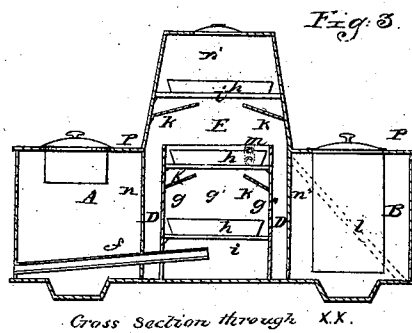
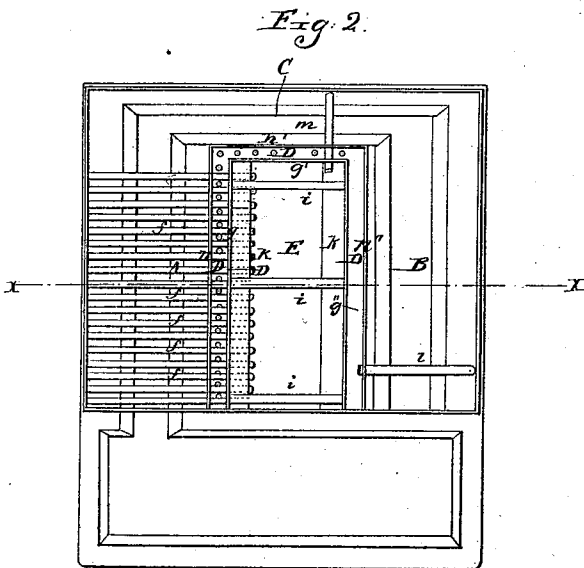
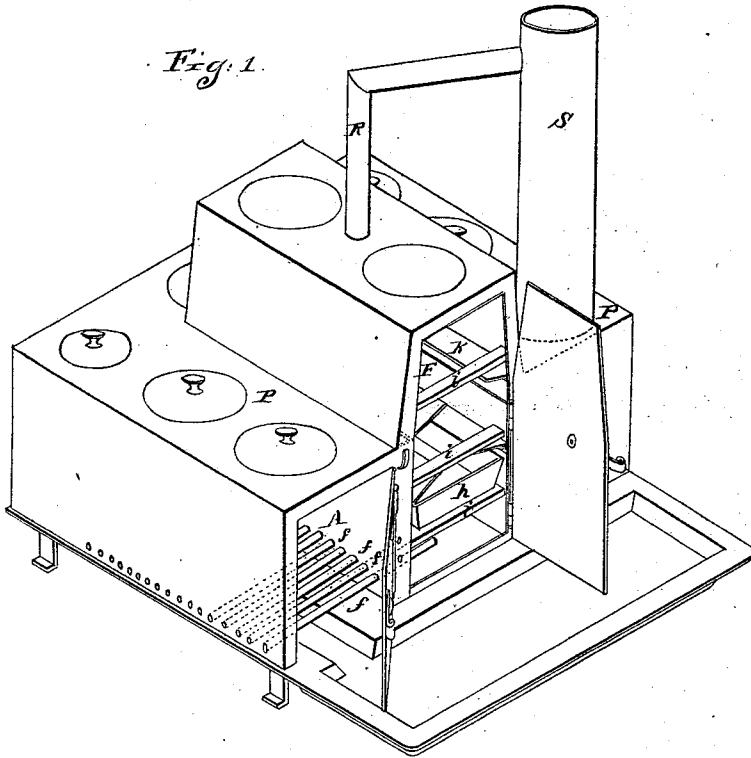


L. B. Field,

Cook Stove.

No. 5943.

Patented Nov. 28. 1848.



UNITED STATES PATENT OFFICE.

LEONARD B. FIELD, OF WEST SPARTA, NEW YORK.

COOKING-STOVE.

Specification of Letters Patent No. 5,943, dated November 28, 1848.

To all whom it may concern:

Be it known that I, LEONARD B. FIELD, of West Sparta, in the county of Livingston and State of New York, have invented a new and Improved Cooking-Stove; and I do hereby declare the following to be a full, clear, and exact description of the construction and operation thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1, is a perspective view, Fig. 2, a top view, with the upper plates removed, and Fig. 3, a vertical transverse section in the line $x-x$ of Fig. 2.

Similar letters indicate like parts in all the figures.

The oven E, occupies nearly the central portion of my improved stove; it rises from the bottom plate of the stove to about double the height of the fire chamber A, located at one side of it.

A flue space C, B, corresponding in depth with the depth of the fire chamber, leads from the rear end of the fire chamber continuously around the rear end of the oven, and along the entire length of its side opposite the fire chamber to the smoke pipe S.

The plate P, forms the top of the fire chamber and of the flue space C, B.

Apertures are formed in the plate P, for the reception of the boilers, which descend into the fire chamber and flue space. The boilers which are adapted to the apertures immediately over the chamber of combustion, descend, but a short distance below the stove plate P, but the boilers that are adapted to the apertures in P, opening into the flue space C, B, descend nearly to the bottom plate of the stove as represented in Fig. 3, leaving a sufficient amount of space at their sides for the gaseous products of combustion to pass from the fire chamber to the smoke pipe and presenting a very large amount of surface to their heating action.

Lining plates I, I', I'', are placed at the sides and rear end of the oven, rising to the same height of the fire chamber, forming the continuous air space D between them, and the main side and end plates n, n', n'' , of the oven.

The oven is raised to the proper temperature by means of hot air, heated in its passage through the tubular grate bars f, f , of the fire chamber, and by radiation from the inner side of the fire chamber and flue space

into the air space D, at the sides of the oven. The tubular grate bars L, L, open through the outer side plate of the fire chamber, and inclining slightly upwards, pass through the same, and through the plate n , the space D, and the lining plate g , into the oven as shown in Fig. 3. Transverse pieces i, i , are secured to or rest upon ledges secured to the sides of the lining plates, g, g'' , and plates n, n'' , of the oven for the reception of the pans h, h ,—or plates—for the reception of the articles to be baked. The tubular grate bars L, L, terminate in a line nearly under the central portion of the lower pan h ; and the hot air discharged therefrom, passes up on every side of the pan, and is gathered to the center of the bottom of the next pan above, by the wings k, k , projecting from the lining plates g, g'' ; and passing around the sides of the second pan, the hot air is again gathered to the center of the bottom of the third pan by the wings k, k , projecting from the plates n, n'' , around which it passes to the top of the oven.

The hot air is drawn from the top of the oven into the smoke pipe S by means of the pipe R, and thereby a constant circulation is kept up through the tubular grate bars L, L, and through the oven.

To prevent injury to the plate n , forming the inner side of the fire chamber, by the intense action of heat, and to cause a uniform temperature in all parts of the oven, I drill a series of small holes through the bottom plate of the stove into the space D, at the side of the fire chamber and at the rear end of the oven, as shown in Fig. 2.

Air pipes m, l , more or less in number pass diagonally through the flue space C, B, opening through the bottom plate of the stove and into the oven, as shown in Figs. 2 and 3, which may be opened and closed at pleasure by valves. I generally insert thimbles, or cases, of sheet-iron into the apertures in the plate P, leading into the flue space, for the reception of the boilers; for the purpose of preventing the boilers from becoming foul by the deposit of soot.

I shall generally close the top of the air space D, at the side of the fire chamber and at the rear end of the oven, for the purpose of conducting the air heated therein, (entering at the small apertures in its bottom,) into the opposite side of the oven; thereby causing a uniform temperature therein. I

shall sometimes dispense with the lining plates g' , g'' , at the rear end and on one side of the oven, and only use the lining plate g , on the side next to the fire chamber.

5 Apertures are formed in the top plate of the oven, as shown in Figs. 1 and 3, for the reception of cooking utensils.

In constructing my improved stoves of small size, I shall make the flue space B, 10 at the side of the oven, very narrow, merely of sufficient capacity to convey the smoke and gaseous products of combustion to the smoke pipe; and shall make the flue space C, at the rear of the oven of sufficient width 15 to receive boilers. And when great compactness is desired, I shall make the entire

flue space C, B, narrow, from the fire chamber to the smoke pipe.

Having thus fully described my improved cooking stove, what I claim therein as new 20 and desire to secure by Letters Patent, is—

The location of the oven by the side of the fire chamber, in combination with the extension from the rear end of the fire chamber of the flue space, past the rear end and 25 along the side of the oven to the smoke pipe, substantially in the manner and for the purpose herein set forth.

LEONARD B. FIELD.

Witnesses:

Z. C. ROBBINS,
GEO. W. BILLINGS.