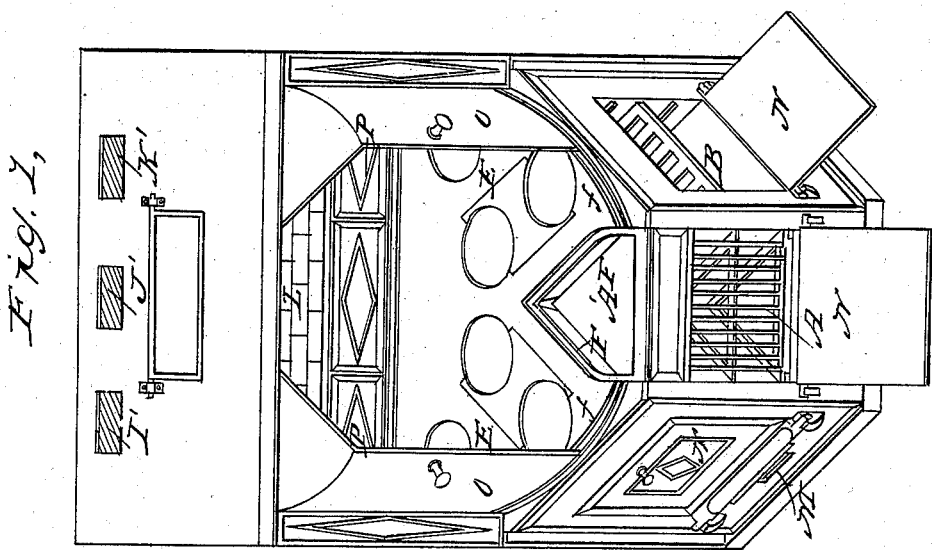
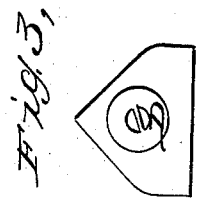
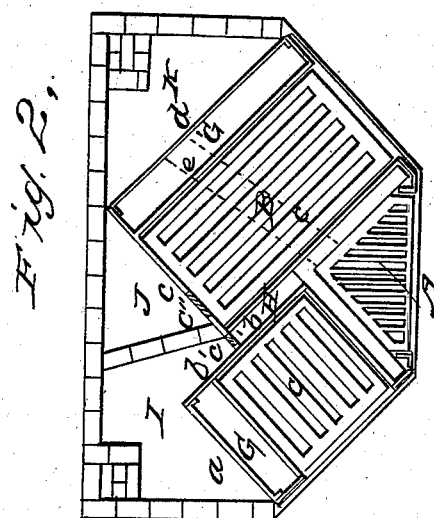
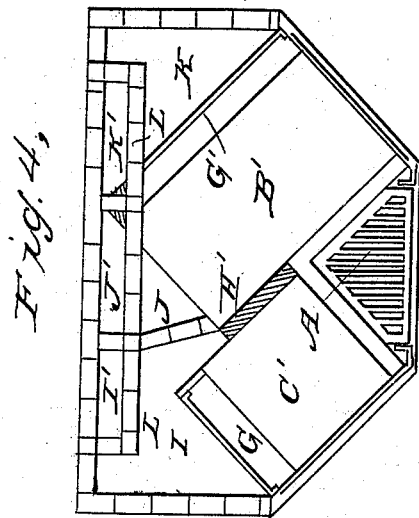


J. FINK.  
Cooking Range.

No. 3,533.

Patented April 10, 1844.



# UNITED STATES PATENT OFFICE.

JULIUS FINK, OF PHILADELPHIA, PENNSYLVANIA.

## KITCHEN-RANGE.

Specification of Letters Patent No. 3,533, dated April 10, 1844.

*To all whom it may concern:*

Be it known that I, JULIUS FINK, of the city of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in the Manner of Constructing Cooking-Ranges; and I do hereby declare that the following is a full and exact description thereof.

In the accompanying drawing, Figure 1 is a front view of my range, in perspective, and Fig. 2, is a horizontal section through the middle of the ovens and the fire chamber, showing the relationship between the triangular fire chamber and the ovens, a relationship by which I am enabled to economize heat, and to have a fire back against one side of each of the ovens, and am also enabled to give a greater depth to one of my ovens than could be attained in a range of the same dimensions if made in the ordinary form. The peculiar shape of the front of my range allows also, a more extended space for boilers above the fire-chamber and oven flues, than is admitted in any other of the same width, and it likewise admits of my inclosing the boiler space by sliding cylindrical doors.

The two ends and the front of my range constitute five sides of an octagon, as will be distinctly seen in the plan, Fig. 2.

A, is the fire chamber, which is triangular; B, and C, are two ovens, one of which, B, extends back to a much greater depth than the other, C; while the latter is as deep as those ordinarily formed in ranges. A triangular plate is made to fit into the space, A', over the fire chamber, and this plate has a boiler opening in it, and a cover adapted to it; it is shown at D, Fig. 3. When this plate is in place, it is in the same plane with the top, or boiler, plate, E, E, of the range.

Fig. 4, is a top view of the range immediately under the plate E, E, showing the top plates of the ovens, and the openings into the descending flues.

F, F, Fig. 1, are the throats, or openings, from the fire chamber into the ordinary flue, or boiler, space between the plate E, E, and the tops of the ovens.

G, G', Figs. 2 and 4, are descending flues, down which the heated air from the fire passes after traversing over the top oven plates B', C'. Below the shaded part, H, Fig. 4, there is an ascending flue, seen also

at H, Fig. 2; this flue is closed at its top H, and the heated air which has descended through the flue G, is to ride in H, nearly to its upper end, before it passes into a flue space, I, behind the range. There are three such flue spaces I, J, and K, which are partitioned off so as not to communicate with each other, but the draft from them passes up through separate flues, I', J', and K', in the brick work at the back of the range; those flues are shown at the top of the range in Fig. 1, where they are to communicate with the common chimney, in the usual manner. The partition wall, L, L, which forms the front of them, is represented as of brick, but it may be of iron; its lower termination is on the top of the back edge of the plate E; below this part, the flue spaces and flues I, I', J, J', and K, K, unite, as shown in Fig. 2. In each of these flues, there are registers, or dampers as in other range flues, so that they may be opened, or closed, at pleasure; these are shown in the dotted lines in Fig. 1.

Below the ovens B, C, there are flue spaces formed in the ordinary manner. These may be cleaned out through openings furnished with stoppers, as at M, Fig. 1.

N, N, N, are drop doors, of the common kind.

The partition plates, a, b, c, d, which bound the vertical flue spaces extend from the boiler plate E, E, to the bottom plate of the range, in the usual manner. Near the bottom of the plate b, there is an opening through it into the ascending flue, H; the shaded part b', may represent the point beneath which said opening is situated, which is in the flue space below the oven. There is also an opening through the plate c, at its end c', close below the covering of the ascending flue space, H, and leading from it into the rear flue space I. The draft from the fire, after passing over the top of the oven C, will, under this arrangement, be down the flue, G, into the flue space under the oven; thence through the opening designated by the letter b', into the ascending flue, H; then through the opening at c', in the upper end of this flue, into the space, I, and the flue I', its passage through which may be governed at will by the register. There is another opening through the plate c, at its lower end, where it makes a part of

the boundary of the flue space under the oven, B. The place of this opening may be immediately below the shaded part *c''*, as it leads from the lower oven flue into the space, 5 J, and thence into the escape flue, J', furnished, also, with a register to regulate it. The draft, in this case, is over the oven, B, down the descending flue G', under the said oven, and through the opening designated 10 by the letter *c''*, as above. Into the third flue space, K, K', there passes a tube, or hollow trunk, from the ash-pit, below the triangular grate; its direction is shown by the dotted lines *e*, *e*. This tube, or trunk, 15 passes through the lower part of the flue space under the oven, and, being open at both ends, allows a free passage of air from the ash-pit into the flue space, which carries with it any smoke, or vapor, that may arise 20 from the ash-pit; when the register in K', is closed, this draft is arrested. The boiler space I inclose by means of doors, O, O, which are segments of cylinders, and slide in grooves *f*, *f*, at their lower edges; at their 25 tops; they are connected to a pin at the center of the circle of which they are segments. At the back part of the recess containing the boilers, there is, below the wall, L, a cast-iron plate P, P, which incloses the three ver- 30 tical flues; this plate is fitted into a groove, and can be taken out at pleasure, thus giving admittance to the flues for the purpose of cleaning them.

Having thus fully described the manner 35 in which I construct my range, and, also, the particular arrangement of its respective

parts, what I claim therein as new, and desire to secure by Letters Patent, is—

1. The manner in which I have combined and arranged the fire-chamber, A, and the 40 ovens B, and C; the former being triangular in its horizontal section, and having one of its backs in contact with one side of the oven B, and the other in contact with one side of the oven C; by which arrangement I am en- 45 abled, not only to heat said oven directly, but also to give to one of them a much greater depth than can be attained in a range of the same length, if made in the usual form. 50

2. I claim in combination with the foregoing, the particular manner in which I have arranged the flues of the respective ovens; the draft of that marked C, after passing down the descending flue, G, as- 55 cending in the flue H, thereby aiding in heating the rear end of the oven B, and, finally, escaping into the flue space I; the flue of the oven B, also descending through the flue G', on one side of it, and escaping 60 into the space J, through an opening herein designated by the letter *c''*.

3. I claim the arranging of the tube, or hollow trunk, for the conveyance of a draft of air from the ash-pit, through the flue 65 space under the oven, B, and into that designated by the letter K, to be conveyed off by the independent flue K'.

JULIUS FINK.

Witnesses:

JOHN THOMPSON,  
R. W. BROOKE.