

E. H. BATES.  
Cooking-Stove.

No. 162,883.

Patented May 4, 1875.

Fig. 1.

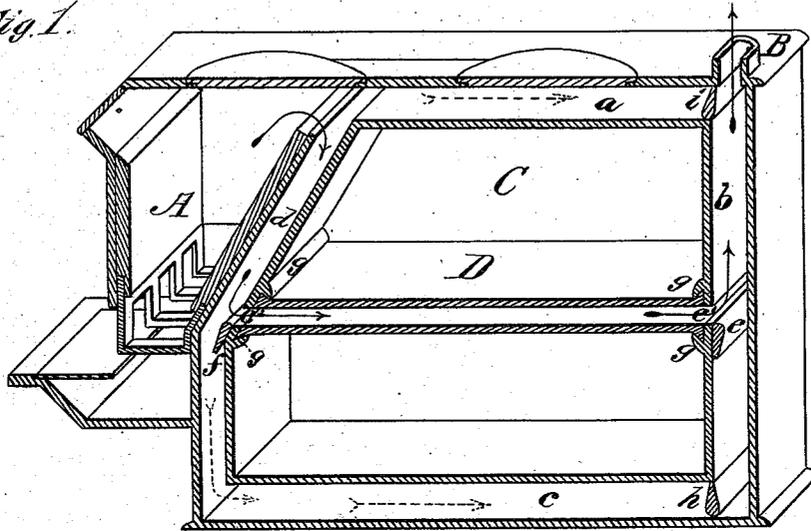


Fig. 4.

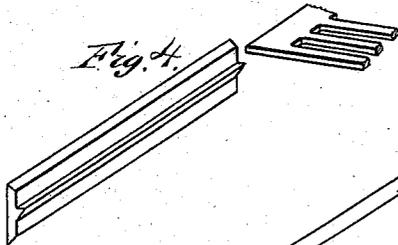


Fig. 2.

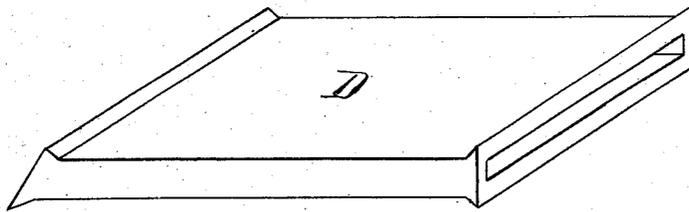
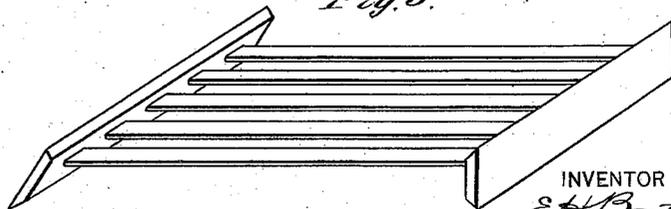


Fig. 3.



WITNESSES

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INVENTOR

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Fig. 5.

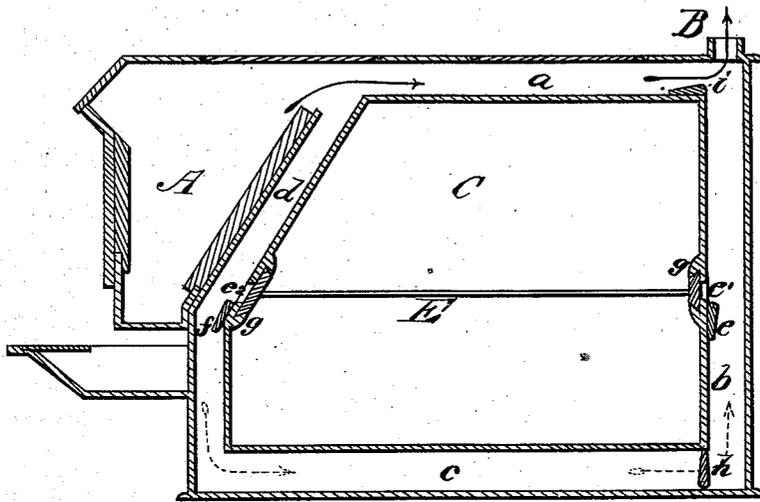
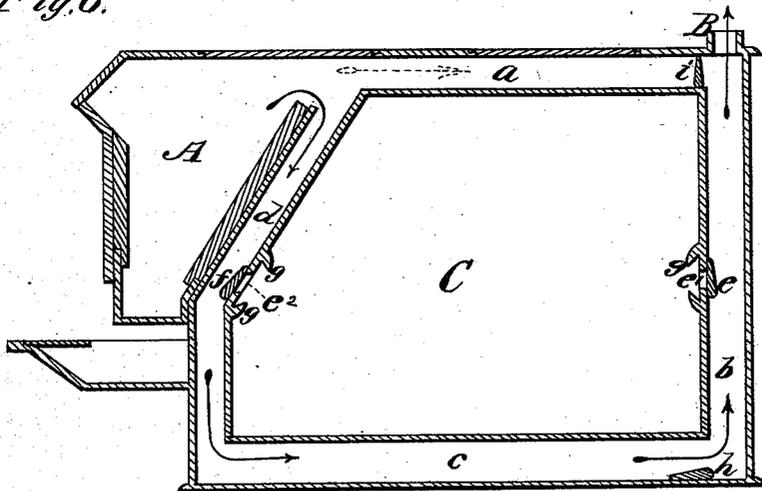


Fig. 6.



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# UNITED STATES PATENT OFFICE.

EMORY H. BATES, OF WASHINGTON, D. C., ASSIGNOR OF ONE-HALF HIS  
RIGHT TO NORVAL E. BATES, OF SAME PLACE.

## IMPROVEMENT IN COOKING-STOVES.

Specification forming part of Letters Patent No. 162,883, dated May 4, 1875; application filed  
March 10, 1875.

To all whom it may concern:

Be it known that I, EMORY H. BATES, of Washington, in the county of Washington, District of Columbia, have invented a new and valuable Improvement in Cooking-Stoves; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a vertical perspective sectional view of my stove. Fig. 2 is a detached perspective view of the improved slide. Figs. 3 and 4 are detail views. Figs. 5 and 6 are vertical sectional views.

This invention has relation to cook stoves and ranges; and it consists in the employment of a hollow flue partition in combination with front, back, bottom, and top flues, and with valves suitably arranged for obtaining a direct draft, an indirect draft through the front, bottom, and back flues, or a draft through said hollow partition, as will be hereinafter explained.

My object is mainly to make a partition which forms two ovens in the stove, afford a broad sheet flue for the purpose of more uniformly distributing heat in the ovens, and utilizing fuel.

The body of the stove is composed of four double walls forming four flues, *a b c d*, with a fire-chamber, A, at the upper part of the front wall, and a smoke-pipe, B, at the upper part of the back wall. The said four walls inclose a large space, forming an oven, as shown in Fig. 6, which oven is provided with doors C, and can be ventilated by opening a valve, *e*, and allowing the odors arising from cooking to escape into the flue *b*, and from thence into the smoke-pipe B. Directly opposite the passage *e*<sup>1</sup>, which is provided with a valve, *e*, and in a horizontal plane therewith, is a passage, *e*<sup>2</sup>, provided with a valve, *f*. The passage *e*<sup>2</sup> is made through the inner plate of the front double wall. Above and below the passages *e*<sup>1</sup> *e*<sup>2</sup>, and in close relation thereto, are flanges *g g*, which form channels for receiving the open ends of a horizontal sheet flue, D, which flue, when in place, separates the large oven (shown in Fig. 6) into two small ovens, (shown in Fig. 1,) and affords

a support for articles placed in the upper oven.

This flue D may be removed, and a grated or a single plate shelf, E, substituted for it, as shown in Fig. 5.

Fig. 3 shows a grated shelf, the bars of which may be solid or hollow.

At the lower end of the back flue *b* is a valve, *h*, and near the rear end of the top flue *a* is a valve, *i*.

The operation is as follows: When the flue-shelf D is removed, and the valves are adjusted as shown in Fig. 6, all the heated products will pass through the front, bottom, and back flues; and, if desired, by adjusting the direct outlet-valve *i*, part of the heated products may be conducted over the top of the oven, as indicated by the dotted arrow in Fig. 6.

When the shelf D is in its place, and the valves are arranged as shown in Fig. 1, the heated products will pass from the fire-chamber half-way down the front flue *d*; thence through the shelf D, and up through the back flue.

If valve *h* be opened, and valve *i* shut, the products of combustion will descend to the lower end of the front flue; thence pass to the back flue, and pass up the back flue, and finally escape out the pipe B.

It will thus be seen that meats may be roasted in one oven, while baking can be conducted in the other oven; also, that the upper oven can be used for cooking, and the lower oven be heated only sufficiently to serve as a warming-closet.

I claim—

1. The combination, with the oven-wall, having the openings of the hollow sliding flue-shelf D, and the devices for closing the joints, of the shelf with the oven-wall, both above and below, substantially as described.

2. In a stove having flues *a b c d*, the removable hollow flue-shelf D and the valves *e f h i*, all combined and arranged substantially as and for the purposes set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

EMORY H. BATES.

Witnesses:

EUGENE W. JOHNSON,  
ROBERT EVERETT.