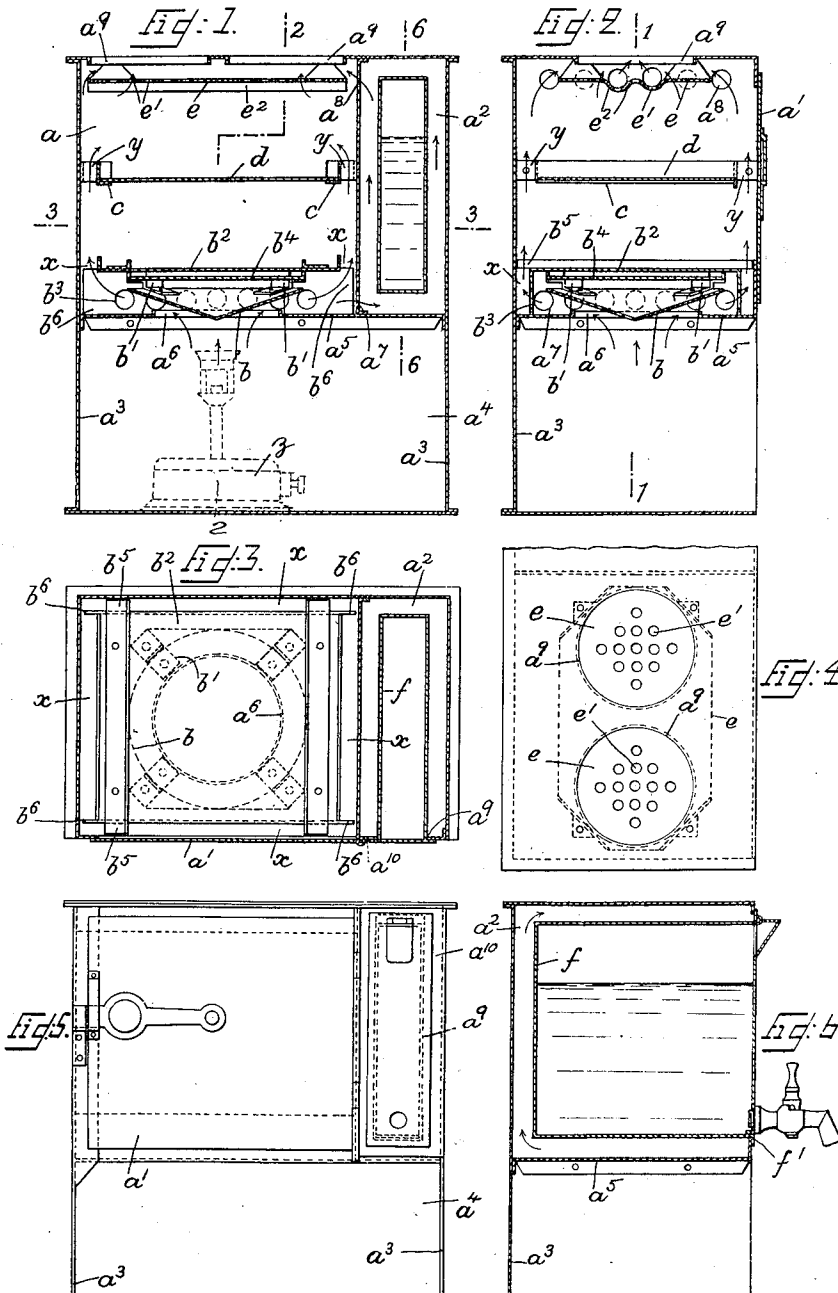


J. A. F. GLOVER.
GAS AND LIKE COOKING OVEN.
APPLICATION FILED JUNE 20, 1910.

993,241.

Patented May 23, 1911.



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UNITED STATES PATENT OFFICE.

JOSEPH ARTHUR FORD GLOVER, OF WANDSWORTH, ENGLAND.

GAS AND LIKE COOKING-OVEN.

993,241.

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To all whom it may concern:

Be it known that I, JOSEPH ARTHUR FORD GLOVER, a subject of the King of Great Britain and Ireland, and a resident of Wandsworth, Surrey, England, have invented certain new and useful Improvements in Gas and Like Cooking-Ovens; and I do hereby declare the following to be a full, clear, and exact description of the same.

10 This invention relates to improvements in portable ovens for cooking or heating articles with the aid of gas or oil burners, and has for its objects to obtain a better distribution and circulation of the heat within
15 the oven, and to adapt the part on which the flames impinge to last longer, while also enabling saucepans and pots or the like to be advantageously heated.

The invention is represented in the accompanying drawings, in which:—

Figure 1 is a sectional elevation of the oven on the line, 1—1, Fig. 2; Fig. 2 is a sectional elevation on the line 2—2, Fig. 1; Fig. 3 is a sectional plan on the line 3—3, Fig. 1; Fig. 4 is a plan of Fig. 2; Fig. 5 is a front elevation; and Fig. 6 is a sectional elevation on the line, 6—6, Fig. 1.

The apparatus comprises an oven proper, *a*, having a door, *a*¹, and supported on legs or walls, *a*³, arranged so as to form or leave a receptacle or space, *a*⁴, for receiving a gas or oil stove, such as *z*, for example, shown in dotted lines.

According to the invention, the oven bottom, *a*⁵, is formed with an opening, *a*⁶, for the flames or heated gases direct from the lamp or burner, placed thereunder, to pass through. An inverted deflecting cone, *b*, is supported a short distance above the opening to evenly distribute the heat to all four sides of the oven, the flames or heated gases impinging on the inclined sides of the cone. The opening, *a*⁶, also serves for the entrance of air which becomes heated by the flames and the hot cone in passing through the annular inlet formed between the edge of the opening, *a*⁶, and the wall of the cone. The cone is supported preferably by legs or distance pieces, *b*¹, a short distance below a false bottom, *b*², so as to leave an insulating air space between the cone and the false bottom. The false bottom is preferably removable, to permit of its being readily taken

out and renewed, and has legs, *b*³, shown as perforated plates, resting on the oven bottom, *a*⁵.

*b*⁴ is a shield arranged between the cone and the false bottom, to leave a secondary air space beneath the false bottom and to aid in equalizing the temperature of the latter. The false bottom serves as a bottom proper to the oven for dishes or other articles to rest on. The distance pieces *b*¹, are attached at their tops to the shield *b*⁴ by rivets which also serve to attach shield *b*⁴ to the false bottom *b*². The false bottom is of such dimensions as to leave a space, *x*, all around between its four sides and the four walls of the oven, to enable the heated gases to rise at the four sides. The false bottom is kept central by suitable means, for example, by bars, *b*⁵, and projections, *b*⁶.

c represents ledges for supporting a tray, *d*, for heating or cooking things in the upper part of the oven. The ledges and trays are arranged so as to leave a space, *y*, at the four sides, to enable the heated gases to rise.

At a short distance from the top of the oven is provided a reflecting plate, *e*, for reflecting the rising heat toward the central part of the oven. The plate, *e*, also serves as a support for kettles, saucepans, or the like, placed through openings, *a*⁹, in the oven-top. The plate is perforated, as at *e*¹, and is formed with depending corrugations, as at *e*², to enable the heated gases to freely circulate under the bottom of the saucepans or the like. The heated gases can also circulate around the bottom parts of the saucepans or the like. The plate, *e*, is of such dimensions as to enable the heated gases to finally escape at the sides to the openings, *a*⁹.

*a*² is a secondary chamber provided at the side of the oven, *a*, the separating wall being provided with apertures, *a*⁷, at the bottom for part of the heated gases deflected by the cone, *b*, to pass through into the chamber, *a*², and with apertures, *a*⁸, at the top for the heated gases to escape through to the openings, *a*⁹. The chamber, *a*², is adapted to receive a removable water-tank, *f*, around which the heated gases freely circulate. The tank fits into a recess, *a*⁹, in a front plate, *a*¹⁰, and is secured in position by a notch, *f*¹, engaging the front plate.

The various arrows in the drawings illus-

trate diagrammatically how the heated gases circulate within the oven and secondary chamber.

5 The invention is of advantage in that the articles being cooked or heated are on all sides subjected to the heat from the uprising heated gases, and the heat being reflected at the upper part of the oven the temperature is practically even at all parts thereof.
10 Further, since the flames and heated gases are deflected immediately they impinge against the inclined sides of the cone, the latter lasts longer than ovens having flat bottoms against which the flames of a lamp or burner impinge. The invention is also
15 of advantage in that the corrugations in conjunction with the perforations in the plate *e*, enable the latter to serve the twofold purpose of reflecting the heat toward the
20 central part of the oven, and of supporting saucepans, or the like, while allowing the heated gases to freely circulate under and around the bottom parts thereof. The invention is further of advantage in that owing
25 to the effective distribution of the heat a smaller oil burner or gas ring may be em-

ployed than customary, whereby a saving in fuel is obtained.

What I claim as my invention and desire to secure by Letters Patent is:—

30 An oven for cooking or heating articles, constructed with an opening in the bottom adapted to receive heated air and products of combustion and an opening in the top, and having a short distance above the bot-
35 tom opening a suitably supported inverted deflecting cone, and a short distance below the top opening a suitably supported plate provided with corrugations and perfora-
40 tions, the plate being adapted to serve the twofold purpose of reflecting the rising heat toward the central part of the oven and of supporting a receptacle when placed
45 through the top opening, substantially as described.

In testimony whereof I affix my signature, in presence of two subscribing witnesses.

JOSEPH ARTHUR FORD GLOVER.

Witnesses:

ALFRED DAY,

ARTHUR WALTER DAY.