

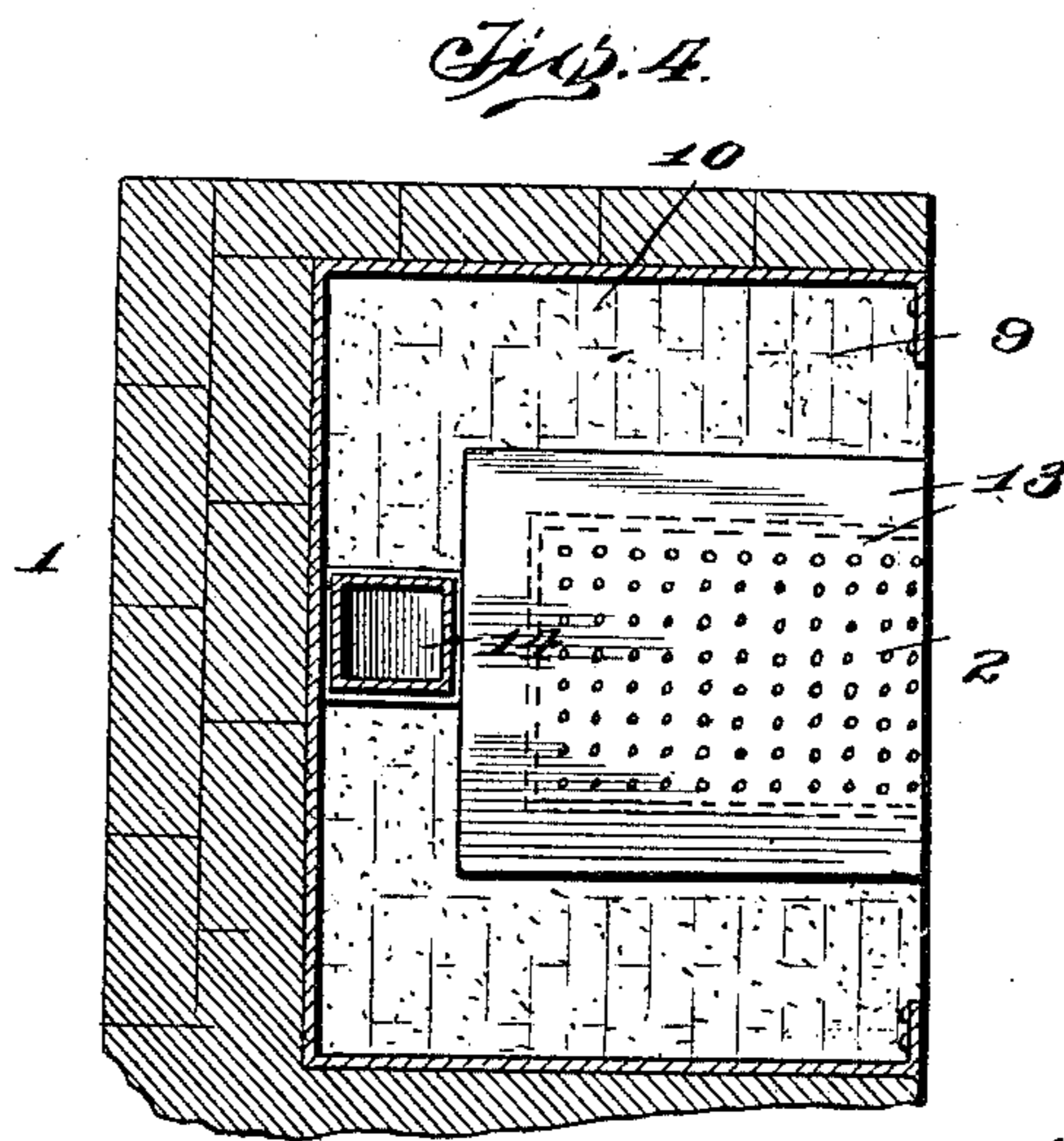
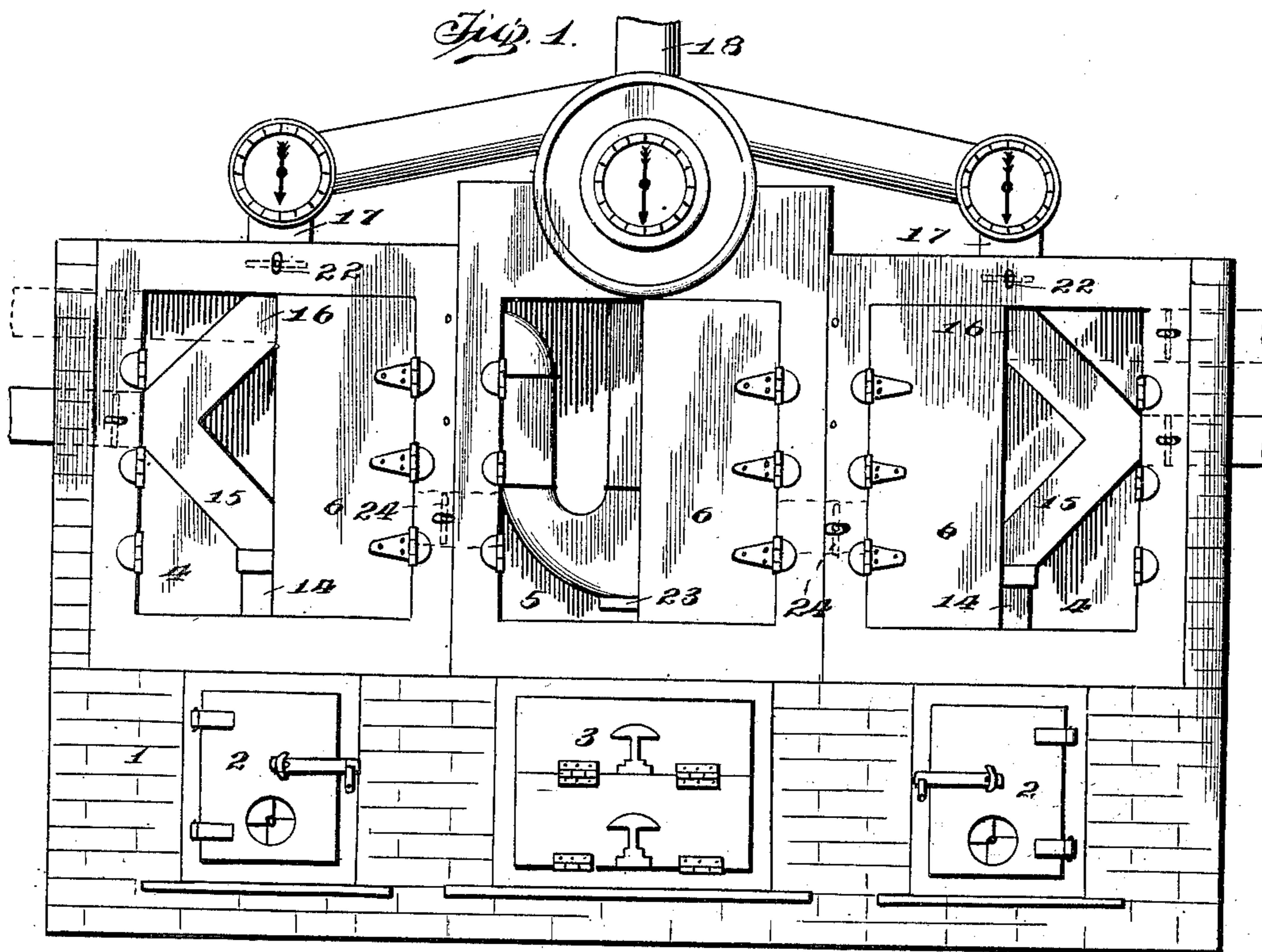
No. 704,660.

Patented July 15, 1902.

J. NESTOR.
PORTABLE BAKE OVEN.
(Application filed July 29, 1901.)

(No Model.)

2 Sheets—Sheet 1.



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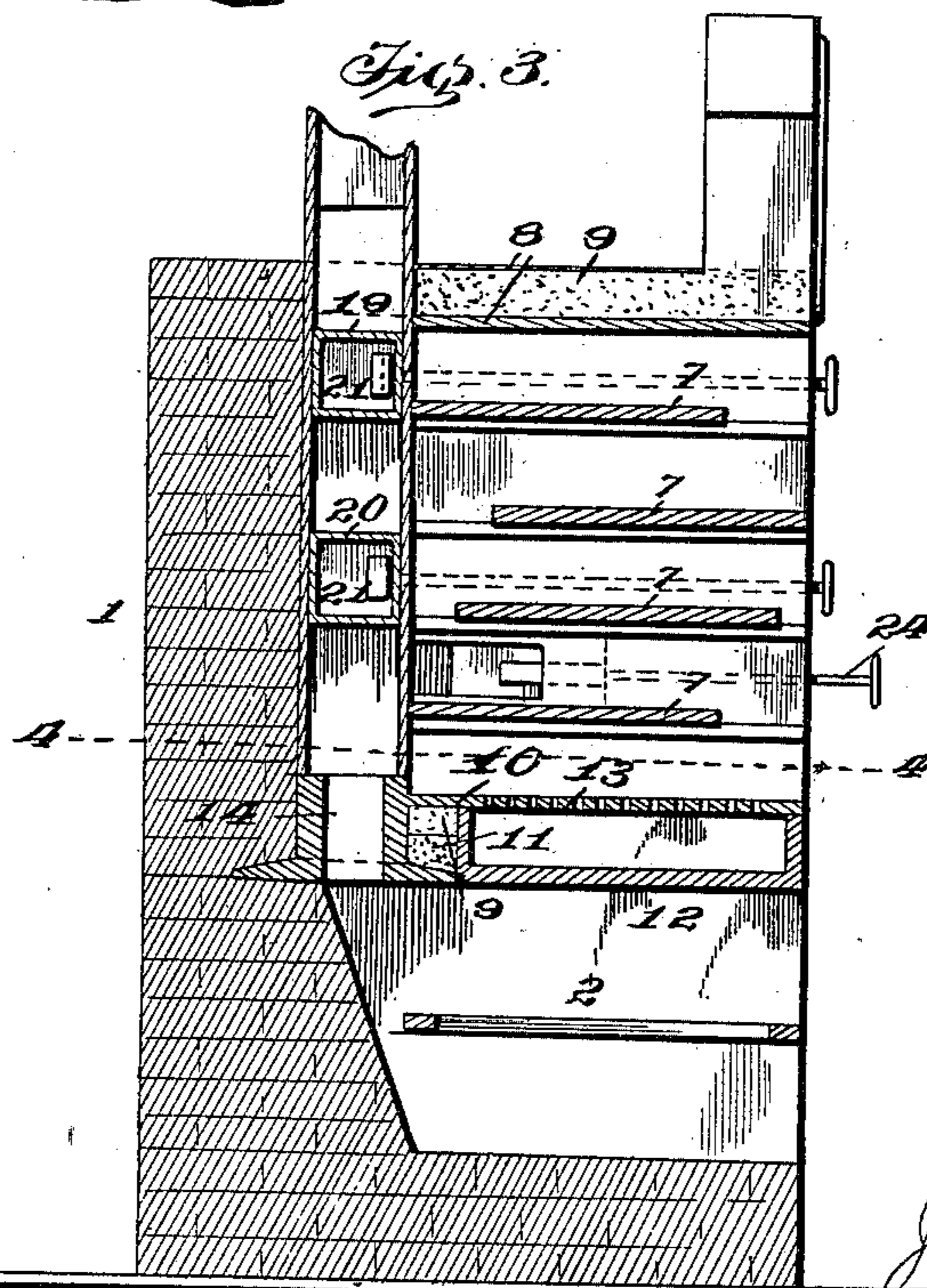
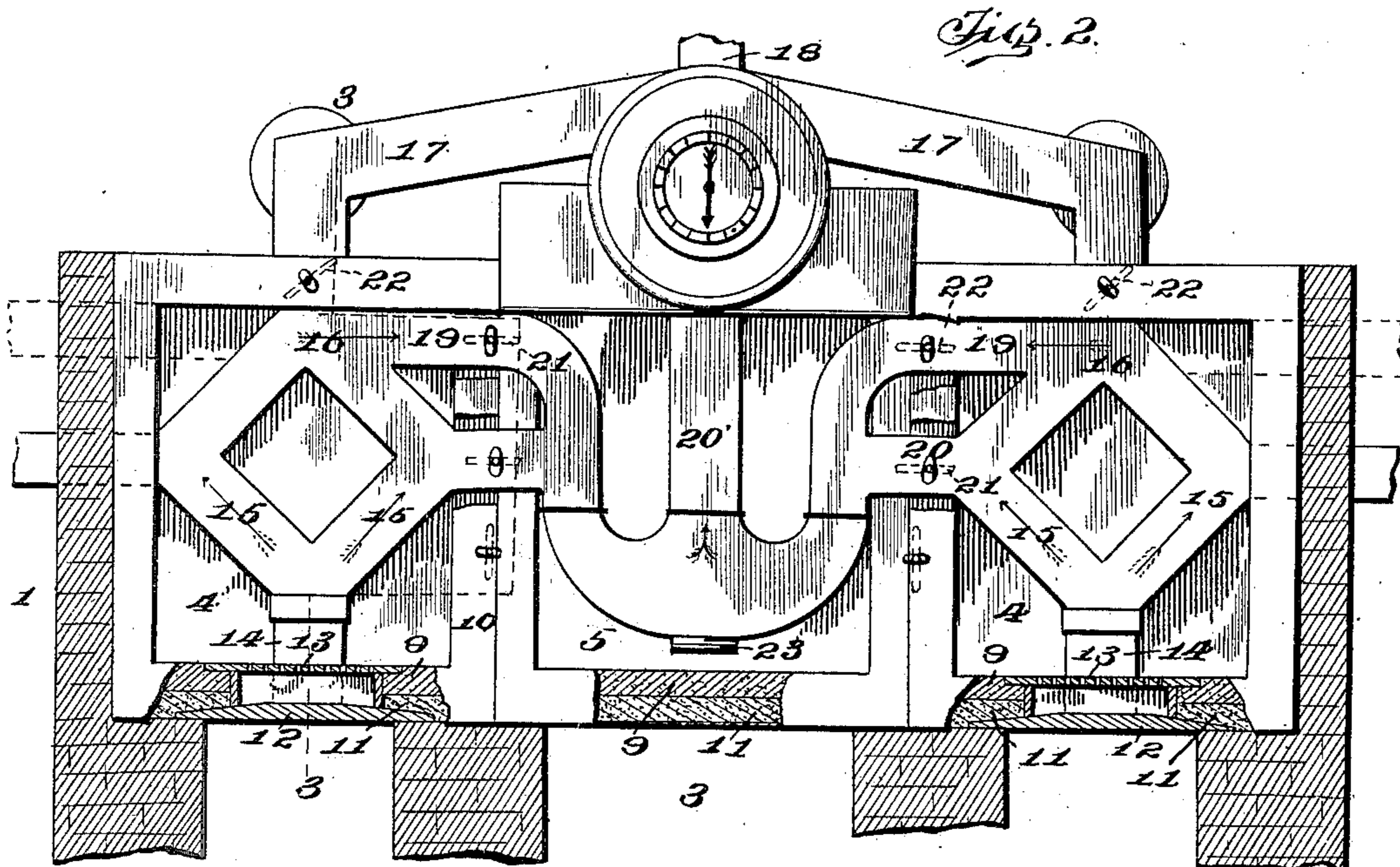
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UNITED STATES PATENT OFFICE.

JOHN NESTOR, OF TACOMA, WASHINGTON.

PORTABLE BAKE-OVEN.

SPECIFICATION forming part of Letters Patent No. 704,660, dated July 15, 1902.

Application filed July 29, 1901. Serial No. 70,175. (No model.)

To all whom it may concern:

Be it known that I, JOHN NESTOR, a citizen of the United States, residing at Tacoma, in the county of Pierce and State of Washington, have invented new and useful Improvements in Portable Bake-Ovens, of which the following is a specification.

The invention relates to improvements in ovens, and more particularly to a heating system for the baking-compartments thereof.

It consists, in combination with suitable supports, of a series of baking-compartments, fire-boxes beneath some of said compartments, means for conducting heat from one of said compartments to another, and means for preventing such communication.

It also consists of certain other novel constructions, combinations, and arrangements of parts, as will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 represents a view in front elevation of an oven embodying the features of the present invention. Fig. 2 represents a view in elevation of the rear of the same, the supporting brick structure being cut away to disclose the arrangement of the interior. Fig. 3 represents a vertical section taken on the plane of line 3 3 of Fig. 2. Fig. 4 represents a horizontal section on the plane-line 4 4 of Fig. 3.

In the art to which the invention relates it has been found desirable to secure an oven capable of being heated in a minimum of time and at the same time to prevent waste of heat, and to attain these and other very desirable results I employ, as seen in the accompanying drawings, any suitable inclosing and supporting structure, as 1, formed with a suitable number of fire-boxes, as 2, and a warming-compartment 3, interposed between each two of said fire-boxes. The fire-boxes 2 may be provided with any suitable grates and constructed and arranged as preferred, each warming-compartment 3 being also of any desired form and receiving its heat from the fire-boxes through the side walls thereof. Above each fire-box 2 is arranged a baking-compartment, as 4, and above compartment 3 is another compartment 5, each compartment being formed with doors 6 and provided with any desired number of suitable horizontally-adjustable supporting-plates, as 7. The cover

of each of the compartments 4 and 5 consists of two plates, as 8 8, spaced one above the other and provided with a filling, as 9, preferably of sand. Around the edges and forming a part of the bottom of each compartment is a layer of brick, as 9, provided with a suitable metallic casing, as 10, inclosing a sand filling, as 11. Secured to the metallic casing 10 is a suitable lower, preferably imperforate, plate, as 12, and resting on top of the upper edge of said casing is a perforated plate 13, whereby the heat may readily pass from the fire-box 2 almost directly to the compartment above the same, and thereby facilitate the rapid heating thereof.

Each fire-box 2 is provided with a pipe, as 14, for conducting the products of combustion therefrom, said pipe rising in the rear of the respective compartment 4, being bifurcated and extending in divergent lines, as at 15 15, and again converging, as at 16, to an outlet-pipe 17, which in turn communicates with a common outlet 18, the combustion-conducting pipe thus forming a rhombus or diamond-shaped figure within the oven 4. At the upper point of the diamond a pipe, as 19, leads into compartment 5, a second pipe, as 20, leading from the central corner into oven 5 and communicating with pipe 19, said pipe extending downwardly to approximately the center of said compartment and converging with the corresponding pipe from the other compartment 4, the two forming a general outlet-pipe, as 20', rising upwardly in the oven and passing out the top thereof.

Any suitable form of dampers, as 21 21, are arranged within pipes 19 and 20, and similar dampers, as 22, are arranged within pipes 17.

At the junction of the two pipes 19 a suitable aperture is formed and closed with a cap, as 23, which cap is designed to be removed to facilitate removal of soot and any foreign substances.

A suitable wall separates each compartment 4 from its contiguous compartment 5, and an aperture is preferably formed therein and normally closed by a damper, as 24, preferably horizontally slidable and designed to be operated for opening said aperture to permit direct communication between compartment 4 and compartment 5, whereby the latter compartment may be heated in a minimum

of time when desired, and it will be noted that all of the above-mentioned dampers are preferably provided with suitable stems and handles extending to the front of the oven within easy reach of the operator.

When it is desired to employ only compartment 4, all the dampers 21 are closed, and when it is desired to heat compartment 5 all of said dampers are opened, or any preferred number may be opened to secure the proper degree of heat. When the dampers 21 are open for heating compartment 5, the dampers 22 are closed, but when dampers 21 are closed dampers 22 are opened, whereby in either case the products of combustion will escape through the pipe opened for them.

Any desired number of compartments 4 may be employed with a compartment 5 between each two thereof; but I have shown only one set of compartments, the same fully illustrating and involving all of the features of the present invention.

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

1. An oven, comprising in its construction baking-compartments, mounted above suitable fire-boxes, a baking-compartment interposed between the compartments above the fire-boxes, means for permitting communication of heat directly between all of said compartments, and means for conducting products of combustion from said fire-boxes through the interposed baking-compartment, substantially as described.

2. In an oven, the combination with a suitable support, forming a fire-box, of a baking-compartment mounted above the same, a pipe for conducting the products of combustion leading from the fire-box into the baking-compartment, bifurcated and extending in divergent lines, and then converging and being reunited, and extending beyond the baking-compartment, a second baking-compartment arranged at the side of the first-mentioned compartment, and means for leading the products of combustion from said pipe through said last-mentioned compartment for heating the same, substantially as described.

3. In an oven, the combination with a suitable support, forming fire-boxes, of baking-compartments mounted above said fire-boxes, a baking-compartment interposed therebetween, pipes leading from said fire-boxes for conducting the products of combustion, extending into said first-mentioned baking-compartments, and then extending into said second-mentioned baking-compartment and converging into a single pipe and extending outside the same, substantially as described.

4. In an oven, the combination with a suitable support forming fire-boxes, baking-compartments formed above said fire-boxes, a baking-compartment interposed therebe-

tween, a pipe leading from each of said fire-boxes into its respective baking-compartment, the said pipe continuing above said baking-compartment, a pipe leading from each of said combustion-directing pipes within the respective baking-compartments and into the interposed baking-compartment, and then extending beyond the same, dampers arranged in the pipes leading into said interposed baking-compartment, whereby the products of combustion may be directed through the pipes within the said interposed compartment or be prevented from passing therethrough, substantially as described.

5. In a baking-oven, the combination with a suitable support, and fire-boxes, of a baking-compartment arranged above each of the fire-boxes, a baking-compartment interposed therebetween, a pipe leading from each of said fire-boxes through its respective baking-compartment and beyond the same, for conducting the products of combustion, a damper arranged in said pipe, a pipe communicating with each of said combustion-conducting pipes below the damper thereof and leading into said interposed chamber, the last-mentioned pipes converging and extending outside said last-mentioned chamber, and a damper arranged in each of the said last-mentioned pipes, substantially as described.

6. In an oven, the combination with a suitable support and fire-boxes, of a warming-compartment arranged between said fire-boxes, a baking-compartment arranged above each of said fire-boxes, a combustion-conducting pipe leading from each of said fire-boxes to its respective baking-compartment, each of the said pipes being bifurcated and extending in diverging lines and again extending in converging lines and forming a single pipe leading outside its respective baking-compartment, whereby a rhombus or diamond-shaped structure is formed in the oven, a pipe extending laterally from the upper corner of each of said diamonds, a pipe extending laterally approximately from the central corner to each of said diamonds, the two pipes of each respective oven converging into a single pipe within the interposed oven and the two pipes formed thereby converged into a single pipe, said pipe leading outside the interposed oven, a damper arranged in the upper portion of the pipe of each of the first-mentioned baking-compartments above the diamond thereof, and a damper arranged in each of the laterally-extending pipes, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN NESTOR.

Witnesses:

JOHN F. LYON,
W. G. HELLAR.