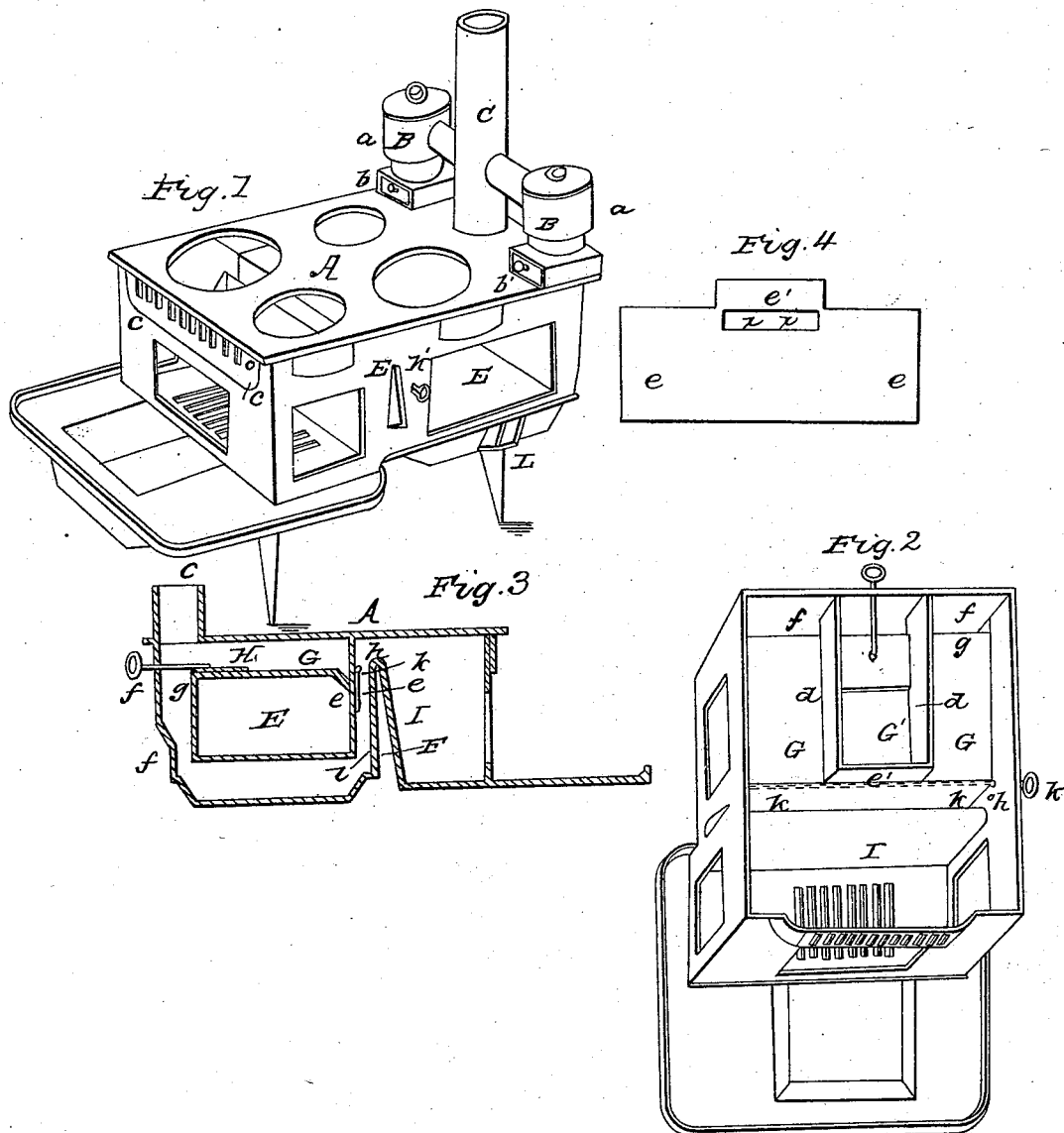


H. STRICKLAND.

Cooking Stove.

No. 1,651.

Patented June 27, 1840.



# UNITED STATES PATENT OFFICE.

HORACE STRICKLAND, OF BRADFORD, VERMONT.

MANAGEMENT OF THE DRAFT, &c., IN COOKING-STOVES.

Specification of Letters Patent No. 1,651, dated June 27, 1840.

*To all whom it may concern:*

Be it known that I, HORACE STRICKLAND, of Bradford, in the county of Orange and State of Vermont, have invented certain Improvements in the Manner of Constructing Stoves for Cooking, by which improved construction the advantages of two different plans are combined in one stove, which stove is thereby equally adapted for use at all seasons of the year; and I do hereby declare that the following is a full and exact description thereof.

In the accompanying drawings Figure 1, is a perspective view of the exterior of my stove.

The top A, I make of one horizontal plate, and usually with four boiler holes, which, if preferred, may be furnished with elevated conical rims.

B, B, are two furnaces which stand over two openings prepared for them in the back end of said plate, and these are connected to the exit pipe, C, by the small pipes D, D, through which the draft from them escapes. These furnaces are provided with grate bars which occupy the offsets at *a, a*, and below this grate they are each furnished with a small drawer, as shown at *b b*, which serve to catch the ashes which fall through said grates, and also serve as dampers and regulators to the fire which may be kindled in the furnaces. The fire chamber in front of the stove does not differ from such as have been previously made and used. It has folding doors in front, and a door at each end, the places for which are shown in the drawing. I usually, also, make a slide grate at *c, c*, in front, to reflect light, and use a sliding hearth to cover the ash pit as in other stoves. The grate of the fire chamber I make to rise upon ledges, so that it may be placed near to the boilers, and contain less fuel when required for summer use.

The oven E, is surrounded by flues at the top and bottom, and in front and rear, which are governed by valves, the peculiarities in the arrangement of which will be presently explained. To prevent the undue heating of the front plate of the oven I have an open space between the back plate of the fire chamber, and the fore plate of the fore oven flue, which space is entirely open at bottom, and the opening F, at the side also leads into it, thus admitting a free circulation of air through this space. By this provision

the back plate of the fire chamber is also prevented from burning out.

The flue, or space, leading from the fire chambers to the back end of the stove immediately below the top plate A, I divide into three parts by vertical partitions extending from front to back; and by means of suitable dampers I direct the draft along these spaces in such a manner as perfectly to regulate the heat. Fig. 2, is a top view of the stove with the top plate removed, for the purpose of showing the arrangement of these flues, and the other parts thereby brought into sight.

G, G', is the top plate of the oven, and *d, d*, partitions which extend from the front oven plate *e, e*, to the back plate of the stove *f, f*. Between the back plate of the oven at *g, g*, and the plate *f, f*, there is a descending flue, which is continued under the oven, and up the front of it, where it opens at *h, h*. In Fig. 3, which is a vertical section along the middle of the stove, from front to back, this course of the flue is shown, the same letters being used in each of the figures to designate like parts.

H, is a sliding damper which is used to close the passage from the middle division of the upper flue into the back descending flue when required.

The front plate of the oven *e, e*, shown separately in Fig. 4, has an elevation at *e'* which closes that end of the middle top flue, while the two side divisions are left open for a direct draft from the fire chamber. An opening in the plate *e, e*, at *i, i*, allows a passage through it into the fore end of the middle top flue, as shown at *j*.

I, is the back plate of the fire chamber, between which and the fore plate of the oven flue is the open space F, Fig. 3, above mentioned.

A valve or damper *k*, extends along the opening of the front oven flue, its upper edge being shown by the dotted lines in Fig. 2, which damper is turned by the handle *k'*. When it lies against the plate *e*, it allows a free passage up or down the front flue, and closes the opening *i*; but when turned against the plate *e*, it closes the front flue, and leaves the passage *i, j*, open into the middle top flue.

At L, Fig. 1, an opening is shown for removing ashes from the lower flue. This opening is to be furnished with a stopper.

The depth of the upper flues should be from three to four inches, the back flue and that under the bottom about three inches, the front about two and a half inches.

5 Having thus described the manner of arranging the flues, and other parts of my stove, I now proceed to show their operation and use.

When the two dampers H, and K are made  
10 to close the front and back openings to which they are adapted, (the front damper being turned against the plate L,) the draft passes along the side division over the top of the oven, then down the back, and under the  
15 bottom, and up the front flue, to the opening i, i, through which it is conducted into the middle top space, and back to the exit pipe C. This is the first method of conducting the draft around the oven. The second plan  
20 is by opening, or reversing the position of both the dampers. The main draft will be then directly from the fire chamber down the front flue, under the bottom, and up the back to the exit pipe. A part of the draft  
25 will also pass over the oven, from front to back, along the upper side flues. By the use of these two dampers the draft may thus be conducted around the oven in two different ways, or be carried over it without passing  
30 around it.

The two small furnaces B, B, will be found specially convenient for summer use and they may be used at any time by burning coal or wood in them without interfering with the other parts of the stove.

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What I claim as my invention, and desire to secure by Letters Patent, in the above described stove, is—

1. The particular manner in which I have arranged the flues around the oven, by dividing the upper flue into three parts, and governing the passage of the draft through the middle section by means of the two dampers, operating as herein set forth.

2. I claim, also, the manner in which I have combined and connected the furnaces B, B, with the stove and its flue for the purpose described.

I do not claim the mere carrying of the flue around the oven, nor the dividing of the upper flue into three sections, this having  
50 been before done; nor do I claim the employment of valves, or dampers generally, but I limit my claim in these particulars to the special arrangement made by me of the  
55 said dampers and flues, as herein set forth.

HORACE STRICKLAND.

Witnesses:

ADAMS PRESTON,  
I. B. PICKETT, Jr.