(No Model.)

V. M. BARRETT.

COOKING STOVE.

No. 407,149. Patented July 16, 1889.

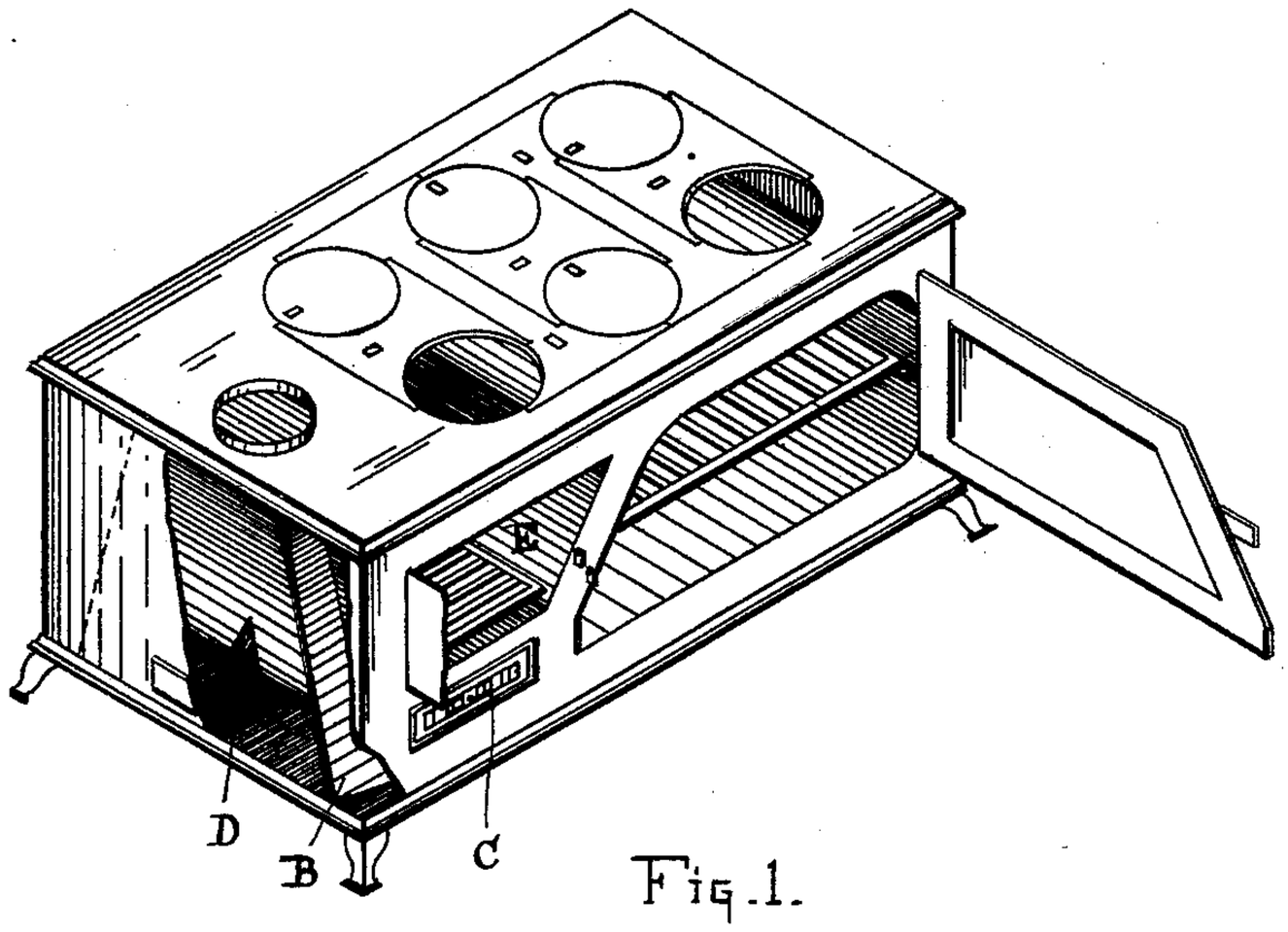

Fig. 1.

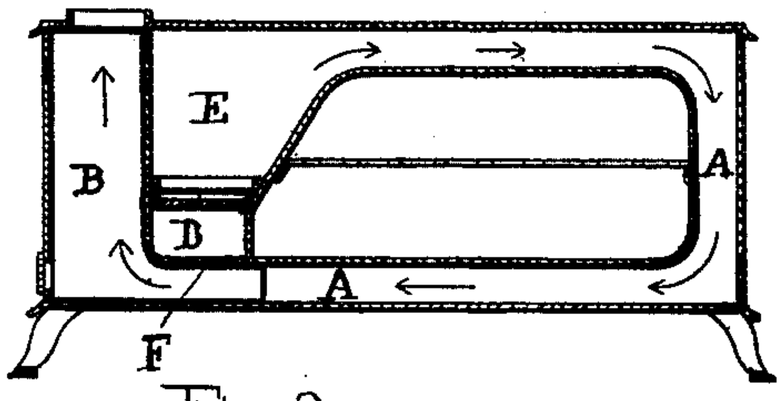

Fig. 2.

Witnesses

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UNITED STATES PATENT OFFICE.

VASAN M. BARRETT, OF ATLANTA, GEORGIA.

COOKING-STOVE.

SPECIFICATION forming part of Letters Patent No. 407,149, dated July 16, 1889.

Application filed March 2, 1889. Serial No. 301,804. (No model.)

To all whom it may concern:

Be it known that I, VASAN M. BARRETT, a citizen of the United States, and a resident of Atlanta, in the county of Fulton and State of Georgia, have invented certain new and useful Improvements in Cooking-Stoves; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as 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 to letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to that class of stoves commonly known as "cooking-stoves," the object of the invention being to so improve such class of stoves as to render them more economical, especially where a fire is not required all the time, as is the case ordinarily in using this class of stoves.

As ordinarily constructed, the oven of a stove of this class is much hotter at its ends than at its middle, for the reason that the chamber under the oven is divided into three parts or flues, heat in the two outside ones generally passing forward, while the center one carries the heat toward the back of the stove, and this heat is of less intensity in the center flue than in the two outer ones, which does not heat the bottom of the oven uniformly. Then, also, in stoves as ordinarily constructed a damper is necessary, which opens and closes a flue leading directly to the chimney to increase the draft by avoiding the friction of the smoke, &c., passing through this divided flue under the oven, and this damper is necessitated by the fact that the draft is much lessened by the length of and turns in the flues for the passage of smoke, &c., whereas if these turns in the flues were done away with and the flue shortened under the oven and the construction improved so as to allow the passage of smoke, &c., around the oven at the first starting of the fire, much fuel and the time consumed in "starting" a fire would be saved, as almost immediate use could be made of the heat evolved in the starting of the fire; also, a fire less than would cover the grate-surface cannot be built in these stoves without allowing a mixture of cold air with the heated air passing through the flues, which is obviously disadvantageous when a small fire only is required, any excess being so much waste of fuel. I obviate this difficulty by a novel construction, whereby I am enabled to divide the grate-surface and to supply draft to either or both parts thereof at will.

This invention consists of details hereinafter described, furnishing a stove that can be sold cheaply and that will have points of merit as to economy, as hereinbefore briefly stated, which is of advantage, especially to those consumers requiring a cheap stove.

In the accompanying drawings, Figure 1 is a perspective of this improved stove, showing the construction thereof in all particulars except as regards the flue passing around the oven. Fig. 2 shows the invention in longitudinal section central to Fig. 1, showing in particular the flue passing around the oven, thence to the pipe, and further showing the division of the ash-box into two parts.

In the figures like reference-marks indicate corresponding parts in the several views.

A is the flue.

B are deflectors.

C is a draft-damper, there being one of these said draft-dampers at each end of the ash-chamber F, dividing the same into two compartments, one draft-damper C opening into each chamber.

The flue A passes from the fire-chamber E backwardly over the oven, thence downwardly, passing under the oven and the ash-chamber, and upwardly outside of the ash and fire chambers into the pipe, soot being prevented from forming in the corners formed by the top of the stove and the side plates by the deflectors B, which also direct the smoke, &c., to the pipe. This flue, passing, as it does, directly around the oven, the fire in the chamber coming in direct contact with the front plate of the oven or bricks thereon, and the heat spreading the entire width of the flue, heats the oven uniformly throughout, and the flue being direct, with no return-flues therein, lessens the friction of the smoke, &c., to a minimum, thereby obviating the necessity of a damper and allowing the heat to be utilized in the oven from the very starting of the fire, instead of wait-

ing, as heretofore, until the fire has gained sufficient headway to allow of the damper being closed, the draft being insufficient until the fire is sufficiently large to heat the air in the chimney to draw the smoke, &c., through the tortuous flue around the oven, as stoves are ordinarily constructed. This construction of flue is one through which the smoke can pass freely, and hence reduces the deposit of soot and ashes to a minimum, there being no obstruction to impede the free egress thereof, or to which the soot would adhere and build upon.

As hereinbefore mentioned, the ash-chamber is divided into two compartments, furnishing, in effect, two draft-flues to carry air to the grate and virtually dividing the grate into two fire-surfaces, and, as the draft can be at pleasure cut off from either the one or the other, it is obvious that a fire can be built on either half of the grate-surface and a positive draft can be obtained without leaving part of the grate-surface open for the admission of practically cold air, or of making the fire so thin as to be of small heating power. This partition D may be made, as shown in the drawings—that is, by forming it integrally with the bottom plate of the ash-chamber, it being bent therein in the form of an inverted V, or by placing a simple partition therein consisting of a plate of metal of the desired size and thickness. Forming the partition from the bottom plate of the ash-chamber is the preferable form of construction, inasmuch as it presents the under surface of the bent-up portion to the cooling action of the air in the flue, which is practically cold at this distance from the fire, being cold enough to prevent the heating of the partition to the point where it would burn out. The flue is also restricted slightly at this point by the deflectors B, and this notch enlarges the area of the opening to nearly the size of the largest part of the flue, and that without a detraction from the operation effectively of the said deflectors.

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

In a cooking-stove, the fire-chamber E, the ash-chamber F, subdivided by partition D, the flue A, passing backwardly over the oven, thence downwardly under the oven and ash-chamber into the outlet, and the deflectors B, all arranged substantially as and for the purpose set forth.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

VASAN M. BARRETT.

Witnesses:
A. P. WOOD,
G. P. BIVINS.