R. SCORER.

Cooking Stove.

No. 94,845. Patented Sept. 14, 1869.

Fig. 2.

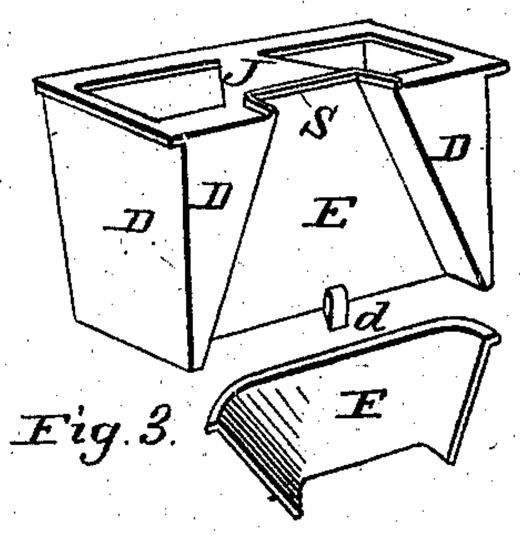


Fig. 3.

Fig. 1.

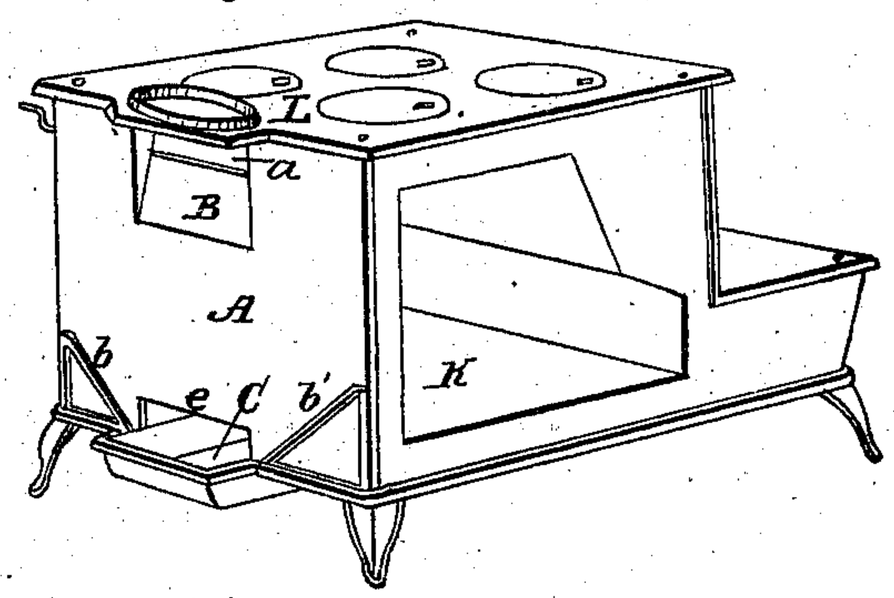


Fig. 4.

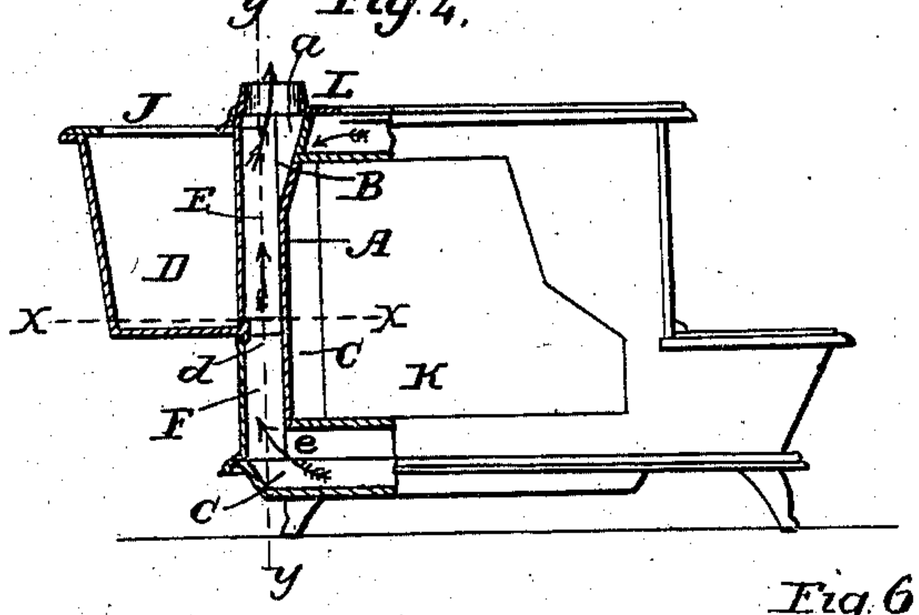


Fig. 5.

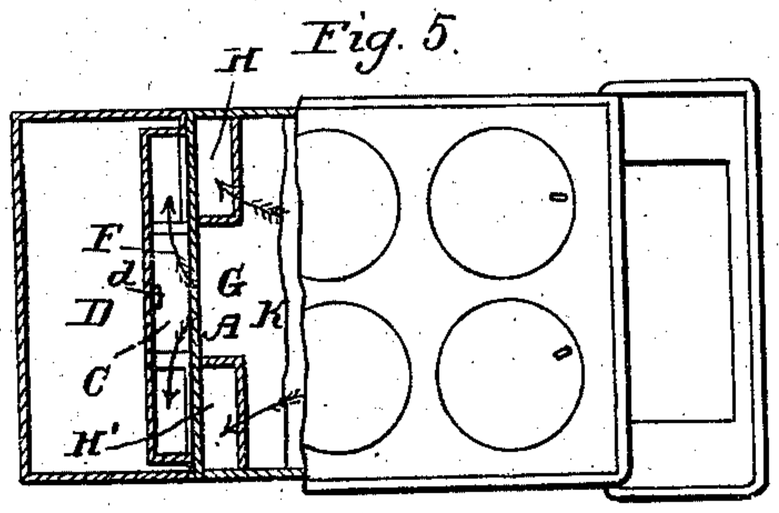
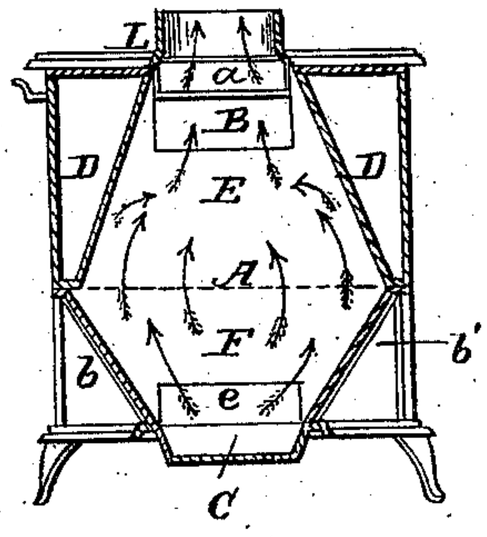


Fig. 6



Witnesses:
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ROBERT SCORER, OF TROY, NEW YORK.

Letters Patent No. 94,845, *dated September* 14, 1869.

COOKING-STOVE.

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

To all whom it may concern:

Be it known that I, ROBERT SCORER, of Troy, in the county of Rensselaer, and State of New York, have invented certain new and useful Improvements in Water-Reservoir Cooking-Stoves; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and letters of reference marked thereon, making a part of this specification, in which—

Figure 1 is a perspective view of the rear end of the stove;

Figure 2 is a perspective view of the water-reservoir's side, which adjoins the rear end of the stove;

Figure 3 is a perspective view of the lower part or plate of the rising flue;

Figure 4 is a vertical longitudinal sectional elevation of the stove with the water-reservoir attached;

Figure 5 is a horizontal sectional view through the water-reservoir and rear-end flues of the stove, taken at the dotted line *x x* of fig. 4; and

Figure 6 is a vertical section, taken at the dotted line *y y* of fig. 4.

The same letters refer to like parts in each of the said figures.

My said invention consists in the peculiar construction and arrangement of the rising or ascending rear flue of a three-flued cooking-stove, in combination with the water-reservoir thereof, whereby the following distinguishing features appear, to wit. The upper part or half of the ascending flue is recessed in the water-reservoir, and is gradually contracted in area from its bottom to its top; while the lower half of said flue is expanded in area from its bottom to its top, and is made in a separate plate affixed to the back plate of the stove; thus, when combined with the water-reservoir flue, forming the ascending or rising flue thereof in two parts—the lower part expanded, and the upper part contracted, which flue is arranged in the rear of and so as to overlap the descending or diving-flues of the stove, in manner substantially as hereinafter fully shown and described.

The object of my invention is to cause the heat of combustion to concentrate and reverberate in the rear-end rising-flue of the stove, so as to thereby heat the water-reservoir more effectually, and also to equalize and better maintain a good baking-heat at the rear end of the oven.

That others skilled in the art may make and use my said invention, I now proceed to fully describe the same.

The accompanying drawings show a three-flued cooking-stove, or range, of the ordinary style and form of construction, with the exception of its rear-end plate, flues, and attached water-reservoir, the parts thereof comprising and containing my said invention and improvements, which are constructed and arranged substantially as follows: The back plate A of the stove has a notched opening, *e*, in its bottom edge, and of the size of the central bottom flue *c*, as shown. On each side of said opening, *e*, there is arranged, on the back plate A, and slanting toward said opening, the dovetailed-sided flanges *b* and *b'*; and the top central part of said plate is recessed at B, so as to make a clear passage to the exit-pipe placed thereover, all substantially as shown in the accompanying drawings.

The descending or diving-flues H and H' are located in manner as shown in fig. 5 of the drawings, and so as to form a recess, G, at the rear end of the oven, and between said diving-flues.

The lower part or plate F of the ascending or rising-flue is made in a separate piece, consisting of a back and end sides, and in an expanded or flaring shape, from its bottom to its top part, substantially as shown in fig. 3 of the drawings; and its end edges, where adjoining the back plate of the stove, are so made as to catch or hook on to the flanges *b* and *b'* aforesaid, and be held in its proper place, as shown in figs. 4 and 6 of the drawings.

The water-reservoir or tank D D has made in its front side, adjoining the rear-end plate A of the stove, a recessed flue, E, which at the bottom part of the reservoir is nearly the whole width thereof; thence it is gradually contracted in size up to its top, so as to come under the pipe-opening or collar of the stove, substantially as shown. At the bottom edge of this recessed flue is a hook or lug, *d*; and it is also provided with a top or cover-plate, J; and at the top part of said flue therein, there is made a flange, *f*.

The aforesaid improved parts are attached or mounted to the stove substantially as follows: The plate F is hooked by its end edges to the flanges *b* and *b'*, its bottom edge resting on the central flue C; the water-reservoir is then placed thereon, with its hook or lug, *d*, on the inside of plate F, and its flue side in contact with the rear plate A of the stove.

The stove-top plate L, which has its under side about the exit-pipe opening made to fit snugly over the flange *f* of the reservoir, is then placed thereover and secured, which thus holds the water-reservoir D and plate F securely in their proper positions, as shown in the annexed drawings.

When the direct-draught damper *a* is closed, the hot gases of combustion then pass down the diving-flues H and H', under the oven, into the central flue C, thence into the expanded and contracted rising flue F E, wherein the heated gases are retarded in their passage, and spread over or partially reverberated in said flue, about as shown by the arrows in fig. 6, thus maintaining a better baking-heat in the rear

parts of the oven, and more effectually heating water in the reservoir. When the said expanded and contracted rising flue is used without the water-reservoir, its upper part is then completed by a suitable cap or plate, which serves as a substitute for the contracted recessed flue in the water-reservoir.

Having thus described my invention,

What I claim, and desire to secure by Letters Patent, is—

1. In a three-flued and water-reservoir cooking-stove, the arrangement of the expanded and contracted parts F and E, forming the rising flue thereof, together as shown, and in the rear of the descending flues H and H′, so as to overlap the same, substantially as described.

2. In a three-flued and water-reservoir cooking-stove, the combination of the expanded lower part F, and the contracted upper part E of the rising flue thereof, with each other and with the diving-flues H and H′, arranged substantially as described.

3. In a three-flued cooking-stove, the aforesaid enlarged and contracted rising flue thereof, arranged in the rear, and overlapping the diving-flues H and H′, substantially as described.

4. The extension G of the oven of a three-flued cooking-stove, to the rear plate A of the same, between the diving-flues H and H′ thereof, substantially as described.

5. The construction of the water-tank or reservoir D of a cooking-stove, at its front side, where adjoining the rear end of the stove, with a recessed contracted flue, E, therein, substantially as and for the purpose described.

6. The combination, with each other, of the water-reservoir D, its recessed contracted rising flue-part E, the expanded rising flue-part F, the diving-flues H and H′, and the damper *a*, all constructed and relatively arranged, substantially as and for the purpose described.

ROBT. SCORER.

Witnesses:
ROBT. HAM,
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