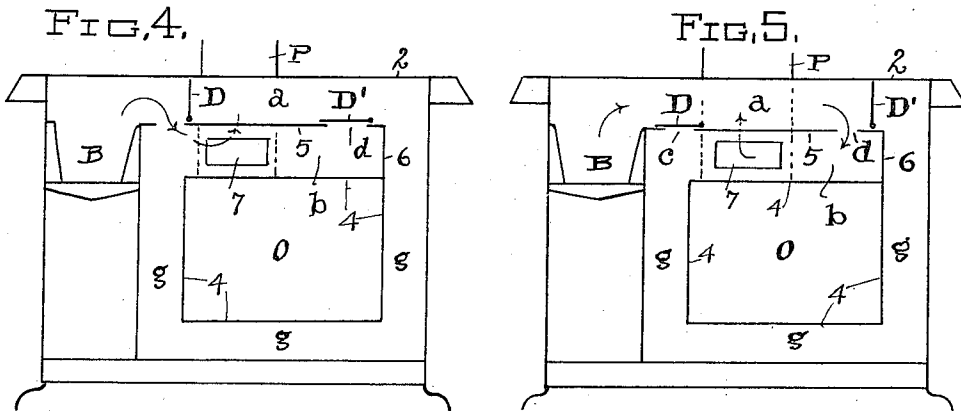
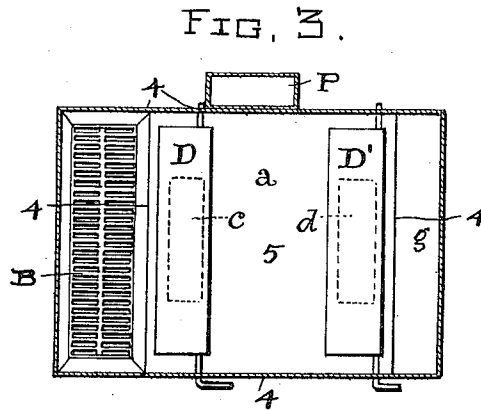
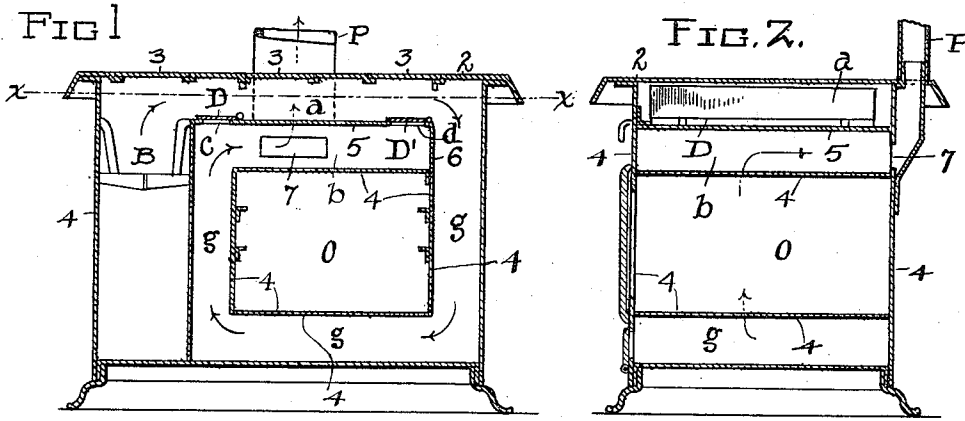


J. ERBEN.
COOKING STOVE OR RANGE.
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1,017,043.

Patented Feb. 13, 1912.



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COOKING STOVE OR RANGE.

1,017,043.

Specification of Letters Patent.

Patented Feb. 13, 1912.

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To all whom it may concern:

Be it known that I, JOHN ERBEN, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Cooking Stoves or Ranges, of which the following is a specification.

My invention relates to improvements in cooking stoves or ranges and comprises certain novel features of construction affecting the draft and the circulation of heat about the oven, all substantially as shown and described and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a sectional elevation of the range front to rear, and Fig. 2 is a central cross section. Fig. 3 is a plan on line *x-x*, Fig. 1. Figs. 4 and 5 are diagrammatic views for the most part, corresponding in the main to Figs. 1 and 2, but showing different positions of the draft controlling dampers as hereinafter fully described.

The construction of the range is clear from the foregoing views, and comprises the usual fire box B, the oven O, the draft flue or pipe P and two dampers D and D'.

The numeral 2 represents the top plate of the range, which, presumably, has six holes with lids 3.

The oven has top, bottom and side walls indicated by 4, and there is a plate or wall 5 half way between the top of the oven and the top plate of the range and which may be described as the bottom of the draft space proper. This plate is level with the top of the fire pot and extends back to be in line with the rear wall of the oven, and the space between said wall and said plate 5 is closed by a plate 6. The said plate 6 usually is a mere extension upward of the rear plate or wall of the oven and may be so regarded in this instance.

The only exhaust opening 7 for the products of combustion is beneath the draft space indicated by *a* and between bottom 5 and the top of the oven in a passage indicated by *b*. This passage comprises the entire area over the oven or the top plate thereof, thus exposing the oven to heat from within this passage according to the flow of the heat therein. As to this there are three different approaches to the said exhaust opening 7 into the draft flue or pipe P. The

first of these is the direct approach by way of damper D, closed in Fig. 1 and open in Fig. 4. That is, the said damper D is closed as to the top draft space *a* which leads back around the oven and open as to the exhaust opening 7. This constitutes the direct draft passage which is used in starting a fire or when for any reason only the two first top holes 3 are to be used and it is not desirable to heat farther back nor to carry the heat about the oven. The second approach to exhaust opening 7 is by damper D' and down draft hole *d* in bottom plate 5. When this damper-way is used the damper D closes down hole *c*, Fig. 5, and damper D' is raised so as to open down passage *d*, thus carrying the heat back beneath all the holes in the top of the stove and out over the top of the oven but closing the passage around the oven.

The third approach to exhaust opening 7 is by the passage *g* entirely around the oven and with both dampers D and D' down over the holes *c* and *d* respectively, thus exposing the oven to all the products of combustion over its top, bottom and sides. This relation of parts is shown in Fig. 1.

The damper D is the direct draft damper according to the foregoing description and damper D' is the indirect damper. Said dampers are referred to as being closed when down and open when up, but these terms are relative as to the several passages which they control. When both dampers are closed the draft must envelop the oven.

I claim:

1. A kitchen range having top and bottom plates horizontally at its top and a draft space between the said plates, an oven beneath said bottom plate and a draft flue for the products of combustion provided with a single inlet opening located between the said bottom plate and the top plate of the oven, said bottom plate having a down draft hole in advance of said inlet opening, and a damper adapted to open and close said down draft hole.

2. A kitchen range having a fire pot and a draft space in its top open to said fire pot and provided with front and rear down draft holes through the bottom plate of said space, a draft passage having an exhaust opening located beneath said bottom plate and separate dampers controlling said down draft holes.

3. A kitchen range having a draft space in its top and a draft flue for the products of combustion provided with an inlet opening beneath the bottom plate of said space, 5 said plate having down draft holes front and rear in respect to said flue, and a damper for each of said down draft holes adapted to be raised to close said draft space and divert the products of combustion downward 10 through the corresponding hole.
4. A kitchen range having a fire-box and a draft space in its top, an oven and a draft passage over the same, a horizontal plate dividing said draft space from said draft 15 passage provided with down draft holes front and rear of the range, separate dampers for said holes adapted to be raised to divert the draft downward, a draft flue at the rear of the range and an exhaust opening for the products of combustion from 20 said draft passage into said draft flue.
5. A kitchen range having a draft space front to rear in its top and a bottom plate for said space provided with down draft 25 holes in its front and rear respectively, a damper for each of said holes adapted to be raised to close said draft space, and a draft flue to carry off the products of combustion having an inlet opening beneath said bottom plate and relatively between said down 30 draft holes.
- In testimony whereof I affix my signature in the presence of two witnesses.
- JOHN ERBEN.
- Witnesses:
H. T. FISHER,
F. C. MUSSUN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."