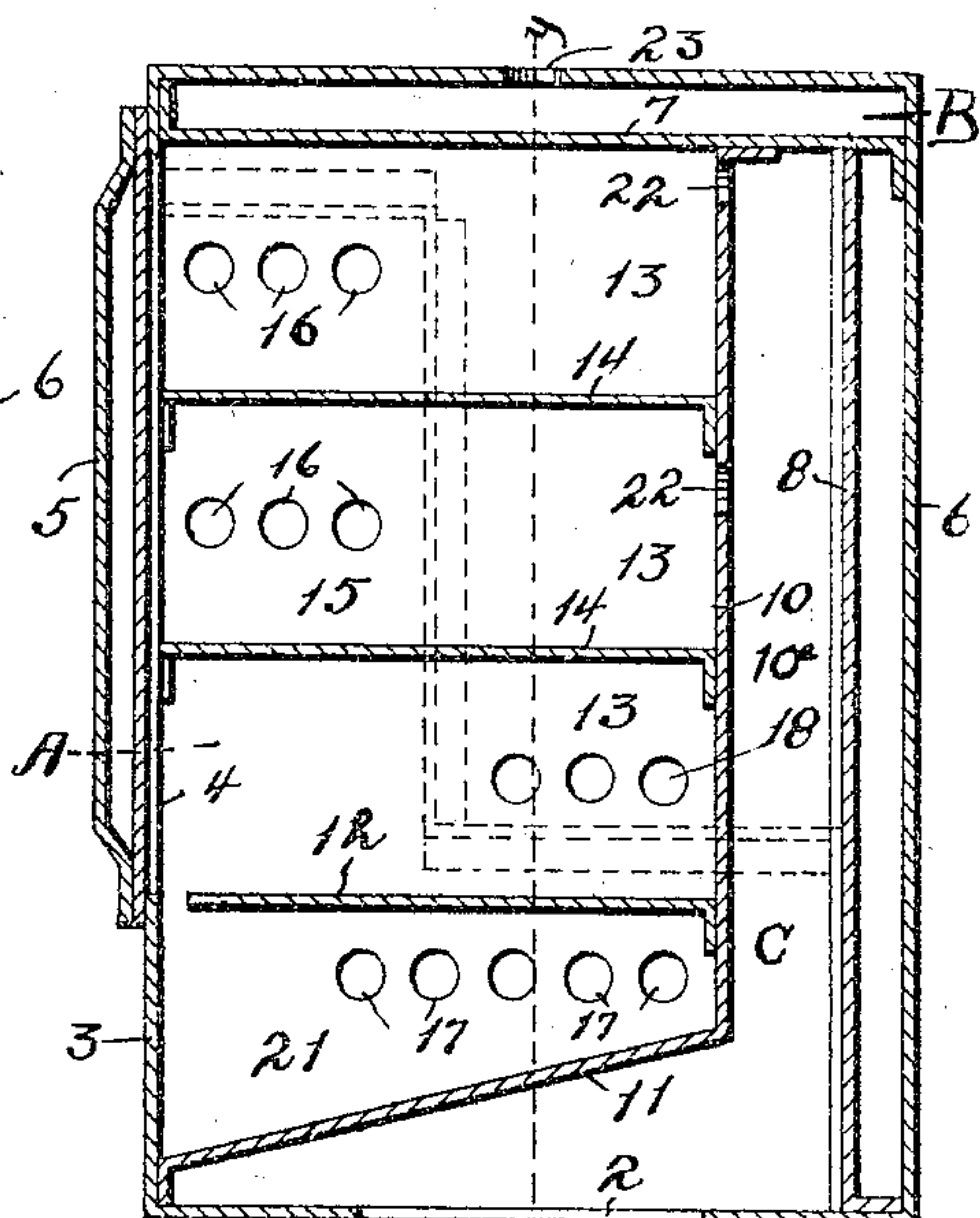


Fig. 2.

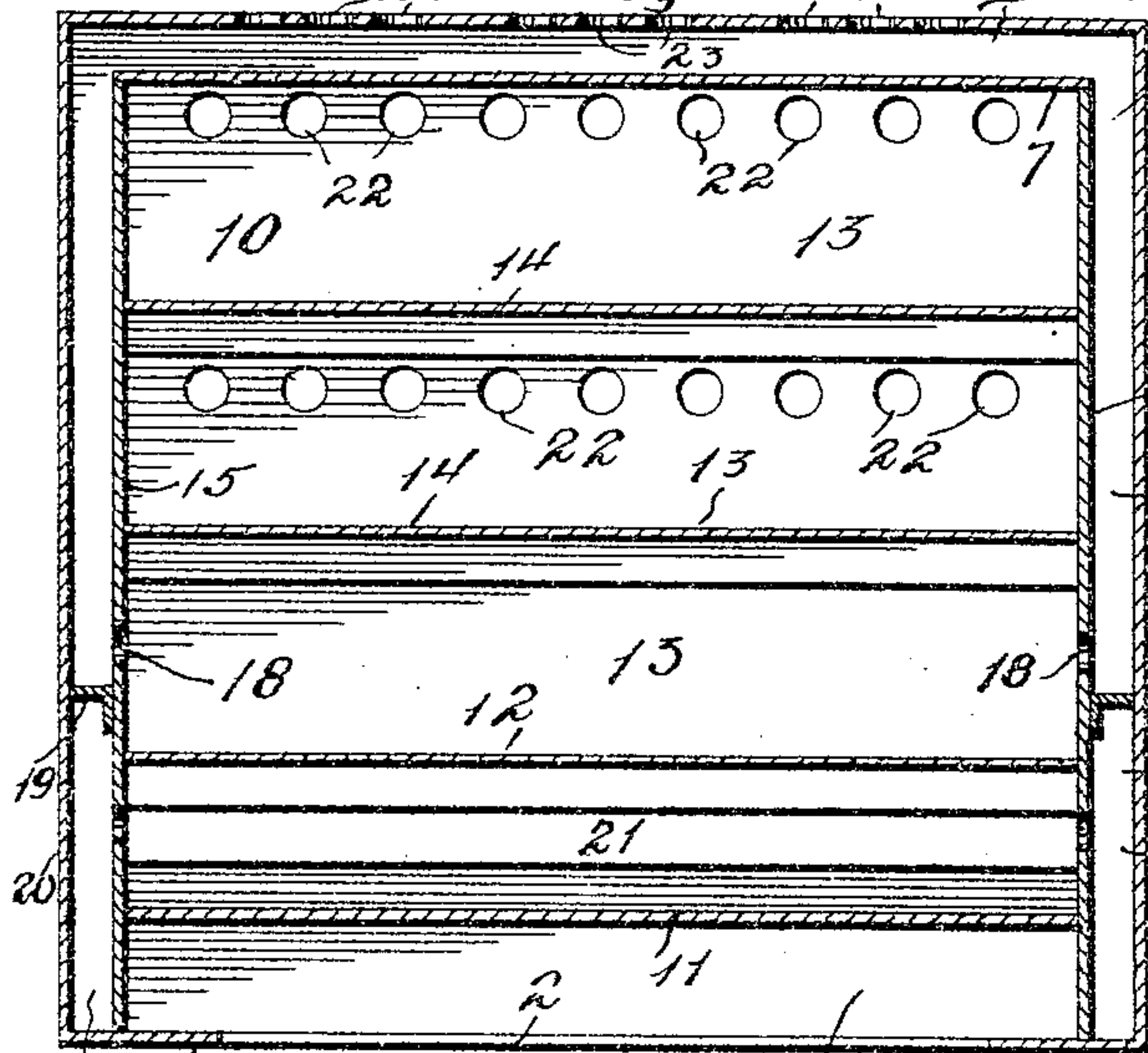


Fig. 3.

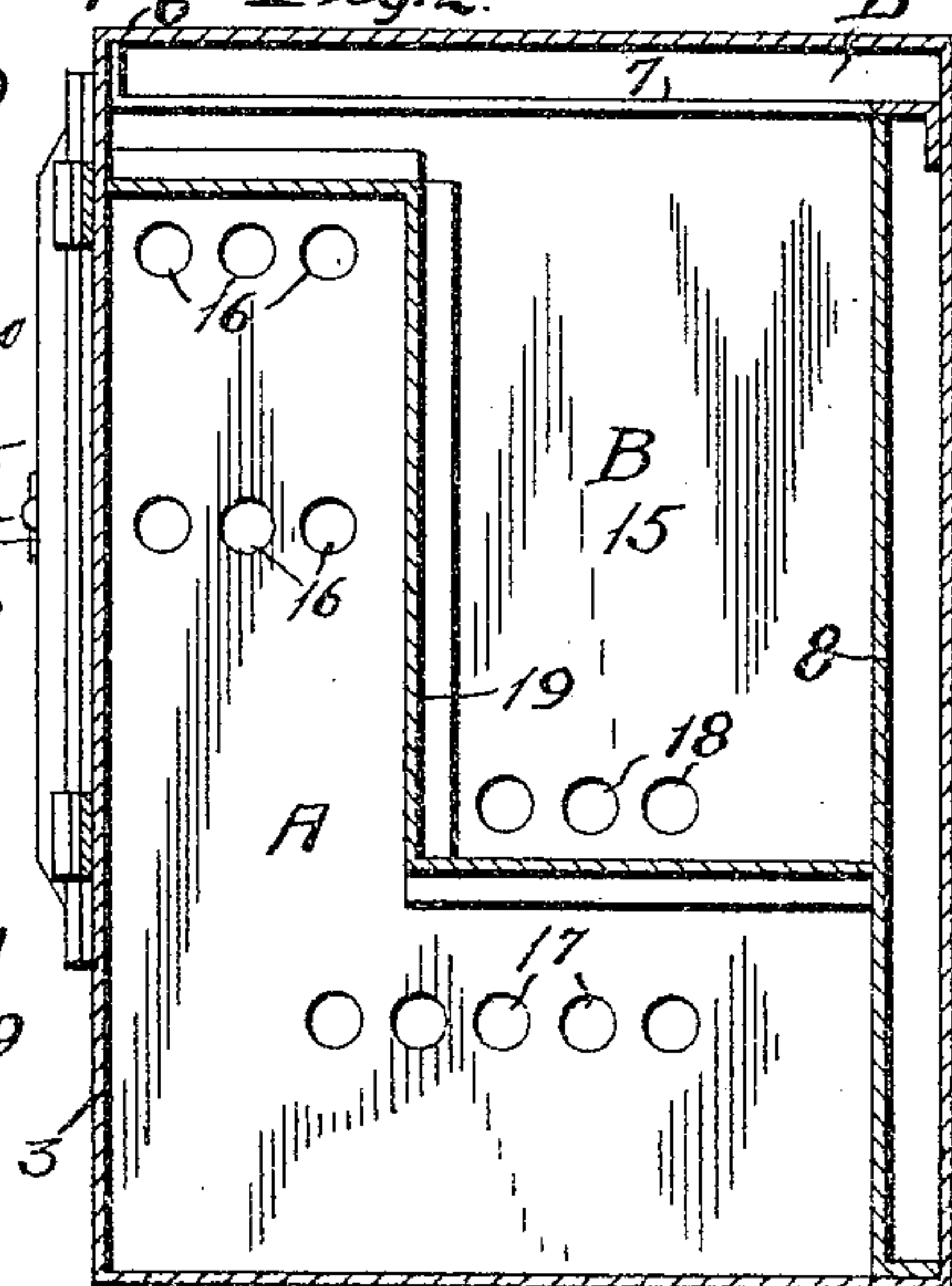


Fig. 4.

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# UNITED STATES PATENT OFFICE.

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## OVEN.

SPECIFICATION forming part of Letters Patent No. 792,439, dated June 13, 1905.

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*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 Ovens, of which the following is a specification.

My invention relates to a new and useful improvement in baking-ovens.

The object of the invention is to provide an improved oven of this class of such construction as to equalize the distribution of heat about and through the various compartments and to produce other improvements in the details of construction and arrangement of parts, which will be more fully pointed out hereinafter.

Finally, the object of the invention is to provide a device of the character described that will be strong, durable, and efficient and one which will be simple and comparatively inexpensive to make.

With the above and other objects in view the invention consists of the novel details of construction and operation, a preferable embodiment of which is described in the specification and illustrated in the accompanying drawings, wherein—

Figure 1 is a front elevation. Fig. 2 is a transverse vertical sectional view taken on the line *x x* of Fig. 1. Fig. 3 is a longitudinal vertical sectional view taken on the line *y y* of Fig. 2, and Fig. 4 is a transverse vertical sectional view taken on the line *z z* of Fig. 1.

In the drawings the numeral 1 designates the bottom of the casing, which is provided with the opening 2, through which the burners or other heat-generating means is introduced.

The numeral 3 designates the front of the casing, which is provided with a rectangular opening 4, covered by suitable double doors 5. Arranged within the casing, which is indicated by the numerals 1, 3, and 6, is a top plate or wall 7 and a back plate or wall 8, which, together with the rear wall 6 of the casing, form a dead-air chamber 9. The walls 7 and 8 also form a heating-chamber C. A heating-compartment 10 is formed by a rear wall 10<sup>a</sup>, ex-

tending downwardly from the under side of the top wall 7 and joining with an inclined bottom deflecting-wall 11, which extends upwardly from the lower edge of the front of the casing 3. It is apparent that a dead-air chamber 9, a heating-chamber C, and a heating-compartment 10 are formed within the casing beneath the top plate 7, which serves the common purpose of a top wall for the parts named. Arranged in the lower part of the compartment 10 is a baffle-plate 12, which projects forwardly and terminates short of the front wall 3 of the casing, so as to leave a space therebetween and also to form the division between the lower cells 13 and 21. Disposed over the baffle-plate are shelves 14, extending from the rear wall 10<sup>a</sup> of the compartment 10 to the front wall 3 of the casing and forming upper cells 13. The compartment 10 is closed at each end by end walls 15, thus producing a closed compartment in the casing 6. The end walls are formed with openings 16, 17, and 18, the openings 16 communicating with the two upper cells, while the openings 17 and 18 communicate with the two lower cells. A zigzag wall 19, extending between the end walls 15 and the end walls 20 of the casing at each end, forms flues A and B, which establish communication between the two upper cells 13 and the lower compartment 21 and the openings 18 and the outlets 23. The rear wall of the compartment 10 is formed with perforations or openings 22, which communicate with the two upper cells 13. The casing 6 is formed in its upper wall with outlets 23. The heated products are to some extent cooled after passing through the upper cells 13, and as they enter the compartment 21 they are reheated by the inclined bottom plate 11.

The operation of the oven is as follows: Heat entering through the opening 2 impinges the inclined bottom plate 11, thoroughly heating the same, and is deflected so as to pass upward through the chamber C, between the rear wall of the compartment 10 and the back plate 8, entering through the openings 22 into the two upper cells 13, and from the said cells out through the openings 16 and down the flue A to the openings 17. The heat products



pass through the openings 17 into the lower cell 21 and along the under side of the plate 12 up into the lowermost cell 13 and from there out through the openings 18 into the flue B, from which they pass upward and out through the outlets 23 at the top. It is apparent that the heat is thoroughly circulated and equally distributed through the oven and its various parts and that it will be entirely exhausted of its heating properties when it escapes through the outlets 23 at the top of the casing 6.

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

1. In an oven, the combination with a casing having an inlet-opening in its bottom and an outlet-opening in its top, of interior end walls, a top plate and a back plate forming a vertical rear dead-air space, end flues and an inclosure, a compartment formed within the inclosure by a bottom wall and a vertical rear wall, the said rear wall being provided with inlet-openings communicating with the inclosure and the said end walls having openings communicating with the compartment, shelves arranged in the compartment for dividing the same into cells, a baffle-plate arranged in the lower portion of the compartment and also acting in conjunction with the shelves to form the said cells, and a zigzag wall arranged between the ends of the casing and the said end walls to form flues about the openings of the said end walls to establish communication between the cells and between one of the cells and the outlet at the top of the casing.

2. In an oven, the combination with a casing having an inlet-opening and an outlet-opening, of walls arranged in the casing to

form a dead-air chamber and an inclosure, walls arranged within the inclosure to form a compartment having communication with the inclosure, a portion of the walls forming the inclosure being provided with openings to establish communication between the interior of the compartment and the casing exterior of the inclosure, and means disposed within the compartment for forming cells therein, and irregular-shaped walls arranged between the ends of the inclosure and the ends of the casing for establishing communication between the cells and between one of the cells and the outlet-opening of the casing.

3. In an oven, the combination with a casing having an inlet-opening and an outlet-opening, of walls arranged in the casing for forming an inclosure, two of said walls being provided with openings, walls disposed within the inclosure and acting in conjunction therewith to form a compartment in the said inclosure, the said compartment being so formed as to include the openings formed in the inclosure-walls and also one of the compartment-walls having openings to establish communication with the interior of the said inclosure, said compartment being formed with a plurality of cells, and irregular walls arranged between the casing and the end inclosure-walls to form flues about the openings of the said walls for conveying the products from one of the cells to another to reheat the said products and also forming flues for conducting the products from one of the cells to the outlet of the casing.

GEORGE R. MOON.

In presence of—

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