(No Model.)

S. J. McDOWELL.

PORTABLE COOKING APPARATUS.

No. 428,569. Patented May 20, 1890.

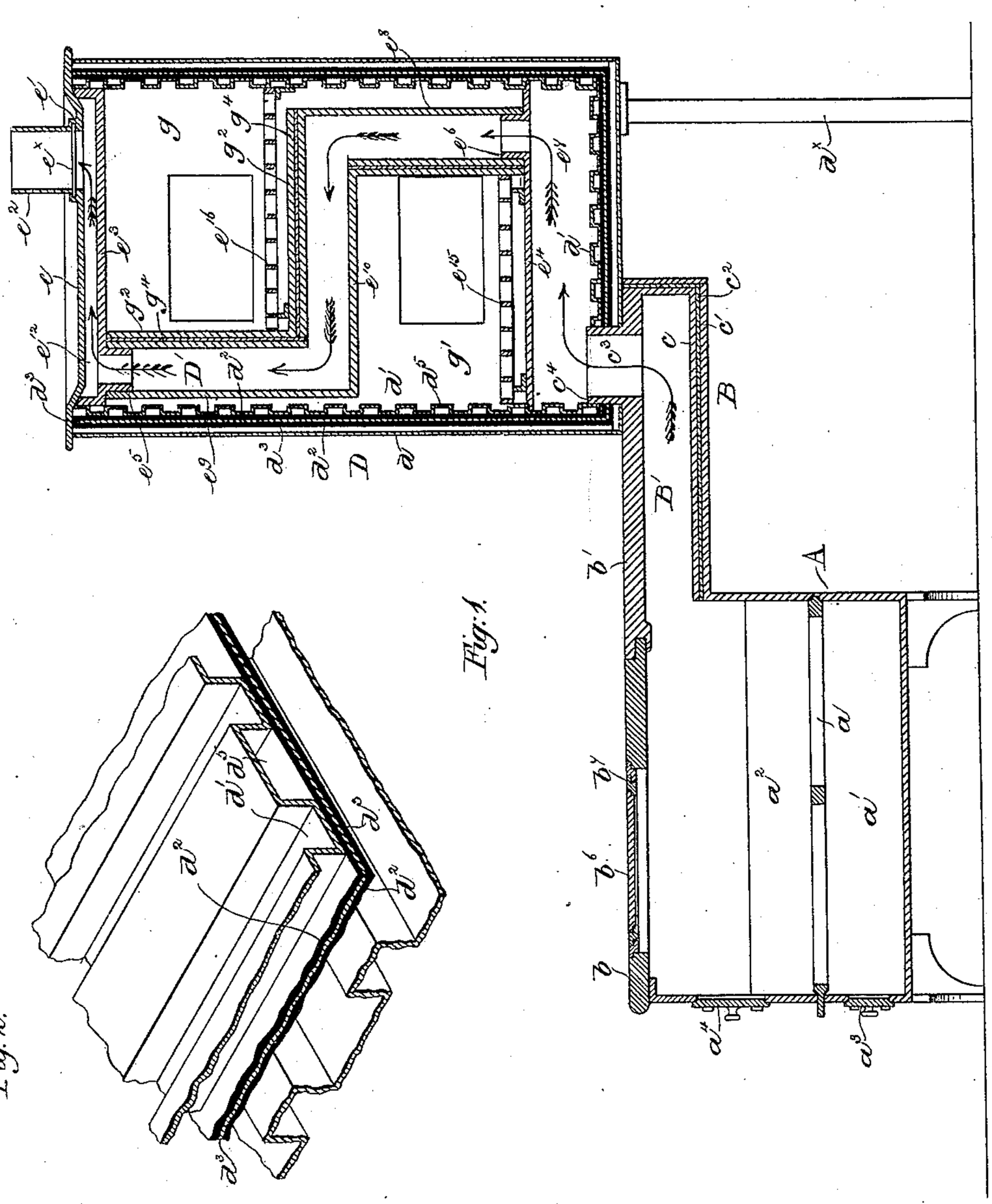

Fig. 1.

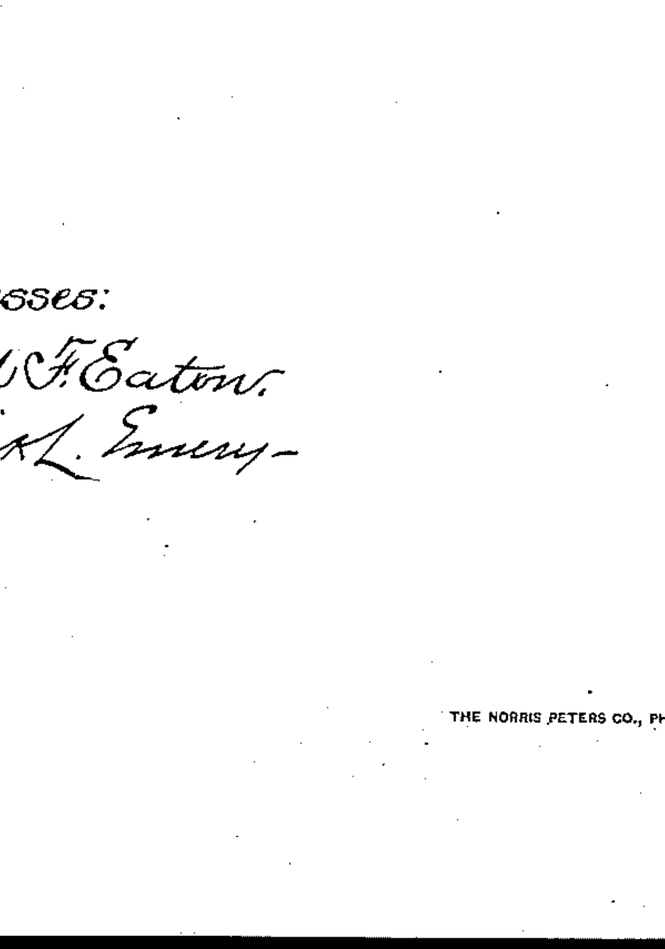

Fig. 2.

Witnesses:
Howard F. Eaton.
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UNITED STATES PATENT OFFICE.

SAMUEL J. McDOWELL, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO WILLARD O. ARMES, OF SAME PLACE.

PORTABLE COOKING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 428,569, dated May 20, 1890.

Application filed November 11, 1887. Serial No. 254,915. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL J. McDOWELL, of Boston, county of Suffolk, and State of Massachusetts, have invented an Improvement in Portable Cooking Apparatus, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

In another application, Serial No. 238,104, filed May 13, 1887, I have shown and described a portable cooking apparatus comprising a roasting-oven, a steaming section or boiler, and a casing containing two ovens provided with a flue arranged in said oven, so that the products of combustion will pass around them on the way to the chimney.

This present invention relates to the construction of the casing containing the said ovens, it being herein shown as connected to a fire chamber or stove.

The particular features in which my invention consists will be pointed out in the claims at the end of this specification.

Figure 1 shows a vertical section of a cooking apparatus embodying my invention, and Fig. 2 a detail to be referred to.

The stove A may be of any desired construction, it being shown as divided by the grate a to form an ash-pit a' below and a fire space or chamber a^2 above the said grate, the said ash-pit and fire-space having suitable doors a^3 a^4, respectively.

The top of the stove is shown as made in two sections b b', of fire-brick, soapstone, or other refractory material, the said sections being shown as "halved in" or "rabbeted" and supported by the ends and sides of the stove, the section b having an opening for the kettles and pots, the said opening being herein shown as closed by a cover b^6, fitted in removable rings b^7, the said rings permitting kettles of various sizes to be placed in the opening over the fire space or chamber a^2.

The stove A has extended from it a section B, which forms with the section b' a flue or passage B', the section B being made, as shown, of two metal sheets or plates c c', and an intervening layer c^2, of asbestus or other non-heat-conducting material, to prevent the radiation of heat from the lower side of the flue or passage B'. The section b' is shown as provided with an opening c^3, constituting an outlet for the passage or flue B', the said section having a collar c^4 around said opening and extended up into a casing D, herein shown as partially supported by the leg $d^\times$, the collar c^4 being shown integral with the section b'. The sides and bottom of the casing D are made of two plates or sections d d', and preferably two or more layers or sheets d^2 of asbestus or other non-heat-conducting material, and an intervening sheet or plate d^3 of metal, the plates or sections d d' being preferably corrugated, as shown in Fig. 2, the corrugations extended or lying substantially at right angles to one another, and forming chambers d^5 between them and the layers or sheets of asbestus, as clearly shown in Fig. 2, the sheets of asbestus being indicated by the full black lines in Fig. 1. In Fig. 1 the plate d' only is corrugated. The sides of the casing support a top plate e, provided with an opening encircled by a flange e', to which may be fitted the chimney-pipe e^2, (shown as integral with the flange e',) the said chimney having a slide-damper $e^\times$. Secured to the sides, or otherwise supported above the bottom of the casing, is a plate e^4, forming a passage e^7 below it, the said plate having an opening from which, as herein shown, is extended upward a flange e^6. The flange e^6 is embraced by the lower end of a vertical section e^8, joined by a horizontal section e^{10} to a vertical section e^9 of a pipe or flue D', the section e^9 being at the opposite side of the casing to the section e^8, the said pipe or flue dividing the casing into two baking-ovens g g'. The section e^9 embraces at its upper end a flange e^5 of a plate e^3, secured to the sides of the casing, the said plate forming with the top plate e a passage e^{12}, connecting the section e^9 with the chimney e^2. The bottom and left side of the oven g' is provided with plates g^2, between which and the plate and pipe section e^8 is interposed a layer g^4 of asbestus or other non-heat conductor. The bottom and right side of the oven g is also provided with plates g^2 and layer g^4 of asbestus. The bottom and left side of the oven g' and the bottom and right side of the oven g are more exposed to the direct action of the products of combustion passing through the

flue D′ than the upper sides of the said ovens, and ordinarily the said ovens would be unequally heated, it being hotter at the bottom than at the top of the said ovens.

The double thickness of plate and the layer of asbestus between serve to dampen or reduce the heat at the bottom part of the ovens, thus producing a substantially even temperature or uniform heat throughout the said ovens.

The products of combustion from the fire-space a^2 pass through the flue B′, passage e^7, and flue D′ into the passage e^{12}, from whence they pass into the chimney, the draft of the said chimney being controlled by the damper $e^{\times}$.

I have herein shown the casing D as divided into two ovens; but it is evident that the said casing may be enlarged and the pipe-sections extended to form three or more ovens.

Each oven is provided, as shown, with a grating e^{15} and door e^{16}.

I have herein shown the outlet c^3 as located at one side of the casing D and communicating therewith through the bottom; but it is evident that the said outlet may be connected through either side of the casing or near the center of the bottom of the said casing.

I claim—

1. In a cooking or heating apparatus, a casing D, composed of two corrugated sheets or plates $d\ d'$, and an intervening layer of non-heat-conducting material, the corrugations of one sheet or plate extending substantially at a right angle to the corrugations of the other, substantially as described.

2. In a cooking or heating apparatus, a casing D, composed of two corrugated sheets or plates $d\ d'$, two intervening layers of asbestus, and a sheet or plate between the layers of asbestus, the corrugations of one sheet or plate extending substantially at a right angle to the corrugations of the other, substantially as described.

3. The combination, in a cooking apparatus, of a casing D, composed of two corrugated sheets or plates $d\ d'$, the corrugations being at right angles to each other, and an intervening layer of non-heat-conducting material, with a stove A, having an extension B, composed of sheets or plates $c\ c'$, and an intervening layer c^2 of non-heat-conducting material, and a non-conducting top b', provided with an opening and surrounding collar, substantially as described.

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

SAMUEL J. McDOWELL.

Witnesses:

J. H. CHURCHILL,

B. DEWAR.