R. LITTLE.

Stove.

No. 46,422. Patented Feb. 14, 1865.

Fig. 1.

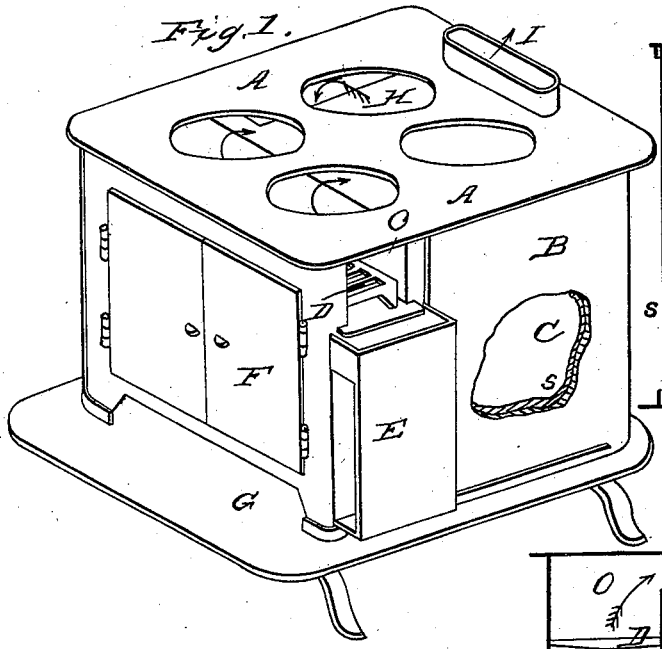


Fig. 4.

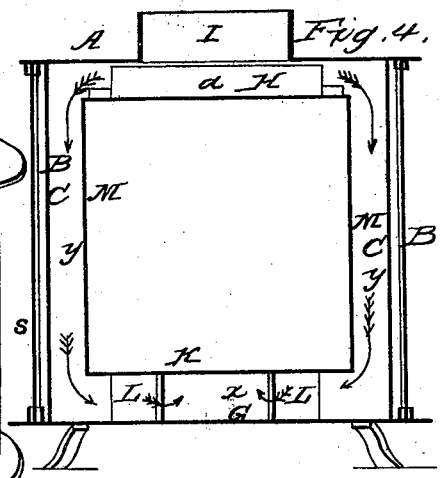


Fig. 3.

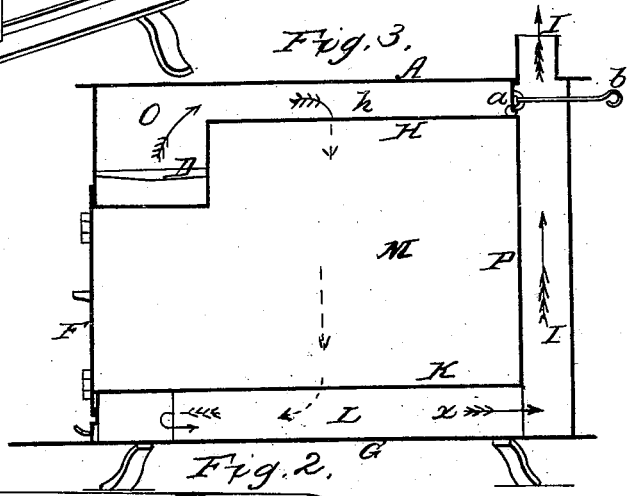
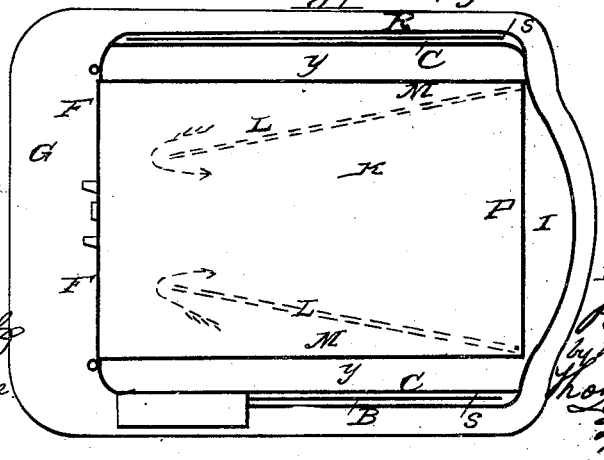


Fig. 2.



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UNITED STATES PATENT OFFICE.

R. LITTLE, OF CANTON, OHIO, ASSIGNOR TO HIMSELF AND SAMUEL LITTLE.

IMPROVED STOVE.

Specification forming part of Letters Patent No. **46,122**, dated February 14, 1865.

To all whom it may concern:

Be it known that I, R. LITTLE, of Canton, in the county of Stark and State of Ohio, have invented certain new and useful Improvements 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 accompanying drawings, in which—

Figure 1 represents a perspective view of said cooking stove; Fig. 2, a horizontal section through the same. Fig. 3 represents a longitudinal vertical section through the same, and Fig. 4 a vertical cross-section through the same.

My invention consists in providing the closed sides of the stove with removable reflector-linings, by means of which the heat can be concentrated on the stove or permitted to escape into the room to be heated, as circumstances may require.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A represents the top plate of the stove. C represents the side plates; G, the bottom plates; D, the grate; O, the fire-chamber, which opens at the side of the stove, and E the ash-pan. The oven is in the center of the stove, and is composed of the side plates, M, bottom plate, K, top plate, H, rear plate, P, and doors F, which open in front. The oven is thus surrounded by flues on all sides, except the front, and is not only heated with great uniformity, but a great saving in the amount of fuel is effected, as the heated gases consecutively circulate through all the flues, and thus spend the greater part of their heat before escaping through the chimney. This will be more fully understood by explaining the operation of said flues.

The smoke and heated gases from the fire-chamber O pass up into the top flue, *z*, between the plates A and H, and being arrested in their direct passage to the chimney by the damper *a*, they divide and descend down the side flues, *y*, of the stove, which are formed by the plates M and the closed side plates, C, of the stove. They are prevented from passing directly into the bottom flue, *x*, by the angular flue-partitions L, which cause the smoke and heated gases to pass around the front edges of said flue-partitions, and to pass thence through the bottom flue, *x*, and up the rear flue, I, into the smoke-pipe, as indicated on the drawings by the red arrows, spending in their passage the greater part of their heat and heating the oven uniformly on all sides.

B B represent plates which are set in suitable grooves outside the plates C, so as to leave between them and said plates a space of about one inch in width. These plates can be readily applied or removed by being simply slipped in their grooves, and are not permanently fastened to the stove. They serve as an outside lining, and are of the greatest service in regulating the heat of the stove as well as of the room to be heated. When the lining is applied to the stove, the heat as it radiates from the sides C is reflected inward by the lining B, and is thus concentrated on the stove, and a proportionate small amount escapes into the room. This is of great advantage when the stove is used for baking in summer, as the room is not heated, and the greater part of the heat being concentrated in the stove a considerable saving in the amount of fuel is effected.

In winter, when the room is to be heated, the lining-plates B may be removed, and the heat radiates from the sides of the stove. If necessary, the lining-plates can be used in winter also when a high heat is required in the oven.

I have found that a more perfect reflection of the heat on the stove takes place by applying tin sheets S to the inner sides of the lining-plates B. These tin sheets are represented on the drawings by red lines, and in using them very little heat escapes from the oven.

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

1. The application to stoves of the removable lining-plates B, substantially as and for the purposes described.

2. The removable side linings, B, in combination with the closed sides C of the stove, substantially as herein described.

3. The combination of removable linings B of the stove with reflecting-surfaces S, for the purpose of concentrating the heat on the stove, substantially as herein described.

R. LITTLE.

Witnesses:

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