H. C. MAUL.

GAS STOVE OVEN BOTTOM.

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1,079,356.

Patented Nov. 25, 1913.

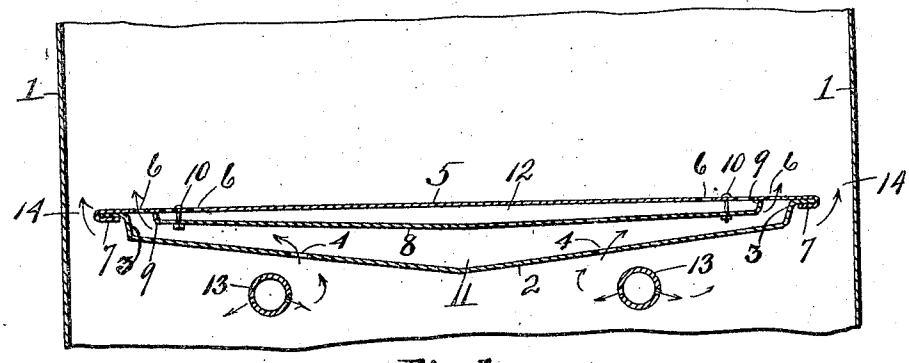


Fig. 1.

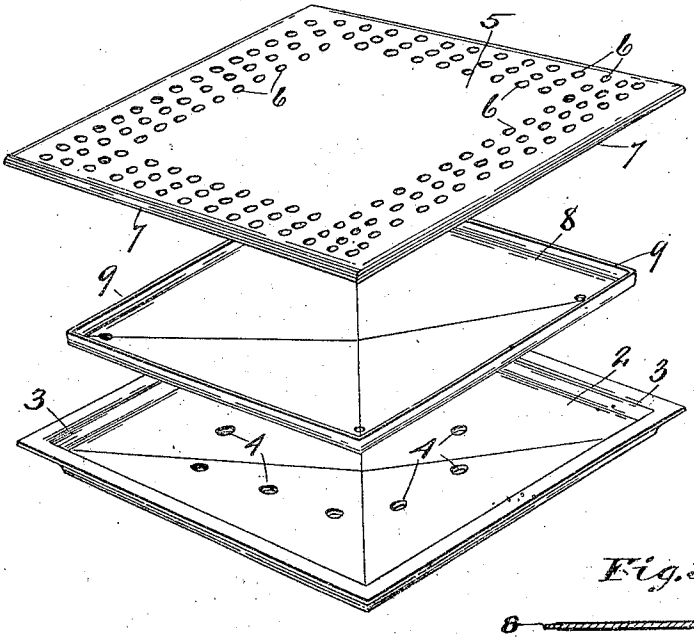


Fig. 3.

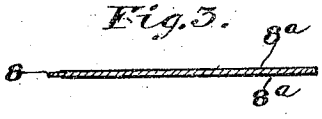


Fig. 2.

Witnesses

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UNITED STATES PATENT OFFICE.

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GAS-STOVE-OVEN BOTTOM.

1,079,356. Specification of Letters Patent. Patented Nov. 25, 1913.

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To all whom it may concern:

Be it known that I, HENRY C. MAUL, a citizen of the United States, residing at Detroit, in the county of Wayne, State of Michigan, have invented certain new and useful Improvements in Gas-Stove-Oven Bottoms; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

The invention relates to a gas stove oven bottom, and consists in the construction and arrangement of parts hereinafter more fully set forth and pointed out in the claims.

The object of the invention is to provide an oven bottom of comparatively simple and inexpensive construction wherein the arrangement is such as to prevent excessive heat at the center of said bottom from the burners which are disposed below the under side thereof, and at the same time to provide for an even distribution of heat or of the products of combustion throughout the entire oven space whereby baking may be evenly and perfectly done.

The above object is attained by the structure illustrated in the accompanying drawings, in which:—

Figure 1 is a fragmentary view in section showing my improved oven bottom in position in the oven of a gas stove. Fig. 2 is a segregated view in perspective of the component parts of the oven bottom. Fig. 3 is a fragmentary view in section through a portion of the middle plate.

Referring to the characters of reference, 1 designates the walls of a gas stove oven. Disposed within said oven is my improved oven bottom, the lower plate 2 of which has a raised marginal flange 3, and is provided with a plurality of apertures 4 therethrough. The upper plate 5 of the oven bottom comprises a sheet of metal having a number of rows of perforations 6 along the margins thereof, and having turned edges 7 which embrace the lateral extensions of the flange 3 of the lower plate, as shown in Fig. 1, thereby joining said plates at their margins. Said upper and lower plates are formed of black sheet metal. Interposed between the upper and lower plates of the oven bottom is a third plate 8 of sheet metal, having a raised marginal flange 9 which spaces it from the under face of the upper plate 5 to which it is connected by the bolts 10, or in any other suitable manner. The lower plate 2 and the intermediate plate 8 are slightly dished so that the air spaces 11 and 12 between the lower and middle plate, and between the middle plate and the upper plate, respectively, are of slightly greater depth at the center and taper gradually toward the margins to effect an equal distribution of the hot gases.

Below the lower plate of the oven bottom are suitable gas burners 13, the hot gases from which on the outside pass along the under surface of the bottom plate and into the baking chamber through the spaces 14 between the wall of the oven and the margin of the oven bottom, while the hot gases between the burners pass through the openings 4 into the space or chamber 11 between the lower and middle plates, and thence into the baking chamber through the outer row of the apertures 6 in the upper plate 5.

A serious objection to gas over bottoms as heretofore constructed is the tendency to become excessively heated at the center, resulting in uneven baking and the burning on the bottom of articles disposed over the center of the oven. To prevent the presence of excessive heat at the center of the oven bottom I provide the middle or interposed plate 8 on both sides thereof with a coating of aluminum 8^a, as shown in Fig. 3. By this arrangement the middle sheet or plate becomes an interposed reflector for the radiant energy from the burners, preventing an excessive radiation of heat through the central portion of the oven bottom and turning it back or directing it laterally through the marginal openings 6 in the upper plate through which it passes into the baking chamber. By preventing an excessive radiation of heat through the central portion of the oven bottom the heat in the baking chamber becomes more evenly diffused, enabling better results to be obtained in baking. The space 12 between the upper face of the reflector plate and the upper plate 5 of the oven bottom assists in retarding the passage of the radiant energy from the burners and in preventing the overheating of the oven bottom at the center. The inner rows of apertures 6 through the upper plate afford

passages for the passage of the hot air between the chamber 12 and the oven.

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

1. An oven bottom comprising a lower plate, an upper plate, a middle plate interposed between and so disposed with respect to said upper and lower plates as to form an air space above and below said middle plate, said upper plate having perforations communicating with the space below the middle plate and having other perforations communicating with the space above said middle plate.

2. An oven bottom comprising a lower plate, an upper plate, and an interposed middle plate spaced from said lower plate and having a marginal flange engaging the under side of the upper plate to afford an air space between the middle and upper plates, said bottom plate having an opening for the passage of the products of combustion to the space between it and the middle plate and the upper plate having an opening to allow of the passage of the products of combustion from said space below the middle plate into the baking chamber.

In testimony whereof, I sign this specification in the presence of two witnesses.

HENRY C. MAUL.

Witnesses:
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M. E. BROESAMLE.