(No Model.)

J. H. FIZER.

COOKING STOVE.

No. 578,143. Patented Mar. 2, 1897.

Fig. 1

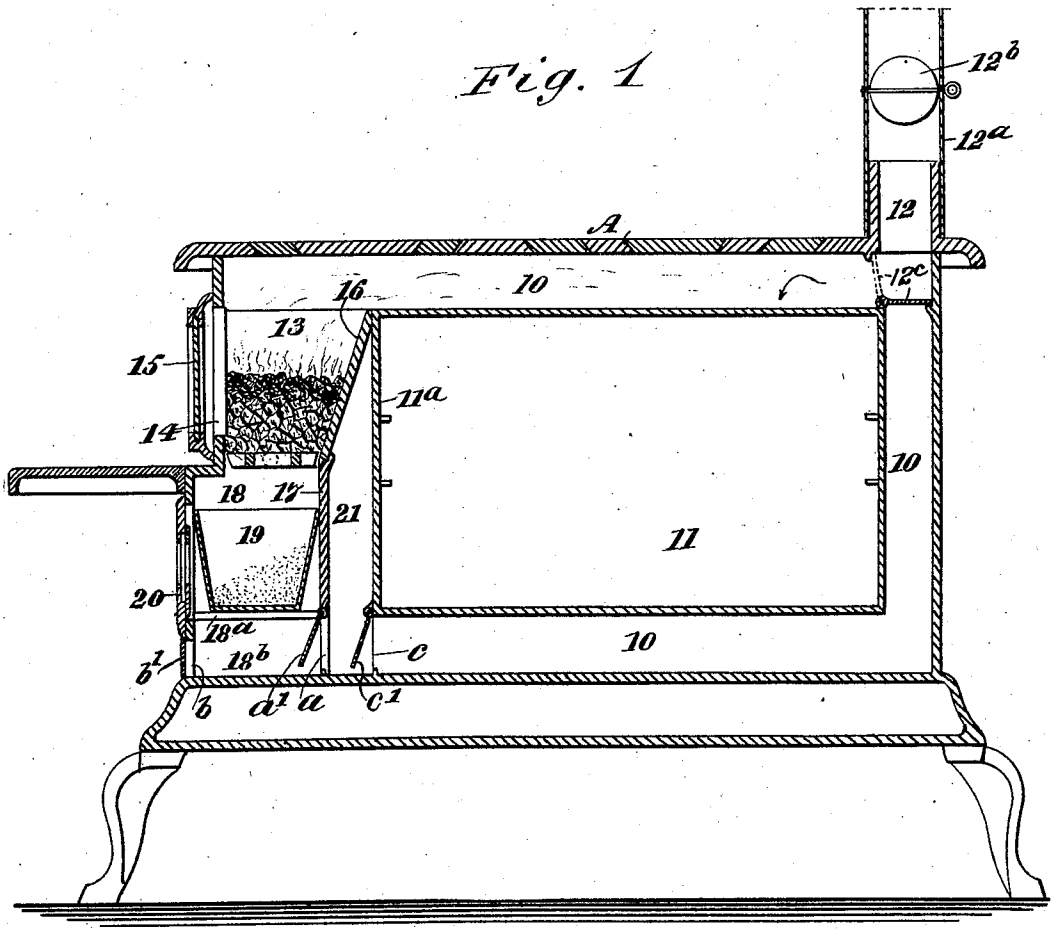
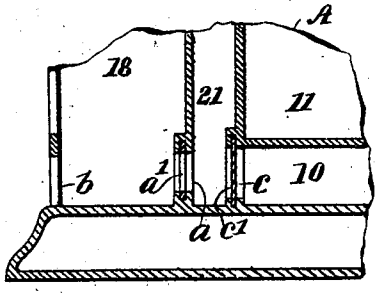


Fig. 2



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UNITED STATES PATENT OFFICE.

JAMES H. FIZER, OF LEXINGTON, KENTUCKY.

COOKING-STOVE.

SPECIFICATION forming part of Letters Patent No. 578,143, dated March 2, 1897.

Application filed April 30, 1896. Serial No. 589,653. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. FIZER, of Lexington, in the county of Fayette and State of Kentucky, have invented certain new and useful Improvements in Cooking-Stoves, of which the following is a full, clear, and exact description.

This invention relates to ranges or other cooking-stoves, and has for its object to provide novel features of construction for a device of the indicated character which will increase the efficiency of the stove in the matter of more evenly heating the oven and economize fuel consumption by decreasing the need for intense combustion of the fuel, for the reason that heat therefrom is more directly conveyed to the heating and draft passages that surround the oven.

The invention consists in the novel construction and combination of parts, as is hereinafter described, and pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both the figures.

Figure 1 is a sectional side elevation of a stove having the improvements, and Fig. 2 is a sectional side view of a portion of a stove and of a modified construction for the improvements.

In the drawings, 10 represents the heat and draft passages or flues that surround the oven 11, as usual, these having communication with the thimble or flange 12, whereon the draft-pipe 12^a is placed. The fire-chamber 13 and grate 14 may be of preferred dimensions and draft be controlled at the front of the grate by the door 15 in the ordinary way.

The improvements comprise a metal or other back plate 16, that is supported in position to form the rear wall of the fire-chamber 13 by an upright partition 17, which is transversely disposed in the body of the stove A at a suitable distance from the front wall 11^a of the oven 11. The partition 17 forms the rear cross-wall of the ash-pit 18, wherein an ash-pan 19 may be placed and removed through the door 20. There is a suitable support 18^a provided for the ash-pan 19, so that a space 18^b is afforded below the latter, and it will be seen that the partition-wall 17, that rests on the bottom wall of the ash-pit, is furnished with an opening *a*, that is controlled by the gate *a'*, and said gate may be pendent, as shown in Fig. 2, or be adapted to transversely slide, as indicated in Fig. 2.

An aperture *b* is formed at the front of the ash-pit space 18^b and is normally closed by a tight door *b'*, as shown in Fig. 1, this provision facilitating the removal of ashes that may fall to the bottom of said space. The back plate 16 is preferably inclined rearwardly, so that its upper transverse edge will contact with the front cross-wall of the oven. The disposition of the partition 17 and the back plate 16 provides a heat-chamber 21, that intervenes said plates and the front wall 11^a of the oven.

An aperture *c* of proper dimensions is provided at the front end of the horizontal heat-flue 10, that is below the oven bottom plate, and said aperture is controlled by a damper *c'*, which may be hung from its upper edge to receive adjustment by swinging it so as to graduate the opening *c*, as shown in Fig. 1, or be slidably held in position for a like purpose, as represented in Fig. 2.

A damper 12^b is usually placed in the pipe 12^a to reduce draft, and another damper 12^c is provided to direct the heat-currents from the fire around from the upper draft-flue 10 at one side of the oven through the lower horizontal flue 10 and up the opposite side of the oven before such currents escape through the draft-pipe.

It will be seen that if the damper 12^b is properly adjusted after a free-burning fire is established in the fire-chamber 13 the heat from the latter will permeate the back plate 16 and rapidly raise the temperature of the air that is in the chamber 21, which will correspondingly heat the front plate 11^a of the oven that in stoves of ordinary construction is not properly heated.

It is to be understood that in service the door *b'* and damper *a'* are to be tightly closed and only opened when the ash-pit and lower flue 10 are to be cleaned. The damper *c'* should be provided with a stem or handle that passes through the side wall of the stove to enable a proper adjustment of said damper.

It is claimed that the described construction, which affords a hot-air chamber 21 between the front plate of the oven and the fire-cham-

ber of the stove, enables the heating of the oven more evenly and with less consumption of fuel than is necessary in stoves not furnished with the improvements.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

In a cooking stove or range, the combination with the front wall of the oven therein, of a back plate for the fire-chamber, an upright partition, spaced from said front wall and supporting the back plate, to permit the said back plate to lean its upper edge against the front wall of the oven, a damper adapted to control an opening in the lower part of the upright partition, and a damper controlling an opening at the front of a horizontal flue below the oven, as specified.

JAMES H. FIZER.

Witnesses:
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