W. F. ROSSMAN.
Portable-Oven.

No. 216,896. Patented June 24, 1879.

Fig. 1.

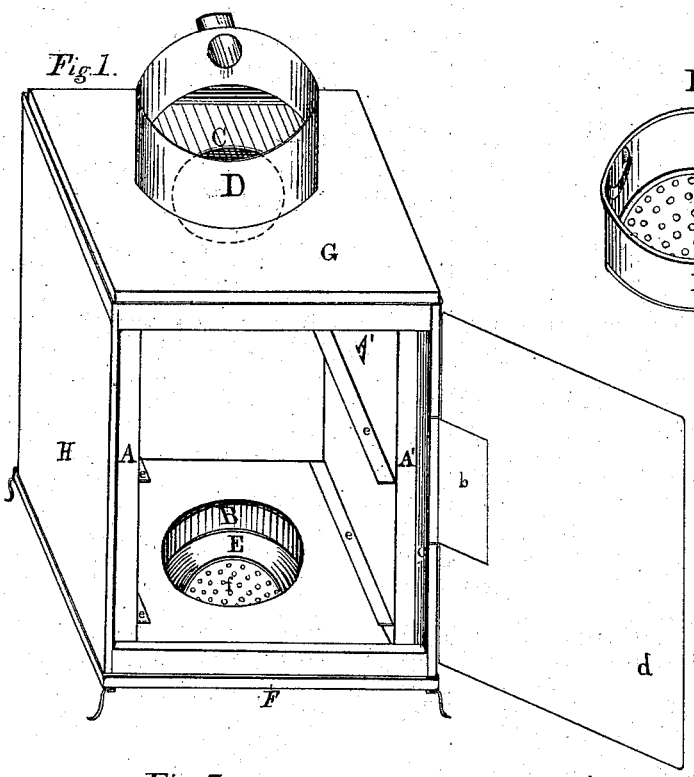


Fig. 2.

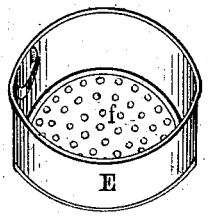


Fig. 3.

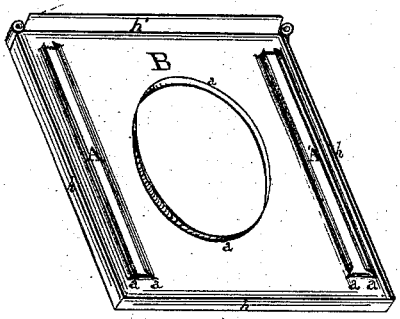


Fig. 4.

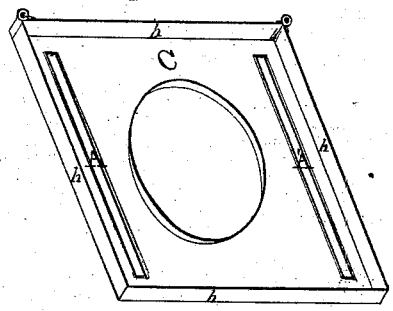
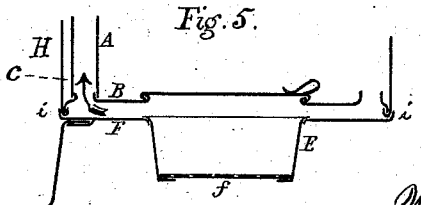


Fig. 5.



Witnesses.

Sherman Law Reg

Giles H. O'Neil

Inventor:

Wm F Rossman

UNITED STATES PATENT OFFICE.

WILLIAM F. ROSSMAN, OF HUDSON, NEW YORK.

IMPROVEMENT IN PORTABLE OVENS.

Specification forming part of Letters Patent No. **216,896**, dated June 24, 1879; application filed March 13, 1879.

To all whom it may concern:

Be it known that I, WILLIAM F. ROSSMAN, of the city of Hudson, in the county of Columbia and State of New York, have invented certain new and useful Improvements in Portable Baking-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, and the letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 represents a perspective view of an oven constructed according to my invention; Fig. 2, a similar view of the fire-pot detached; Fig. 3, a similar view of a plate forming the bottom of the baking-chamber; Fig. 4, a similar view of another plate forming the top of said chamber; and Fig. 5 an outline sectional view through the center of the fire-pot, showing the construction of the oven and a cover over the hole in plate B.

This invention belongs to that class of baker's ovens known as "portable," and is designed primarily to be used upon or in connection with kerosene and oil stoves, but which is adapted as well to be used with or upon ranges and stoves in which coal or wood is employed as the fuel.

It consists principally of a sheet-metal box of any desired form and size, but preferably of the form of a square or of a parallelogram, having within it two vertical flat-box flues extending from top to bottom and nearly from front to the rear of the oven, each standing a little inside of the shell or outer wall, so as to leave an air-space between them. External radiation and loss of heat are thereby prevented.

Another peculiarity of this invention consists, as believed, in the combination of exterior replaceable or removable bottom and top pieces with the permanent bottom and top plates, so that when attached flues are formed between them and the permanent plates, for the passage of the heat and other products of combustion.

With this oven, baking can be done on kerosene, petroleum, or oil stoves of any kind without the articles in it being exposed to or injured by the vapors or smoke of the burning oils, which cannot be done by most of those now in use. It may be employed, also, with economy and comfort for baking with charcoal or coke in warm weather upon or in connection with any range or stove when not desirable to heat the latter, or independently and alone, by using the fire-pot shown in Fig. 2 in either case.

A A′, Fig. 1, are the vertical side flues, each so located as to leave air-spaces *c* between them and the adjacent exterior sides of the oven. They are connected at bottom with the permanent bottom plate, B, and at top with the permanent top plate, C, (both which are shown detached in the drawings,) which plates, whether made of cast-iron or sheet metal, are slotted and the edges of the slots flanged, so that the flue-boxes A A′ may be fitted over and attached to these flanges *a a a a*.

The plates B and C are just alike, so that if made of cast-iron the same pattern answers for both. When used for the bottom the flanges *a a*, &c., are all turned upward, and when for the top plate they are all turned downward. The margin flanges or rim *h h h*, on three sides, are of uniform width; but the flange *h′*, on the fourth or front side, is of double width, to provide a bearing for the door *d* to close against.

The margins *h* of the plate B fit into grooves turned or formed in the bottoms of the side plates H, which sides in their turn sit within flanges *i*, turned up on all the sides of a bottom pan-like plate, F, in which is loosely secured the fire-pot E.

Attached to the corners of this pan-like bottom piece F are loops or eyes for securing legs, when required. This construction of the bottom gives more breadth to the base, and therefore more stability to the whole arrangement. It could be made, like the top piece, G, with margins of equal and sufficient widths to form the flue-space, and, like it, fitted tightly within the margins *h h h* and *h′*.

The bottom F and top G being arranged in either of the ways above described, or in any other suitable and similar manner, not only are top and bottom flues formed with which the vertical side flues A A′ communicate, but, being removable, these side flues are accessible, and can be cleaned when necessary.

The circular holes in B and C have slightly

flanged or turned edges, and are provided with covers to close them when required.

The fire-pot E, Fig. 2, is provided with a flange or rim at top to hold it suspended in rim or collar D, Fig. 1, or in the circular hole in bottom piece F.

When this fire-pot is used with its fire of charcoal in rim D, and partly closed by one of the covers placed on the rim, slightly at one side, the draft and heat, after spreading over the top of the oven, pass downward through the side flues A A′, and bottom flue, out through the circular hole in F into the boiler-hole in the top of the range or stove on which the oven is placed.

When used or suspended with its fire in the hole in bottom piece F, the hole in the permanent bottom plate B being covered, as shown in Fig. 5, the draft and products of combustion, after spreading over the bottom, pass upward through the side flues A A′ into the top flue, between the permanent plate C and removable top piece G, into rim D, which is covered when in use, and thence out of the pipe. When the oven is used in the manner last described, it is placed on legs, or otherwise set high enough to accommodate the fire-pot.

Again, by closing the holes in both the permanent plates B and C, and placing the hole in bottom piece or pan F over a kerosene or oil stove or an open boiler-hole of a range or stove in which is a fire, the draft and heat take the same course as when the fire-pot E is suspended in bottom piece F, as above described.

The hole in the top plate C is to be closed in all cases, when the top flue is required to be perfect, by either a removable or fixed cover.

What I claim as my invention is—

1. The combination of the vertical flues A A′ with the bottom and top plates of a portable oven, substantially as described.

2. A portable oven provided with removable bottom and top pieces F and G, in combination with the permanent bottom and top plates B and C, and vertical flues A A′, substantially as and for the purposes described.

3. The combination, with a portable oven provided with the removable bottom piece F and top piece G, of rim D and fire-pot E, substantially as and for the purposes set forth.

WM. F. ROSSMAN.

Witnesses:

SHERMAN VAN NESS,

GILES H. O'NEIL.