

H. G. GILES.
Cooking Stove.

No. 102,533.

Patented May 3, 1870.

Fig. 1.

Fig. 4.

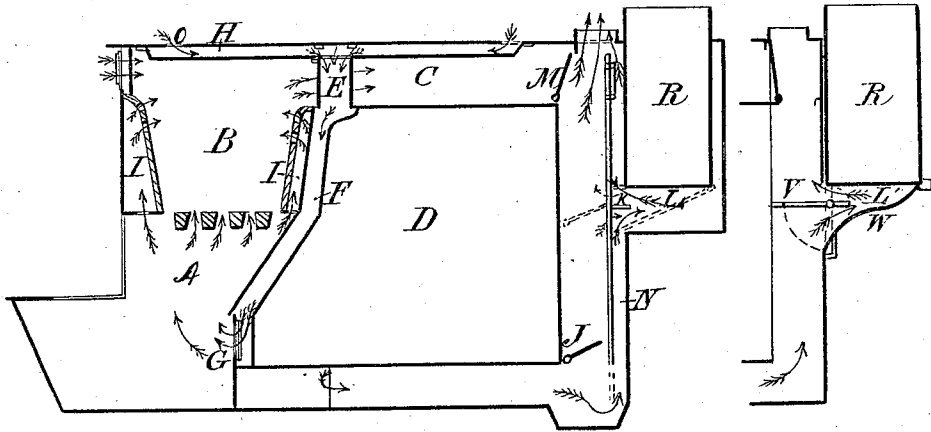


Fig. 2.

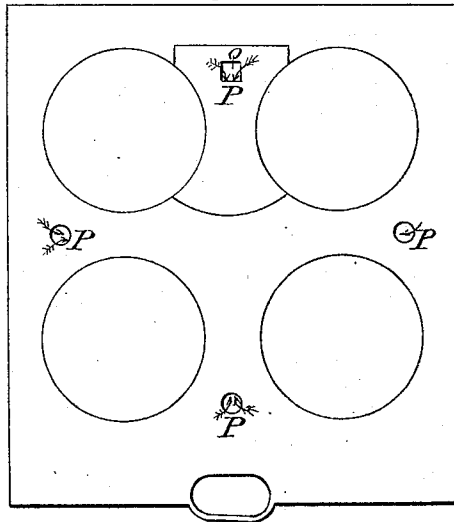
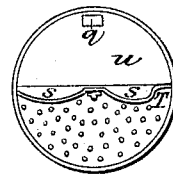


Fig. 3.



Witnesses:
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HENRY G. GILES, OF TROY, NEW YORK.

Letters Patent No. 102,533, dated May 3, 1870.

IMPROVEMENT IN COOKING-STOVES.

The Schedule referred to in these Letters Patent and making part of the same.

Be it known that I, HENRY G. GILES, of the city of Troy, county of Rensselaer and State of New York, have invented certain Improvements in Cooking-Stoves, of which the following is a specification.

The first part of my invention consists in aiding combustion by a hot-air draught taken down through and under the cross-bars to the center, thence down the front side of the oven to the bottom of the same, and admitted through a damper to the grate, and also on all sides of the fire-pot and through perforations in the same, to intermix with and burn the gases.

The second part of my invention is a perforated cover for the stove made in two parts, and so arranged that air for burning the gases may be let on, or shut off.

The third part of my invention relates to a water-tank on the rear of the stove, for heating water and retaining it for culinary and other purposes.

Description of Drawings.

Figure 1 shows a cross-section of the stove through the center, from front to rear.

Figure 2, the top.

Figure 3, the lid or cover, with perforations for gas-burning.

Figure 4, the back of stove with water-tank.

This stove may be made after the manner of what is known to the trade as a common square three-flued, or other cooking-stove, in which my invention is applied by forming the chamber H under the cross-bars of the stove-top, and connecting said chamber with the pipe or flue E, reaching down through the top oven-plate, and thence connecting with the flue F, leading down to the damper G, which opens said flue F into the chamber A.

In the top of the stove are several apertures, P, opening through into the chamber H.

Through the openings P air is drawn down into the chamber H, thence down pipe E through flue F and damper G into the chamber A, whence it is admitted to the flue through the grate. The flues H, E and F, being very hot, the air becomes highly heated on its passage, and in this state is applied to the fuel, thereby causing a quicker and more perfect combustion of the same. When this hot draught is used with effect, the front of the stove should be closed.

In fig. 3, I show a cover for the stove made in two parts, with a large annular cavity s between the two,

and perforations in the lower part, for the purpose of throwing air in jets down upon the fuel, or upon the rising gases from combustion of fuel, for igniting and utilizing the same.

The air is first admitted through the openings q. This may not be new, but one or more cups T are raised in the lower part, to match and form a cover or stopper for the opening q, when the top u is turned around to the right point. The advantage of this is that, when the gases from bituminous or other fuel are spent, the air may be shut off, and the heat retained.

On the back of the stove is the reservoir R. Underneath it is the chamber L, extending the whole width of the stove, forming a rest on the outer edge for the reservoir R, so that said chamber L is formed by the reservoir R, and the ogee-formed plate w on the back of stove, at one side of said chamber L, and next to the back of the stove is the damper V, the purpose of which is to open or close said chamber to the back-flue, and at the same time to divert the rising heat from the back flue to the chamber L, where, striking the bottom of water-tank R, it is passed back to said back flue over the top side of said damper, when said damper lies horizontally.

The general form of the plate w is of some importance, as in manufacturing it may be made so as to be detached from the stove for convenience and safety in shipping.

It is common, in making low-oven cooking-stoves, to have two plates back of the fire-box. One is called "front oven-plate," the other "back fire-plate." Between these is a chamber running parallel with the fire-box, with openings made at each end through the sides of the stove, to admit a circulation of air in said chamber. This circulation may be quickened, and a larger volume of air added to the downward flue F, by an opening made through the front oven-plate into said flue F, thus bringing said air, through the means of said flue, to the fuel, to sustain combustion.

Claim.

The chamber H, flues E F, and damper G, in combination with the chamber A and fire-pot B, as and for the purposes set forth.

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