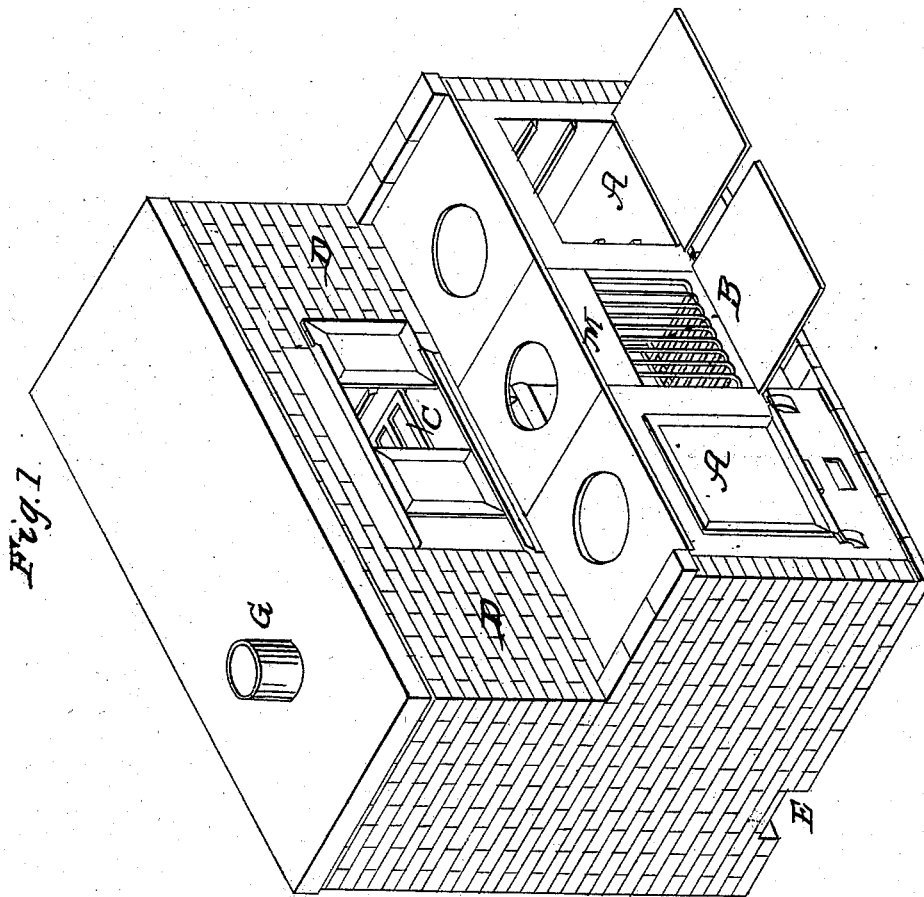
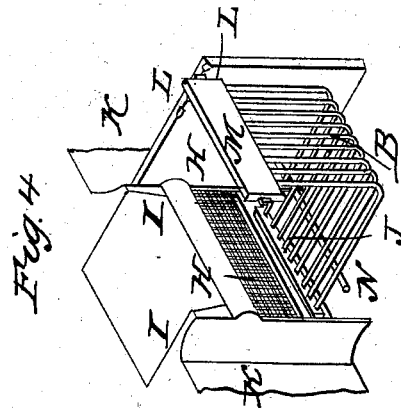


A. W. THOMPSON.

Range.

No. 3,501.

Patented March 20, 1844.



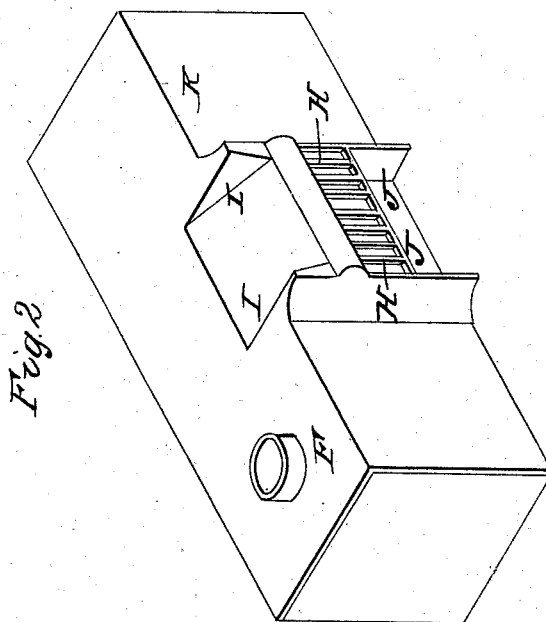
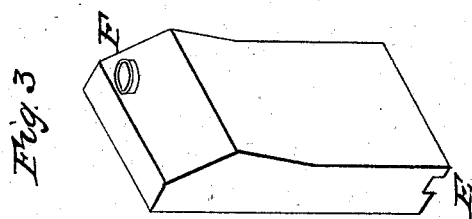
A. W. THOMPSON.

2 Sheets—Sheet 2.

Range.

No. 3,501.

Patented March 20, 1844.



# UNITED STATES PATENT OFFICE.

AMBROSE W. THOMPSON, OF PHILADELPHIA, PENNSYLVANIA.

## KITCHEN-RANGE.

Specification of Letters Patent No. 3,501, dated March 20, 1844.

*To all whom it may concern:*

Be it known that I, AMBROSE W. THOMPSON, of the city of Philadelphia, in the State of Pennsylvania, have made certain new and useful Improvements in the Manner of Constructing Kitchen-Ranges and Grates; and I do hereby declare that the following is a full and exact description thereof.

In my improved kitchen range, there are the usual compartments for baking, and for performing the other operations required in the processes of cooking.

My first improvement in this apparatus consists in the combining therewith, in the manner hereinafter described, of an air-heating chamber, by means of which a large portion of heat which is ordinarily wasted may be applied to the warming of apartments distant from that in which the range is situated. I also apply the same principle to open grates, by combining with them an air heating chamber similar to that used with my kitchen range. I have likewise made an improvement in the manner of regulating the capacity of the fire-chamber, or grate, for receiving and burning the coal in kitchen ranges.

In the accompanying drawing, Figure 1, is a perspective view of a range, within which is contained an iron casting represented in Fig. 2, which casting may be in one entire piece. Fig. 3, represents a similar casting which is intended to form a heated air chamber behind a grate, such as are used in parlors or other rooms.

In Fig. 1, A, A, are two ovens, one on each side of the fire-chamber, B. In the upper compartment, at C, an oven also is represented. These parts, and the flues surrounding the ovens, and by which they are to be heated, and likewise the openings for receiving cooking utensils, or for other purposes, may be formed and arranged in any of the ways adopted in other ranges. The ovens A, A, in the lower compartment extend back only as far as to the line of wall, D, D, the space behind them being occupied by the air-heating chamber, of which the casting, Fig. 2, forms the front and top; its ends, back, and bottom being, in general, formed by the brick work of the fire place. This chamber may, however, have its ends,

back and bottom of cast-iron, forming a box to be placed within the brick work.

E, Fig. 1, is an opening into the heated-air chamber, through which air from the room, or conducted through a pipe leading out of doors, and connected with said opening, may be admitted; and F, Fig. 2, is an opening, furnished with a collar, to which a pipe G, Fig. 1, is to be attached, so as to conduct the air which has been thus admitted, and has been heated, wherever it may be required.

The depth of the fire-chamber, from front to back, is to be considerably less than that of the ovens A, A, and the middle part of the heated-air chamber is made to project forward, as shown by the fire back, H, H; this fire back is represented as furnished with projecting ribs, or protuberances, as is frequently done, to prevent its burning out.

I, I, is the throat of the fire place leading to a flue, in the ordinary manner. Below the fire back, H, H, there is a recess, J, J, this part retiring beyond the plane of the front, K, K, of the heated-air chamber, in order to adapt it to the receiving of the lower and rear part of the grate, which is made to move back and forth, in a manner to be now described.

Fig. 4, shows one of the cheeks, or sides, of the fire chamber and the grate, in place; the other cheek being removed to show the structure the more clearly.

L, L, are notches on the upper ends of the cheeks into which projections from the top bar, or face piece, M, of the grate are to pass.

N, is a bar upon which the bottom and rear part of the grate rests in such a situation as to enable it to pass into the recess at J, J, immediately below the fire back. It will be seen that by merely shifting the top bar of the grate, in the notches L, L, the fire chamber may be enlarged, or diminished, at pleasure.

The heated-air chamber, Fig. 3, will not need to be described, as its structure, and its application behind an ordinary parlor grate, will be apparent, its principle of action being the same as that appended to the range, the difference between the two being only in size and form.

Having thus, fully described the nature of my improvements, and the manner in which they are carried into operation, what I claim as new therein, and desire to secure  
5 by Letters Patent, is—

The manner herein described of altering the capacity of the fire chamber of my improved range by forming notches in the upper ends of the cheeks, and a recess under

the fire back. I do not claim the altering the 10 capacity of such a fire chamber, abstractedly, but limit my claim to the manner of doing this, as herein represented and made known.

A. W. THOMPSON.

Witnesses:

GEO. W. DONOHUE,  
ALFRED P. HESSER.