

E. WALTER.
Cook Stove.

No. 5,094.

Patented May 1, 1847.

Fig. 1.

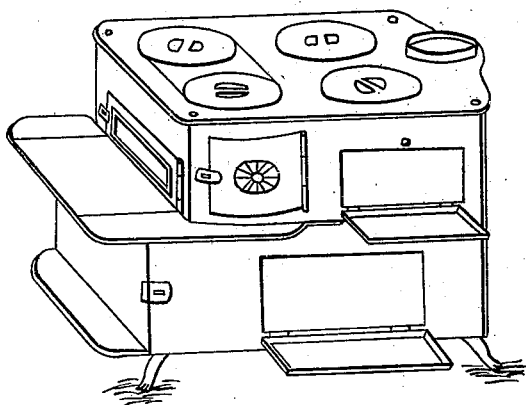


Fig. 2.

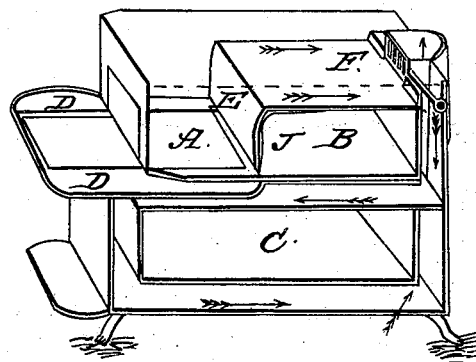
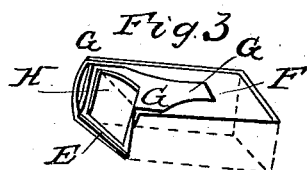


Fig. 4.



WITNESSES

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ELIHU WALTER, OF SYRACUSE, NEW YORK.

COOKING-STOVE.

Specification of Letters Patent No. 5,094, dated May 1, 1847.

To all whom it may concern:

Be it known that I, ELIHU WALTER, of the village of Syracuse, county of Onondaga, and State of New York, have invented new and useful Improvements in Cooking-Stoves; and I do hereby declare the following is a full and exact description of the construction and application of the same, reference being had to the annexed drawings, making a part of this specification.

Figure 1 in the drawing annexed is a perspective view of my stove. The stove is made of cast iron plates so fitted as to make the stove air tight. The stove is held together by four wrought iron rods one near each corner and passing perpendicularly through the top and bottom plates of the stove with a screw nut on the bottom end of the rods. The stove has four boiler holes in top all of the same size and equal distance part. The fire place or grate is in the upper and front part of the stove with one door in end and one in front and with broiling hearth in front of fire place with sliding hearth damper. There are two ovens to the stove with doors in each end or side. The upper and smaller oven being back of the fire place and the under and larger oven being under the fire place and upper oven and extending in front to or under a part of the hearth. The front end plate of this stove under the hearth is so constructed that it can be taken entirely off when the inside flues of the stove are so filled up that they require cleaning out.

Fig. 2 represents the stove with the top plate and one of the side plates removed in order to show the internal construction of the stove. In this figure my fire place is designated and marked letter A with a grate so constructed as to burn either wood or coal. My upper or smaller oven is designated and marked letter B. My under or larger oven is designated and marked letter C.

The plate upon which the fire grate A rests forms the bottom of my fire place, the bottom of my oven B and the hearth plate to my stove and is one entire plate. It extends in length from the front end of the hearth to the back end of the oven B and the corners extending to the back plate of the stove and in width the entire breadth of the stove. This plate has a broiling hearth in front and the plate is designated or marked letter D. The back side of the fire

place is a plate extending the whole width of the stove in length and in breadth from plate D upon which it rests almost perpendicularly to within three or four inches of the top plate of the stove. This plate forms the back side of the fire place and the front end of the oven B and to designate it is lettered E.

The top plate of oven B is an entire plate extending horizontally from the last described plate upon which it rests to the back end of oven B and in breadth the entire width of the stove and leaves a space between the top of oven B and the top plate of the stove of from three to four inches. This plate is lettered to designate it F. The back plate of oven B is a plate extending in length the entire width of the stove and in breadth from plate D upon the back end of which it rests perpendicularly to within about two inches of the top plate of the stove with a damper in the center of the top of this plate so constructed that it can be closed and force the fire under oven B and around oven C or opened and let it pass into the main flue of the stove. This flue is composed of two plates inserted perpendicularly and extending from the top plate of the stove to the top plate of oven C in length and in breadth filling up the space from the back plate of oven B to the back plate of the stove these plates are inserted as to form a flue to receive the fire and smoke on its return from around oven C. The top plate of oven C extends from the back plate of the stove horizontally to the front end of oven C in length, and in breadth the entire width of the stove a space being left in the center of the back end of this plate for the fire and smoke to pass through on its return from around oven C, with a partition in the center of the plate running lengthwise this plate is so placed as to leave sufficient space between the two ovens for the fire and smoke to pass.

The front end of oven C is represented in Fig. 4 and is marked in that figure K K; it extends the entire width of the stove in length and in breadth the height of oven C. Attached to this plate are two partition plates marked in Fig. 4 L L, these two partition plates are in length from the top of plate K K to the bottom plate of the stove and in width the entire space between oven C and front end of stove they are so placed as to come together at the top and thence

extending down to the bottom plate of the stove diagonally so as to leave a space in the center at the bottom front end of oven C of one half of the entire breadth of the stove this space is not occupied by the fire and smoke and these plates L L form flues to pass the fire and smoke to the outer edges of oven C. The bottom plate of oven C extends horizontally the entire breadth of the stove in width and in length from the front end of oven C to within two or three inches of the back end plate of the stove; between this plate and the bottom plate of the stove there is a space sufficient for the fire and smoke to pass through, and this bottom plate of oven C is supported by two plates resting perpendicularly on the bottom plate of the stove the entire length of oven C and in width sufficient to fill up the space between bottom of the oven C and the bottom plate of the stove. These plates are so placed as to leave a space in the center of about one half the width of the stove through the center lengthwise under oven C, this space is not occupied by the smoke and these plates form flues for the smoke and fire to pass under oven C on the outside edge thus concentrating the heat to the out edges of the oven C. The back end plate of oven C extends in length the entire width of the stove and in breadth the entire depth of oven C.

Fig. 3, represents plates E and F (being the top and front end of oven B of Fig. 2) turned upon edge so that you can see the underside of said plates or the inside of the top and front end plates of oven B Fig. 2. To the under side of plates E and F is attached by points G G G another plate leaving space between this plate and plates E and F of from $\frac{1}{2}$ inch to one inch or more, this plate I call an equalizing oven damper and to designate it letter H. This plate is smaller than plates E and F and is thickest where the heat given off through plates E and F is most intense and is in shape as is represented by plate H Fig. 3. The edge of this equalizing oven damper is seen in Fig. 2 in oven B at points J, J. The reason why I call this an equalizing oven damper is that the plates E and F become very hot where the fire comes in immediate contact with it so much so that if there was no protection inside of oven B under these plates the heat given off from plates E and F would be so intense at points where those plates are most heated as to burn whatever was placed in oven B but by means of placing the equalizing oven damper H under these heated plates as above described it

equalizes the heat in oven B by allowing the heated air to pass out at the edges of plate H into oven B thus making an uniform heat in oven B.

I apply my heat fire and smoke in this stove as follows: My fire and smoke passes my fire place A Fig. 2 over the upper oven B filling the whole space over the oven B (if damper is closed) down the out side or back corner flues at back end of oven B thence under oven B and over oven C taking in the whole space between the two ovens and taking into that space not only all the fire and smoke from my fires but also the heat that escapes from the under side of plate D (upon which plate my fire is built) when the heated air fire and smoke arrives at the front end of oven C it is passed down by flues to the outside edges of oven C and thence under oven C in flues at the under and outer edges of oven C to back end of oven C, it then occupies the whole space back of oven C and finally passes through the center of the back end of upper plate of oven C into the main flue of the stove. By means of the circuitous route which the fire and smoke passes over and under ovens B and C I not only pass all the fire and smoke contained in a given quantity of fuel entirely over and under my ovens but I also add to this all the heat that is given off from under side of plate D (upon which the fire is built) and pass that heat entirely around oven C before it is permitted to escape, again should I wish only to heat oven B and require a quick heat by opening the damper attached to plate at back end of oven B I permit the fire and smoke to escape immediately into main flue of stove, the heat given off by plate B upon which the fire is built being sufficient to heat the bottom plate of oven B and the equalizing damper H in Fig. 3 so equalizing the heat as to prevent oven V from burning, this would occur when I wanted to bake quick with a small amount of fuel.

What I claim as my invention and desire to secure by Letters Patent is—

The arrangement of the flues over and under the two ovens B and C, that is carrying the flue entire around the oven B (a portion of the said flue being under the fire chamber) and then dividing the flue around the oven C in the manner described, the whole arrangement being as herein set forth.

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Witnesses:

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