L. S. BACON.

Cooking Stove.

No. 5,504.

Patented April 11, 1848.

Fig. 1.

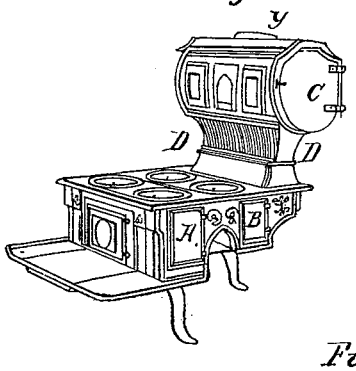


Fig. 2.

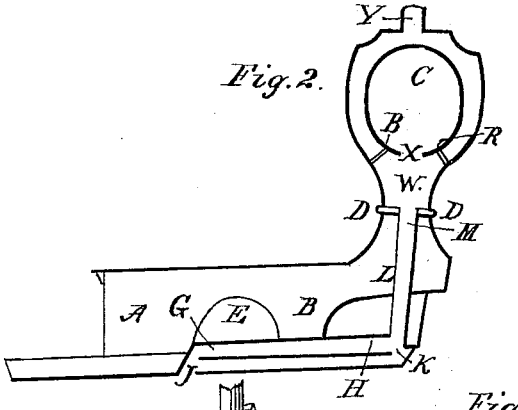


Fig. 3.

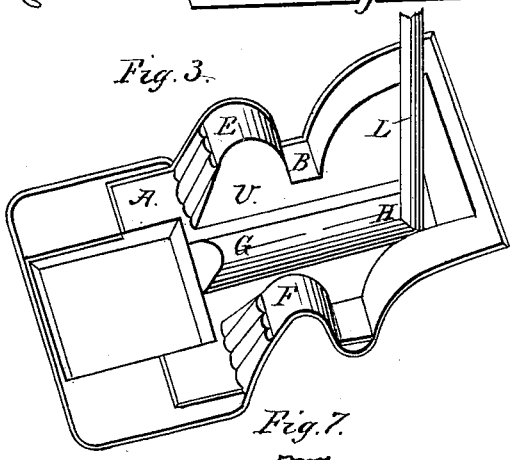


Fig. 4.

Fig. 5

Fig. 6.

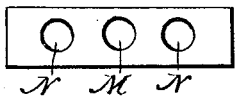


Fig. 7.

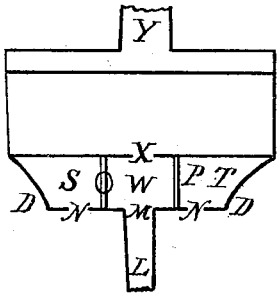


Fig. 8

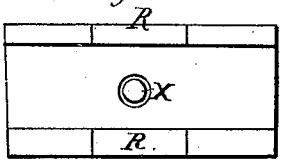


Fig. 9.

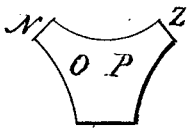
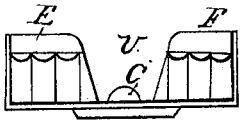


Fig. 10.



UNITED STATES PATENT OFFICE.

L. S. BACON, OF LE ROY, NEW YORK.

COOKING-STOVE.

Specification of Letters Patent No. 5,504, dated April 11, 1848.

To all whom it may concern:

Be it known that I, LATHROP S. BACON, of Le Roy, in the county of Genesee and State of New York, have invented a new and useful Improvement in Cooking-Stoves; and I do hereby declare that the following is a full and exact description of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a perspective view; Fig. 2, a longitudinal section of the stove and oven through the center and showing particularly the channel by which fresh air passes from below the bottom of the stove to the interior of the oven. Fig. 3 is a perspective view of the bottom plate of the stove, showing the two elevations E F which separate the two fire chambers A B and showing the space U between the said elevations, which constitutes the horizontal communication between the two fire chambers; and also is shown within this open space U, centrally between the two elevations E F the semi-tubular elevation which constitutes the upper part of the air channel. Fig. 4 represents the bottom plate of the air channel detached. Fig. 6 represents the horizontal partition plate which is placed between the stove and oven, it has three openings or apertures. Fig. 7 is a longitudinal section of the oven with a representative of two vertical partition plates O P which extend from the horizontal partition plate. Fig. 6 is the lining of the oven, as hereinafter fully described. Fig. 8 is a horizontal section of the oven representing the space between the outside casing and the lining of the oven, also the hot air aperture X in the bottom of the lining. Fig. 9 is a representation of one of the two vertical partition plates O P (both being exactly alike) these vertical partition plates O P extend from the horizontal partition plate Fig. 6 and uniting with it on each side of the center aperture and extending to the lining of the oven—the top part of these plates being made in a form to fit tightly against the lining of the oven. Fig. 10 is a front sectional view of the bottom plate of the stove showing the two elevations E F and the semitubular elevation G H and also the open space U; and Fig. 5 represents a transverse section of the air channel, showing the position of the grooves, or dovetails which hold to its place the bottom plates J K of the air channel.

This stove is constructed with two fire chambers A, and B; it has four boiler holes on top and an elevated oven C; the two fire chambers are sufficiently separated by the two elevations E F in the bottom plate of the stove so that either may be used separately—these elevations are on each side of the open space U and are shown in Fig. 3 and Fig. 10 at E F, also in Fig. 2 at E. The open space U located between the elevations E F constitutes a horizontal communication between the two fire chambers A and B by means of which a central draft may be communicated to the rear fire chamber from the front part of the stove, and also it forms a communication or space through which the fire may be moved at pleasure from one fire chamber to the other thereby rendering the use of two fire chambers in one stove the more convenient and useful.

In the bottom of the open space U and centrally between the elevations E F is a longitudinal semi-tubular elevation G H which constitutes the upper side of an air channel and extends horizontally to the rear part of the stove. On the under side of the bottom plate Fig. 3 and on each side of the semitubular elevation G H are grooves or dove-tails, which can not be well represented except by a sectional view, which is seen at I I Fig. 5; the object of these dove-tails I I is to receive the edges of an inverse counterpart or curved plate J K. This semi-tubular elevation is closed at G, but has an opening upward at H; but the curved counter part is open at J and closed by a half disk at K, so that the air that is admitted at J is turned upward at H K and is conducted to the oven by the vertical pipe L, which is matched to the horizontal semi-tube at H (covering the opening as shown by Fig. 3) and extends to the center aperture M in the horizontal partition plate Fig. 6. The bottom plate J K, Fig. 4, forming the bottom of the horizontal air channel G H is made of tin plate or other polished metal, for the purpose of reflecting the heat which it receives by radiation from the fire chambers above, and thus increase the heat of the air within the air channel, for it is an established fact that polished metallic surfaces have the property of reflecting heat.

The oven C is constructed nearly in the form of a double cylinder, the outside casing of which is made of cast iron plates and

the lining is made of sheet iron and is placed at such a distance from the casing as to leave a space of an inch or more between the casing and the periphery of the lining as shown by Fig. 8; located at D D between the stove and oven is placed the horizontal partition plate Fig. 6. This partition plate has three vertical openings N M N; the two vertical partitions O P extend from the horizontal plate Fig. 6, to the lining of the oven resting on said plate seen Fig. 6 on each side of the aperture M, and extending to the lining of the oven the space between these two partitions O P forms the apartment W. Extending from one partition plate O P to the other and resting on the branches of them at Z Z is a small plate of iron just wide enough to fill the space between the casing and the lining of the oven. A sectional end view of these small plates is shown at R R, Fig. 2, these plates close the central part of the space between the lining of the oven and the casing and are located at R R Fig. 8. The object of these small plates is to prevent the hot air that is passed into the apartment W by the pipe L from ascending through the space between the casing and lining of the oven to the smoke pipe Y. The apartments S T Fig. 7, on the right and left of the vertical partition plates O P communicate freely with the space between the casing and lining of the oven, so that the smoke and heated gases from the fire chambers ascend through the apertures N N the apartments S, and T the space between the casing lining of the oven to the smoke pipe Y above the oven. But the current of air which ascends from below the bottom of the stove (entering at J) through the horizontal air channel G H J K the vertical pipe L and through the vertical aperture M to the apartment W is conducted into the interior of the oven through the aperture X and being intensely heated in its passage tends to increase the heat in the oven—the current of air so entering the oven being at a higher temperature than it would be if cast iron, or other material were used for the bottom of the air channel J K than polished metal.

I do not claim the elevated oven, nor the introduction of heated air into the oven, nor the duplicate fire chambers; but

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

1. The central horizontal communication or space U in combination with two fire chambers A, and B, constructed substantially as herein described and for the purposes herein fully set forth.

2. And also I claim the construction of the air channel G H J K the upper part of which consists of a semi-tubular elevation in the casting of the bottom plate of the stove and the bottom part of the channel consisting of a polished or lustrous metallic plate in the manner and for the purposes herein fully set forth.

LATHROP S. BACON.

Witnesses:
C. SUNDERLAND,
E. ALLEN.