

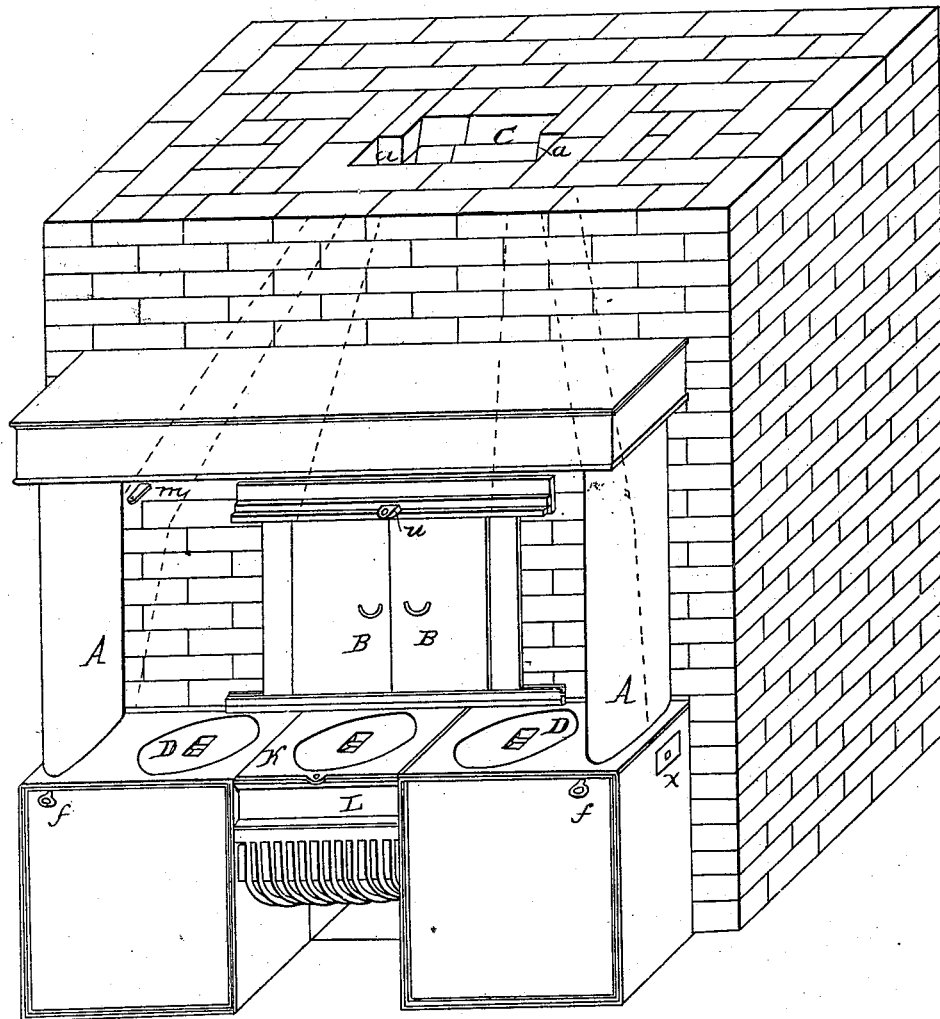
H. H. STIMPSON.

3 Sheets—Sheet 1.

Cooking Range.

No. 1,515.

Patented March 14, 1840.



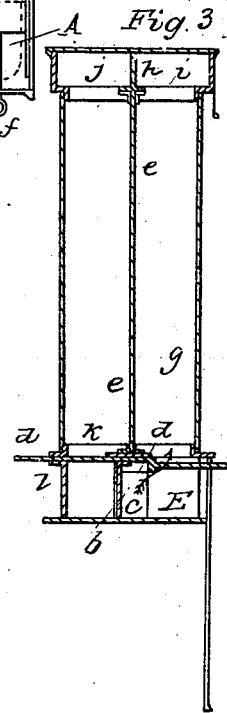
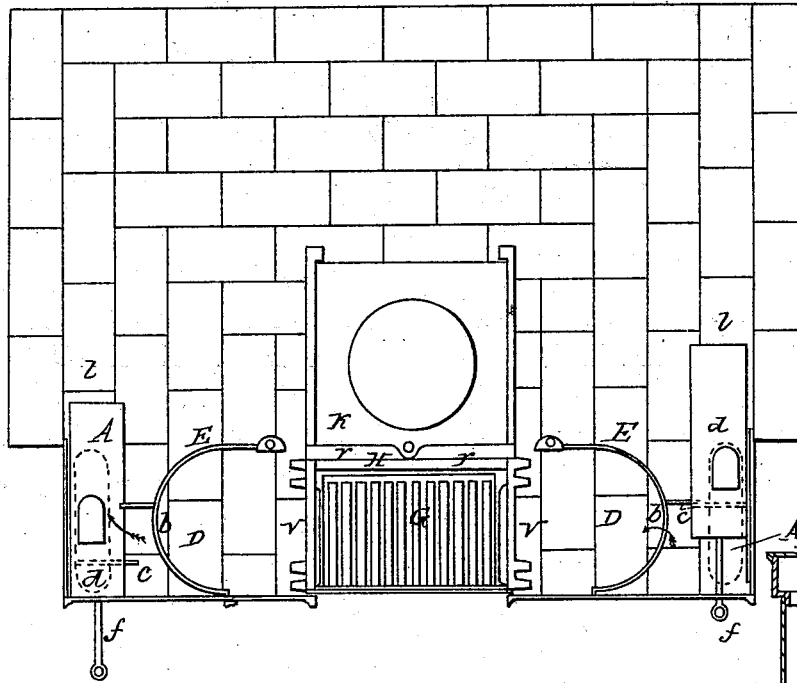
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Fig. 2



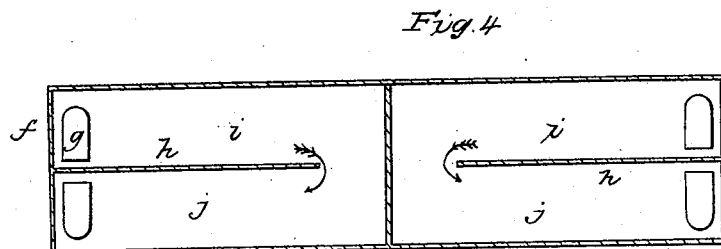
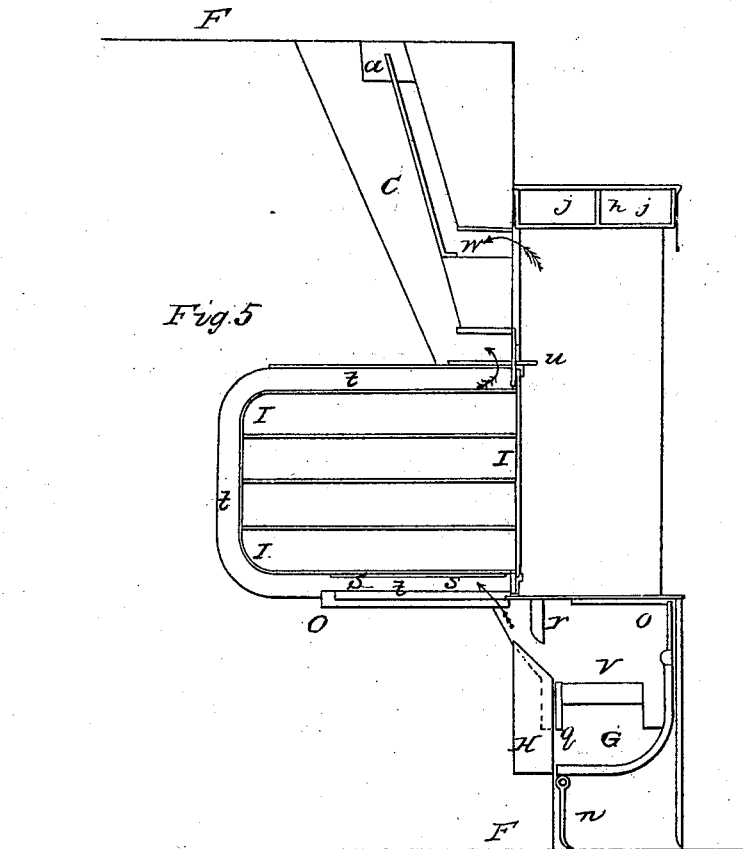
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3 Sheets—Sheet 3.

Cooking Range.

No. 1,515

Patented March 14, 1840.



UNITED STATES PATENT OFFICE.

HERBERT H. STIMPSON, OF BOSTON, MASSACHUSETTS.

COOKING-RANGE.

Specification of Letters Patent No. 1,515, dated March 14, 1840.

To all whom it may concern:

Be it known that I, HERBERT H. STIMPSON, of Boston, in the county of Suffolk and State of Massachusetts, dealer in stoves, have invented certain new improvements in cooking-ranges, whereby a greater quantity of heat (caloric) may be radiated from them to heat the room in which they may be placed; and I do hereby declare that the following is a full and accurate description thereof.

My invention consists in the manner of providing the range with two perpendicular columns to connect the two ends of the range with the mantel and to radiate heat, the columns being hollow and divided into two flues, one for the ascent and the other for the descent of the heated air or flame.

Drawing No. 1, Figure 1, is a front and end view of the range, showing also the masonry which forms the lower part of the chimney to the height of five bricks above the mantel. A, A, are two oval shaped columns connecting the side flues of the range with the mantel and constituting that part of my invention, the object of which is, to increase the radiation of heat. B, B are the oven doors. C is the main flue. a, a, are the entrances of the side flues into the main flue.

Fig. 2, drawing No. 2, is a horizontal section of the range just below the top plates, the brickwork being represented as built up to the height of the bottom of the flues, under the side boilers, D, D. E, E, are pieces of sheet iron bent around the places for the side boilers and fastened to the top and front plates of the range for the purpose of protecting the brickwork governing the passage of the heated air or flame around the boilers. b, b, are the passages from the boilers to the side flues or into the radiating columns. The dotted lines A, A, represent sections of the radiating columns. d, d, are dampers to turn the heated air into the radiating columns, when the heat is wanted in the room, or to stop it from them when it is not wanted. c, c, are perpendicular dampers joined to the lower side of the dampers d, d, and extending to the bottom of the side flues, which flues are covered with plates of iron to make level surfaces for the dampers to move over. The perpendicular pieces c, c, are shown more distinctly in

Fig. 3.

Fig. 3 is a perpendicular section of the

range cut down through one of the radiating columns. e, e, is a partition dividing the column into two flues. c, d, d, is a section of one of the dampers named in Fig. 2. f in all the drawings represents the handles to move these dampers. b is a hole in the sheet iron pieces named in Fig. 2.

Fig. 4 is a plan of the inside of the mantel; h, h, are partitions dividing each half of the mantle into two longitudinal flues, (i, j,) a section of which may be seen in Fig. 3. Now the dampers (d, c,) being pushed in like that at the right-hand end of Fig. 2 and as in Fig. 3, the heated air will enter the front flues of the column (g) and from thence passing into the front flues (i) of the mantle, to the ends of the partitions, (h, h,) then through the rear flues (j, j) of the mantle and down the rear flues of the radiating column and through the dampers (d) at (k) will pass into the side flues (l). The side flues rise nearly perpendicular to m, Fig. 1, where they are furnished with dampers, from thence they open into the flue C at a, a, their direction being shown by the dotted lines Fig. 1.

Fig. 5 is a central and transverse section of the range. F, F, F, is an outline of the lower part of the chimney to the height of five bricks above the mantel. G is the grate. n is a stud attached to the grate, to support the back part of it, its front being supported by a pivot, projecting from each of the two upper corners of the grate, which pivots rest in holes or nicks made in the front ends of the two side plates (o, o, o,) of the fireplace, so that when it is desired to clear the grate, it is only necessary to trip the stud (n,) and pull the lower front of the grate forward, when its whole contents will fall on the ash grate below. One of these pivots is made longer than the other, so that it may be placed in the hole provided for it, and slipped along far enough to allow the other to be entered, then the grate being moved back to a central position may be swung into its place; and the stud (n) being placed perpendicularly will support it. H is a section of a firebrick made of the proper dimensions for the back of the fireplace, and is kept in its place by ledges (q) on the side plates of the fireplace, in front and by the brickwork in the rear. When the back requires renewal it is only necessary to lift out of its place the cross-bar r, r, when the back may easily be removed and another

put in its place, a small quantity of mortar being first spread upon it to cement it in its place. I, I, I, shows a section of the oven, which is made of sheet iron and has a plate of cast-iron S, S, fastened to its bottom to receive and somewhat abate the first and most intense action of the flame on the oven. In order to remove the oven, it must be lifted up, so that the plate of cast-iron on its bottom, will clear the door frame; it may then be drawn out, and the flue easily cleared. *t, t, t*, is the flue around the oven. *u*, is a damper to regulate the draft through that flue. *V* is a passage from the fireplace to the side boilers. *W* is a flue for the escape of the gas and steam arising from the range. *X*, Fig. 1, is a small door for cleaning the side flues. Two or more tubes or funnels may be substituted for each of the columns (*A, A*,) above described, and the effect will be nearly the same, yet I believe the columns to be preferable. *K* is a slide or cover called the blower and is used for increasing the draft of air from below the grate by its being drawn over the grate and stopping the air from entering from above. *L* is a plate of iron to increase the depth of the fireplace above the grate.

The method of using the range together with my improvements is as follows, to wit:—

In order to kindle a fire of anthracite coal the grate should be first about half filled with charcoal or hard wood, which should be laid so compact as to prevent the hard coal from getting below it, it should then be lighted at or near the bottom. The remaining space may then be filled with small size anthracite coal, and the blower (*K*) drawn over it. All the flues should be opened and remain so until the coal has become well ignited, when side and oven flues may be closed, unless the oven is to be used in which case the oven flue should remain either wholly or partly open, this depending on the intensity of heat required in the oven. In broiling or toasting the slide *K* should be pushed back under the oven and all the dampers opened in order that the gas and smoke may pass off. Roasting may be done in the oven by placing the meat in a pan provided with a grate to keep the meat above the liquid in the bottom of the pan, the pan being placed near the bottom of the oven, and the damper in the oven door, and a small valve in the top of the oven being open. Roasting may also be done in a tin kitchen in front of the fire.

In baking bread the side dampers, the dampers in the oven door, and the valve in the top of the oven should be closed. If the oven is too hot at the bottom the slide *K* may be pushed in under it, and if too hot at the top the damper may be partially closed.

To heat flat-irons a pan provided for the purpose with its bottom covered with a thin coat of sand may be placed on over the fire in the grate and the flat irons placed on the sand in the pan, all the dampers being closed unless the gas should escape into the room, in which case the oven damper may be partially opened.

When it is desired to make use of the radiating columns for heating the apartment, the dampers (*d, c*,) must be pushed in, so as to close the direct passage from the side boilers to the side flues, and open the communication into the columns and mantel, this it will readily be perceived will very much increase the power of the range for heating the room. When the range gives out heat enough in the room without the use of the radiating columns the dampers (*d, c*,) may be drawn forward so as to open the direct communication from the side boilers to the side flues, and close the passages into the radiating columns. When these dampers have been moved to the places in which it is wished they should remain, the handles may be unscrewed and taken out, and when the dampers are to be moved the handles (*f*) may be screwed in again.

Having thus fully described the manner in which I construct and arrange the respective parts of my kitchen range, it is to be understood that I have included therein many devices which are common to other ranges, or cooking and heating apparatus, and which I do not therefore, claim as constituting any part of my invention, but

What I do claim is—

The particular manner in which I have constructed the dampers *d, c*, and combined them with the side flues in the brickwork, and with the double flues in the columns *A, A*, and through them with the flues *i*, and *j*, leading half way along the drum, or mantel with which said columns are connected, so that the draft may be passed directly into the chimney, or through the columns and mantel at pleasure, by means of the particular devices hereinbefore described.

H. H. STIMPSON.

Witnesses:

CHARLES P. CURTIS,
WM. R. CURTIS.