

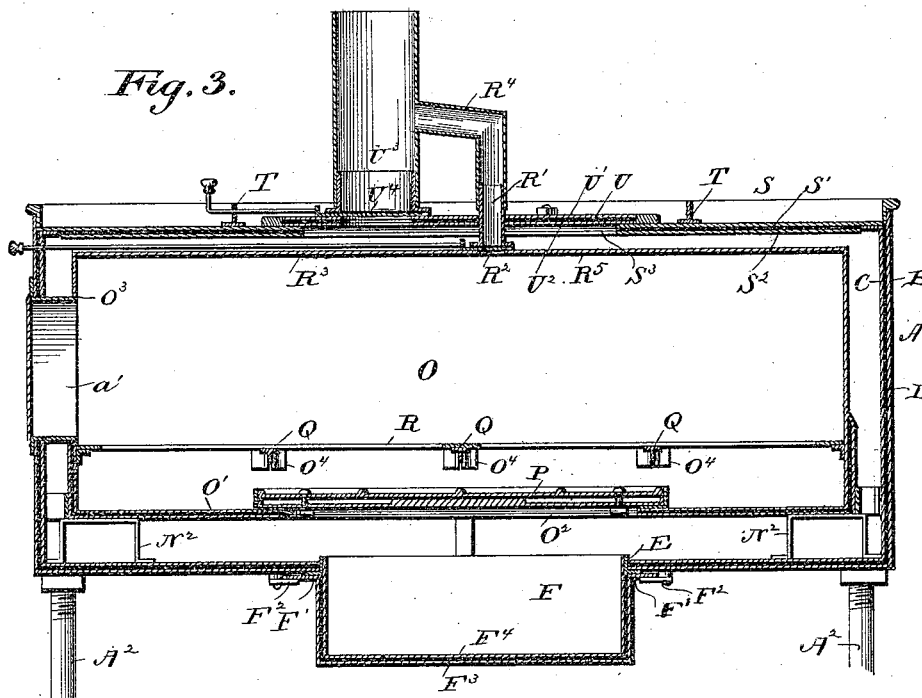
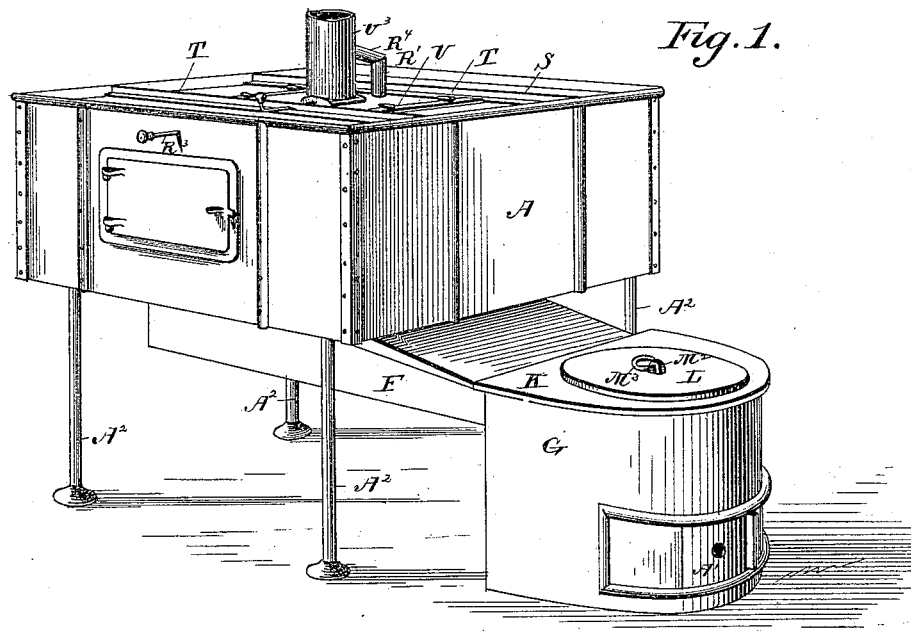
(No Model.)

2 Sheets—Sheet 1.

S. J. McDOWELL.
PORTABLE OVEN.

No. 346,763.

Patented Aug. 3, 1886.



WITNESSES

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J. Fred. Reilly.

INVENTOR

S. J. McDowell,
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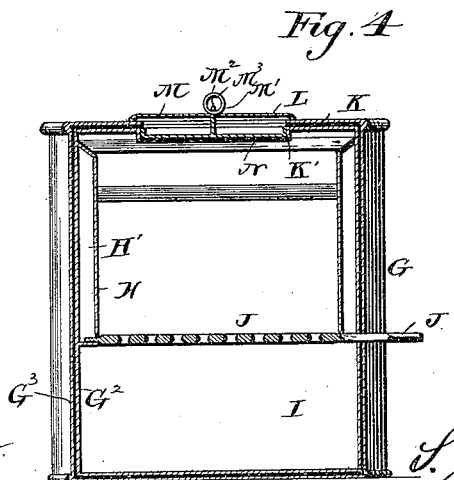
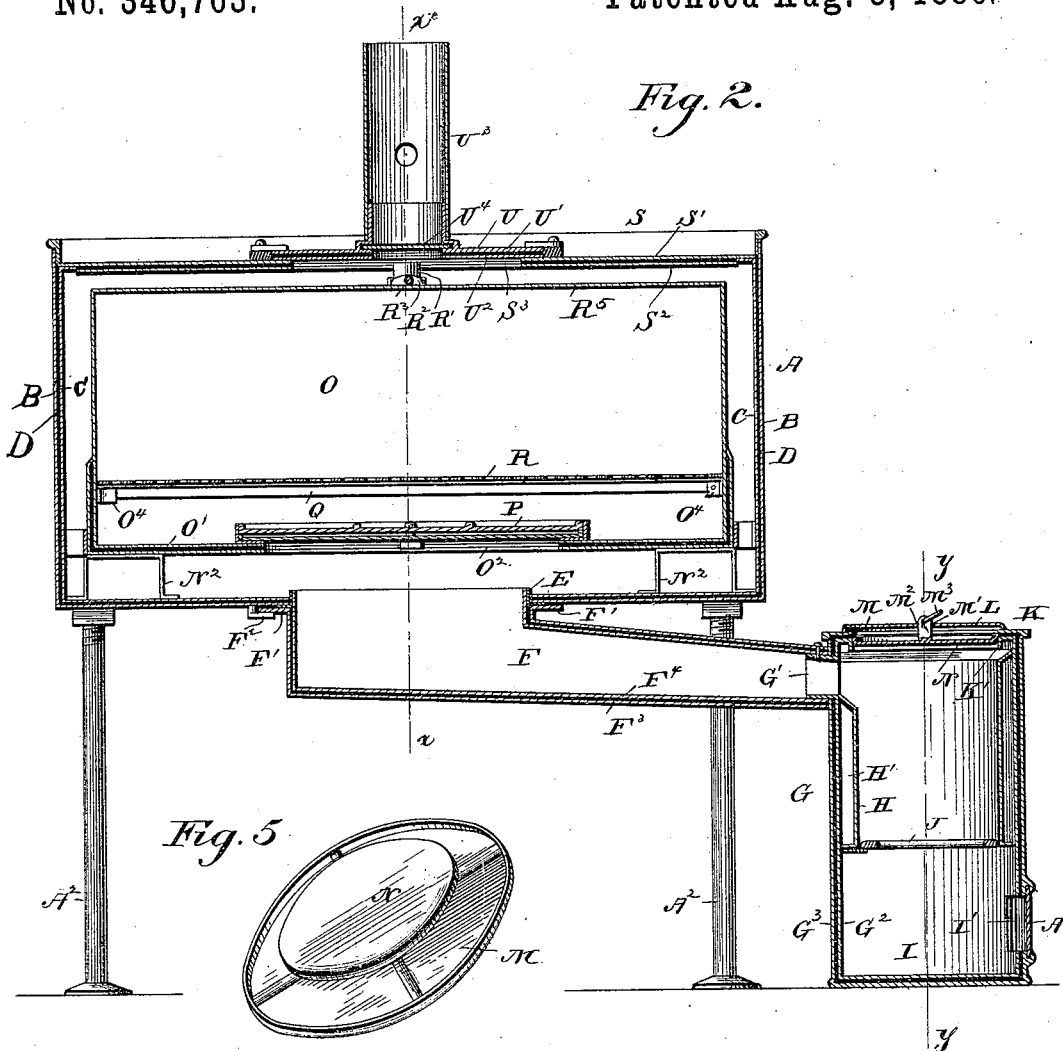
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UNITED STATES PATENT OFFICE.

SAMUEL JOHN McDOWELL, OF BOSTON, MASSACHUSETTS.

PORTABLE OVEN.

SPECIFICATION forming part of Letters Patent No. 346,763, dated August 3, 1886.

Application filed August 18, 1885. Serial No. 174,731. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL JOHN McDOWELL, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Portable Ovens; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

My invention relates to portable ovens; and it consists in the improved construction, arrangement, and combination of parts, which will be hereinafter fully described, and pointed out in the claims.

Referring to the annexed drawings, Figure 1 is a perspective view of my improved portable oven, showing my improved furnace connected thereto in operative position. Fig. 2 is a longitudinal vertical sectional view taken through the center of the oven and furnace. Fig. 3 is a transverse vertical sectional view taken on the plane indicated by line *x x* in Fig. 2 of the drawings. Fig. 4 is a transverse vertical sectional view taken through the furnace on the plane indicated by line *y y* in Fig. 2, and Fig. 5 is a perspective view showing the top or cover of the furnace detached and in an inverted position.

The same letters of reference indicate corresponding parts in all the figures.

Referring to the several parts by letter, A represents the outer casing of my improved oven, which is composed of an outer and an inner sheathing, B C, preferably of sheet-iron, between which a lining of asbestos, D, is interposed. The bottom of the said casing has a central opening, E, of considerable size, and within this central opening fits snugly the upwardly-extending end of the flue F, which is provided with the flange F', whereby it is secured in operative position to the bottom of the outer casing, as shown, by means of the turn-buttons F² F². The flue F is, like the outer casing, formed of double walls F³ F⁴, between which a lining of asbestos or other non-conducting material is interposed, the lower end of the said flue fitting over the large flat attaching-collar G' of the furnace G. This fur-

nace G is constructed with the inner and outer shell, G² G³, between which a lining of asbestos or other non-conducting material is interposed, the whole forming the casing of the furnace. In addition to this, the upper portion of the furnace, forming the fire-box, has an inner shell, H, between which and the inner lining, G², is a space, H', which is packed with ashes, plaster, or other suitable non-conducting material.

The furnace shown in the drawings hereto annexed is semi-cylindrical in form, although it may be stated that this particular shape is no part of the invention. This shape, however, is found very convenient, and it admits of the use of a very large flat flue, as shown.

I indicates the ash-pit of the furnace, access to which may be had through the doors I'; and J indicates the grate, which is mounted pivotally and provided with a shank, J', to receive a wrench by means of which the grate may be turned.

K represents the top of the furnace, which has an opening, K', for which a cover, L, is provided. This cover consists of a plate, M, ribbed on the under side, and having a central opening, M', through which passes a shank, M², the upper end of which has a handle, M³, and to the lower end of which is attached an additional cover-plate, N, of a less diameter than the upper plate, M, and adapted to fit within the opening K'. By this arrangement a space is left between the two plates, which prevents the center of the upper plate from becoming overheated, and enables the said plate to be used as a muffin-plate, &c.

The front end of the outer casing of the oven has a suitable door, A', affording access to the interior, and the outer casing is preferably supported upon suitable detachable legs, A². The bottom of the outer casing, A, is provided on its inner side with the supports N², on which rest the inner casing, O, the bottom and lower portion of the sides of the inner casing being made double and provided with an interposed lining of asbestos or other non-conducting material, as shown. The central portion of the bottom O' of the inner casing, or the area which comes above the flue-opening in the bottom of the outer casing, has a flanged opening, O², on which rests the double ribbed

plate P, composed of two cast-iron ribbed plates bolted together, with an air-space between them, the object of this arrangement being that when the said plates are placed in operative position immediately over the point where the most intense heat enters the oven the under plate will become very hot, but the upper plate (on account of the air-space between the two plates) will remain comparatively cool, this construction preventing the plate from warping or springing up, as is the case where a single plate is employed. The front end of the inner casing, O, has a door-opening, O³, registering with the door-opening of the outer casing, A, the said opening of the outer casing being provided with the inwardly-projecting flange a', which extends to such a length that its inner edge, f, comes in close contact with the outer edge of the door-opening of the inner casing, thus preventing the smoke and gas from the furnace from entering the inner casing through the said opening, through which the bread, &c., are placed in and removed from the oven. The inside of the inner casing, O, is provided near its bottom with the brackets O⁴ O⁴, formed each of two L-shaped pieces secured to the inner side of the casing O in such a manner as to leave a vertical space between their projecting free ends, adapted to receive the ends of and support the transverse T-shaped bars Q Q, which support the racks or gratings R R, which form the removable bottom of the oven. The top of the inner casing, O, is closed by a cover, R, which is provided with a central upwardly-extending flue, R', controlled by a damper, R², the operating-rod of which, R³, extends through a suitable aperture in the front wall of the outer casing, so that it may be readily reached and manipulated, for the purpose of regulating the heat in the interior of the oven—that is to say, in the inner casing. The outer casing, A, is provided with a cover or top plate, S, which fits closely thereon, and is made with double walls S' S², between which a lining of asbestos or other non-conducting material is interposed, the upper side of the said cover being provided with the transverse strengthening and anti-warping ribs T. The center of this cover S is provided with an opening, S³, of considerable size, which is closed by a removable center plate, U, also constructed with double walls

U' U², between which a lining of non-conducting material is interposed, the said plate having a flue, U³, controlled by a damper, U⁴, and connected by an elbow, R⁴, with the flue R'. The latter, as before stated, is simply for the purpose of regulating the heat in the interior of the oven—that is to say, in the inner casing, from which it leads—the damper R² being opened partially or wholly to permit a portion of the heat in the inner casing to escape when desired, while the damper U⁴ merely regulates the draft.

Although I have described my invention in the foregoing specification in connection with a double-walled furnace, and also a double-walled oven having an inner and outer portion and provided with a deflector and dampers, I do not limit myself to that construction, which is common, as it is equally as applicable to those having single walls; neither do I limit myself to the particular shape shown in the drawings, as it can be used with other shapes as well.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The combination of an oven-stove, supported secured to the sides thereof, said supports being formed each of two L-shaped pieces, and being secured to the sides in such a manner as to leave a vertical space between their projecting free ends, and a series of T-shaped braces, the ends of each of which rest upon said supports, with the downwardly-projecting rib between the free ends of said supports.

2. The combination, with a double-walled stove, of a cover consisting of the upper plate ribbed on the under side, and having the small central opening, and the lower plate, preferably of smaller diameter than the upper plate, having the central upwardly-projecting shank extending through the central opening of the upper plate, and formed with the handle above the said upper plate, substantially as described, for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

SAMUEL JOHN McDOWELL.

Witnesses:

J. FRED. REILY,
ARTHUR L. MORSELL.