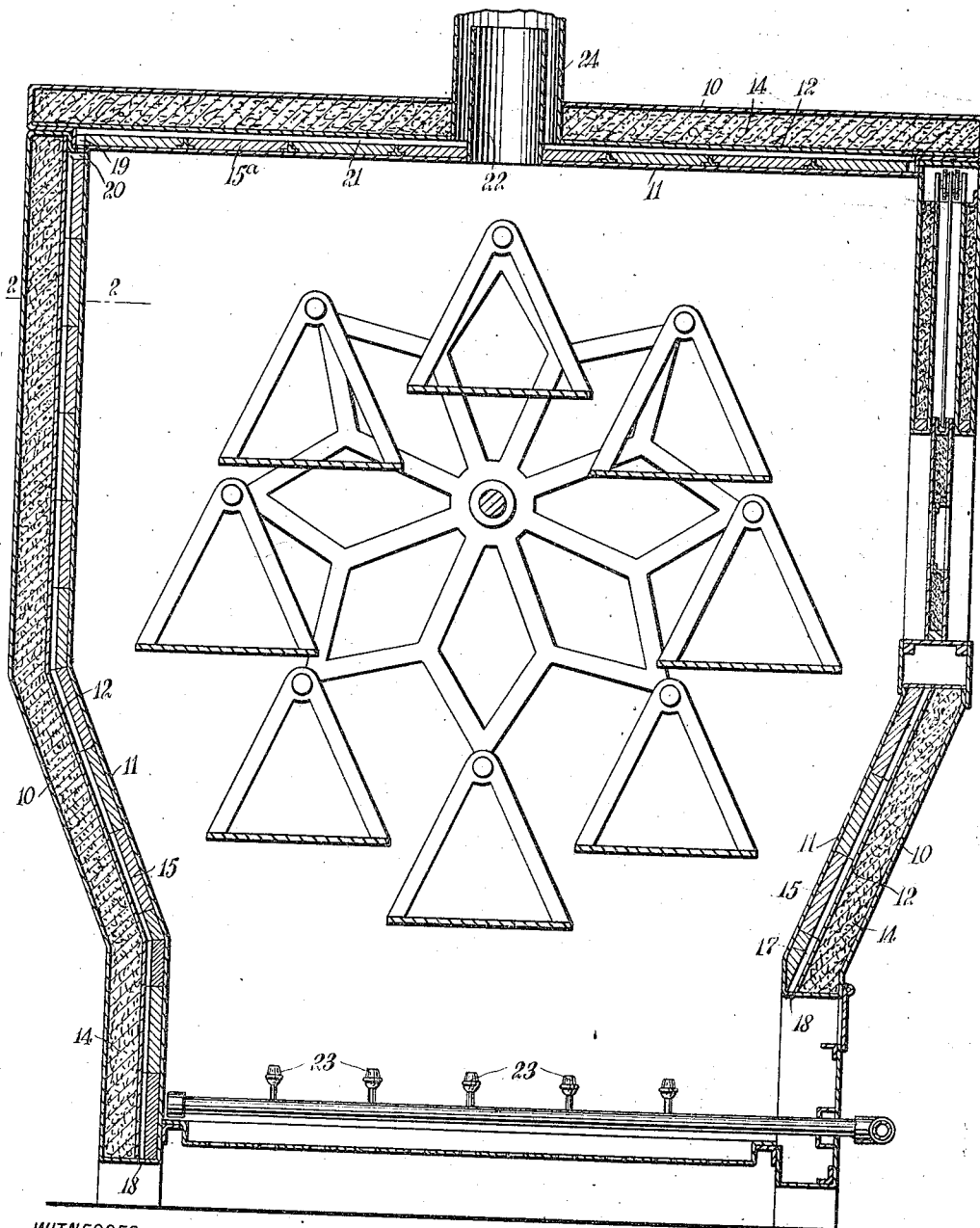


G. B. MEEK.
 PORTABLE REEL GAS OVEN.
 APPLICATION FILED JAN. 18, 1910.

961,512.

Patented June 14, 1910.

2 SHEETS—SHEET 1.



WITNESSES

J. H. Prophy

C. W. Fairbank

Fig 1

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George Beveridge Meek

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ATTORNEYS

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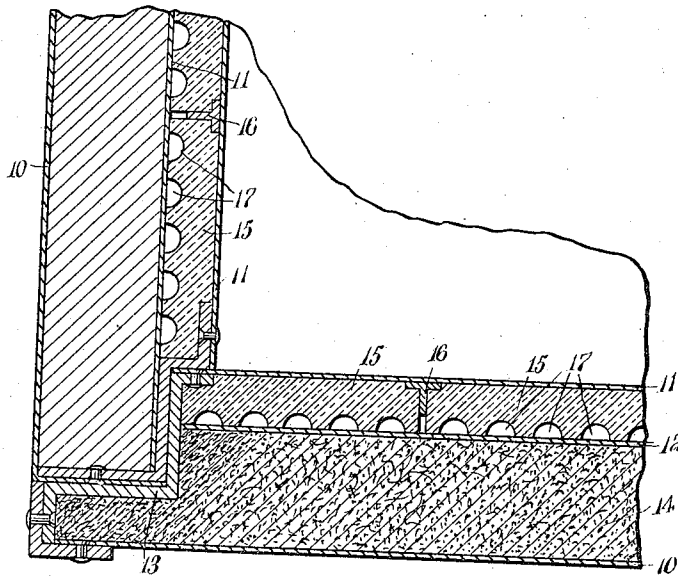


Fig. 2

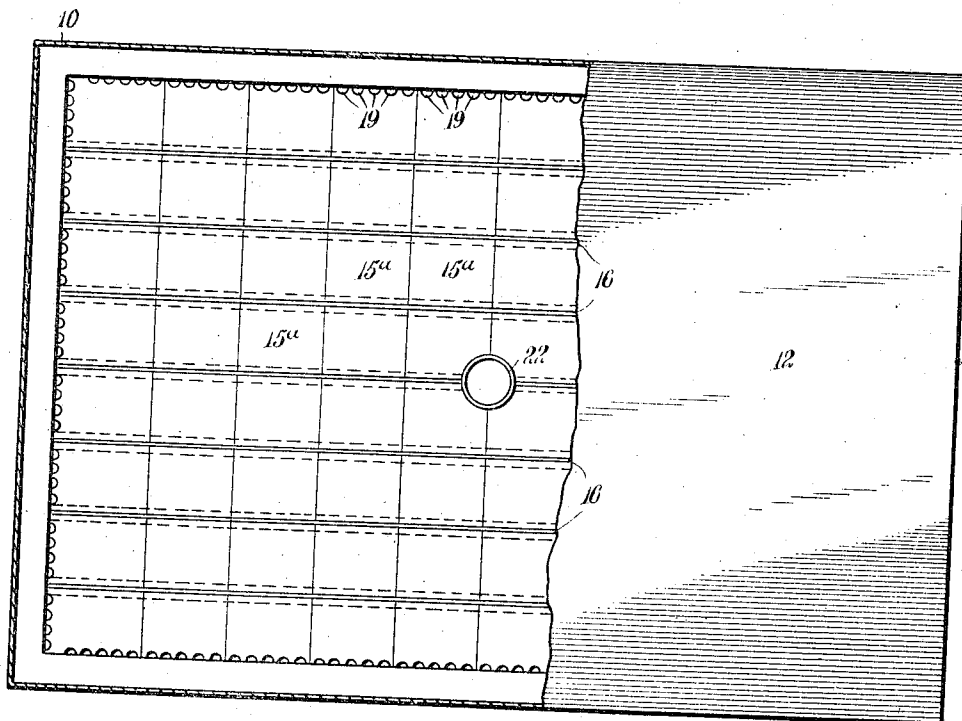


Fig. 3

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UNITED STATES PATENT OFFICE.

GEORGE BEVERIDGE MEEK, OF NEW YORK, N. Y.

PORTABLE-REEL GAS-OVEN.

961,512.

Specification of Letters Patent. Patented June 14, 1910.

Application filed January 18, 1910. Serial No. 538,607.

To all whom it may concern:

Be it known that I, GEORGE BEVERIDGE MEEK, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Portable-Reel Gas-Oven, of which the following is a full, clear, and exact description.

10 This invention relates to certain improvements in gas ovens, and more particularly to that type of oven illustrated in my previous Patent, Number 906,251, granted December 8, 1908.

15 In the oven shown in my previous patent, I make up the walls of separate sections detachably secured together, and within the oven are mounted suitable burners and a rotatable reel for supporting the food products to be baked. The wall sections may be readily separated, and the entire oven packed within a comparatively small space for shipment.

20 My present invention relates particularly to the wall structure of the oven, and this wall structure may or may not be applied to the oven illustrated in my previous patent. In my present construction, I form the walls with inward and outward chambers, and one of these chambers I fill with tile, each tile having one surface thereof so constructed as to facilitate circulation of air.

25 One embodiment of my invention will be hereinafter described and the scope of the invention defined in the claims.

30 Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures, and in which—

35 Figure 1 is a vertical section through an oven constructed in accordance with my invention; Fig. 2 is a horizontal section through one corner thereof and taken for instance on the line 2—2 of Fig. 1; and Fig. 3 is a top plan view of the top section or wall of the oven, a portion thereof being broken away.

40 In the oven illustrated, I form each wall of a separate section, and detachably connect these sections together and to the section forming the top wall. The specific means illustrated particularly in Fig. 2, for connecting together the sections at the corners, is not important and may be varied without departing from the spirit of my

invention. It is only essential that the joints be formed as nearly gas tight as possible, and that they permit of the assembling of the sections after they are separately shipped from the manufacturer to the user. Each wall is formed of three separate layers or sheets of metal, namely, an outer sheet 10, and inner sheet 11, and an intermediate sheet 12. These sheets are spaced apart, so as to leave two separate chambers therebetween; one an inner compartment and the other an outer compartment. At the edges of the sections, the separate sheets or layers are held rigid in respect to each other by being riveted or bolted to suitable edge walls 13, the edge walls being so formed as to facilitate the putting together of the sections at the corners.

75 To prevent the transmission of heat through the walls, I fill the outer compartment with a packing of non-combustible, non-conducting fibrous material 14, which is preferably asbestos fiber, and fill the inner chamber with a plurality of separate tiles or bricks 15, of fire-clay or other refractory material. These tiles are formed of such thickness, that they engage with the walls 11 and 12, and are prevented from movement by said walls. For pressing and reinforcing inner wall 11, and for preventing any lateral movement of the tiles, I provide a plurality of vertically-extending tees 16, each having the cross member or top thereof in engagement with and secured to the wall 11, and having the leg member extending toward the wall 12. The tiles may be cut away or so formed at their edges as to engage with the sides of these tees. The tees form guides or channels between which the tiles may be vertically slipped into place. Each tile in the face thereof toward the wall 12 is provided with a plurality of parallel grooves, channels or corrugations 17, which constitute vertical air passages for the side walls. The corrugations in one tile register at their ends with the corrugations or air passages in the tiles above and below, so that a plurality of continuous air passages extend vertically from the lower edge of each side wall to the upper edge thereof. At the lower edge, each passage registers with a corresponding opening 18 in the sheet metal forming the lower edge of the wall, so that air may freely enter the lower ends of the passages.

The top wall is constructed in substantially the same manner as the bottom wall, except that tiles 15^a are employed, which are spaced from the intermediate wall 12, and the upper surfaces of said tiles 15^a are smooth. Thus the air may circulate in any horizontal direction between the upper surfaces of these tiles and the wall 12 thereabove. The marginal rows of tiles in the top are each provided with vertical passages 19 in their edges, which register with openings 20, in the upper edge of the side walls, and these last-mentioned openings register with the air passages in said side walls. Thus the air entering through the openings 18, may pass upwardly through the passages 17 and through the ports or openings 20 and 19, to the air chamber or space 21 above the tiles 15^a.

In the top wall is a gas outlet conduit 22, leading from the interior of the oven and permitting of an escape of the gases of combustion from the burners 23. The conduit 22 closely fits the inner wall 11, and the adjacent tiles are cut to fit closely around said conduit. Concentric with the conduit 22, is a second conduit 24, slightly larger than the conduit 22, so as to leave an annular space therebetween, and this conduit 24 passes through the outer wall 10, the asbestos filling 14, and the intermediate wall 12, so that said annular space communicates with the chamber 21. The conduit 24 extends to any suitable chimney or other point of disposal for the gases, while the conduit 22 preferably terminates a short distance within this conduit, so as to constitute an ejector nozzle for drawing gas up through the annular passage outside of the conduit 22. The ejector serves to create a continuous circulation of air through the passages in the walls and to prevent the outer surfaces of the oven walls from becoming excessively heated. Thus workmen may easily remain and work in the same room in which the oven is located, as the air circulation in the oven walls prevents the transfer of heat to the outer surfaces of the oven walls, and thus prevents the air of the room from becoming heated to an objectionable degree. The corrugations in the walls of the tiles not only serve to form air passages, but serve to space the walls and form a minimum amount of direct connection from the inner wall to the outer.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. An oven having the sides thereof formed of an inner sheet metal wall, an outer sheet metal wall, an intermediate sheet metal partition forming with the inner and

the outer walls, two separate compartments, a packing of insulating material within one of said compartments, and a plurality of tiles or bricks filling the other of said compartments, and each having a plurality of corrugations or grooves in the face thereof to constitute vertical air passages communicating with the atmosphere at their upper and lower ends.

2. An oven having the sides thereof formed of separate sections detachably connected together, each section having a vertically-disposed partition intermediate the inner and outer surfaces thereof and subdividing the wall into separate compartments, a filling of insulating material within one of said compartments, a plurality of tiles fitted within the other of said compartments, to fill the same, each of said tiles having air passages communicating with the outside atmosphere at their lower ends, and a top wall having two separate compartments or chambers, a filling of asbestos in one of said chambers, and a layer of tile within the other of said chambers and spaced from said partition to form an air chamber communicating with said air passages.

3. An oven having the sides thereof formed of an inner sheet metal wall, an outer sheet metal wall, an intermediate sheet metal partition forming with the inner and outer walls two compartments, insulating material filling the outer of said compartments, a plurality of reinforcing members for the inner wall and disposed within the inner compartment, and a plurality of tiles or bricks within the inner compartment and held against lateral displacement by said reinforcing means each of said tiles or bricks having an air passage extending across one surface thereof.

4. An oven having the sides thereof formed of separate sections detachably connected together, each section having oppositely-disposed walls and a partition between said walls and forming therewith two compartments, a filling material within one of said compartments, a plurality of T-irons within the other of said compartments and reinforcing the adjacent wall of the section, and a plurality of tiles or bricks within said last-mentioned compartment and held in place between said T-irons each of said tiles or bricks having an air passage extending across one surface thereof.

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

GEORGE BEVERIDGE MEEK.

Witnesses:

DAVID R. MEEK,
PAUL J. DELANEY.