G. E. WARING & A. S. WOLCOTT.

COOK STOVE.

No. 4,599. PATENTED JUNE 20, 1846.

Fig: 1

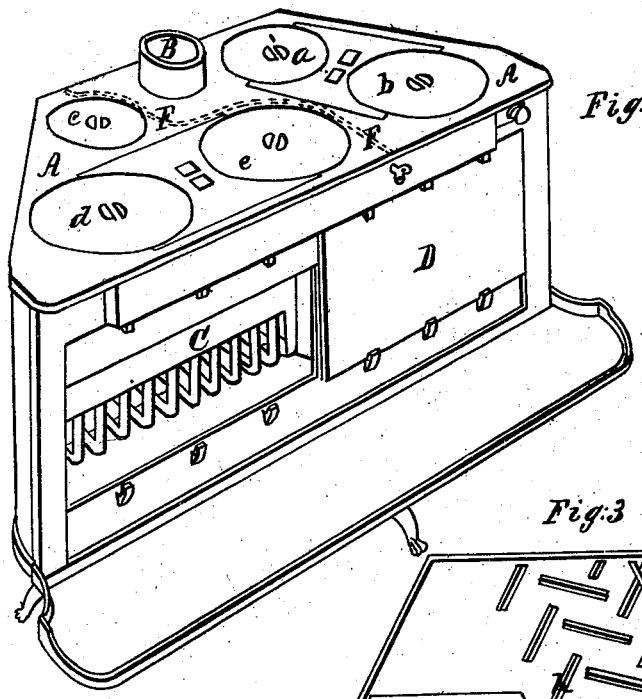


Fig: 3

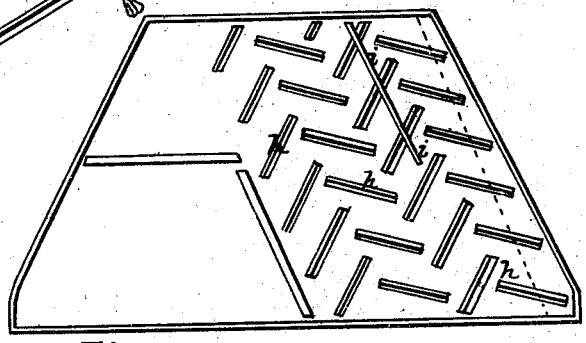
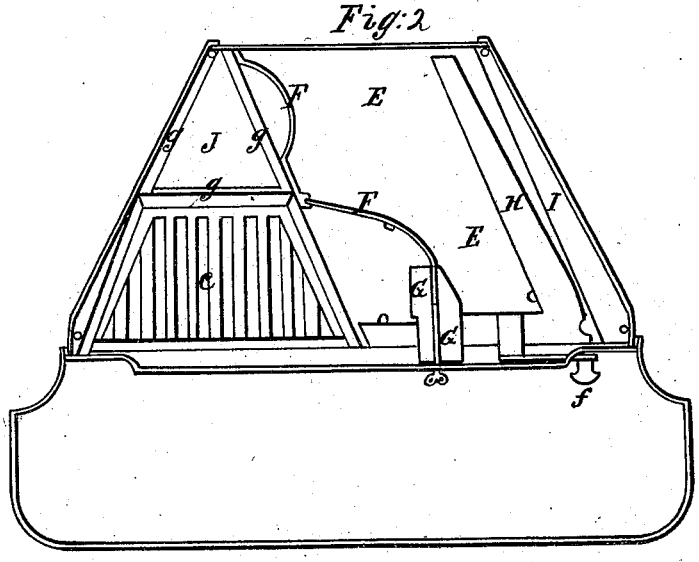


Fig: 2



UNITED STATES PATENT OFFICE.

GEO. E. WARING, OF STAMFORD, CONNECTICUT; SAID GEO. E. WARING AND RICHD. E. PETERSON ADMINISTRATORS OF A. S. WOLCOTT, DECEASED.

KITCHEN-RANGE.

Specification of Letters Patent No. 4,599, dated June 20, 1846.

To all whom it may concern:

Be it known that I, GEORGE E. WARING, of Stamford, in the county of Fairfield and State of Connecticut, and ALEXANDER S. WOLCOTT, a citizen of the United States, now deceased, did jointly invent certain new and useful Improvements in the Manner of Constructing Kitchen-Ranges, the right to which it was our intention to secure by Letters Patent and which intention it is the object of this instrument of writing to consummate for my benefit and for the benefit of the heirs at law of the said ALEXANDER S. WALCOTT, deceased; and I do hereby declare that the following is a full and exact description of the said improved kitchen-range.

This range when made with a single oven as herein described and represented has on one side of it a grate or fire chamber for containing the fuel and an ash-pit beneath it formed in the usual manner; and on its opposite side there is an oven with a flue space above and below it, which two flue spaces communicate with each other by means of a lateral flue space extending from front to back of the range on that side of the oven which is farthest from the fire chamber, said flue being formed by one of the jamb plates and a side oven plate. I will here remark however that we had it in contemplation sometimes to make our range with two ovens, the fire chamber being placed between them, but in this case the principle of construction would not be changed, the additional oven being combined with the fire chamber in a manner precisely the same with that herein described.

Behind the fire chamber there is a descending flue which extends down below the bottom of the oven, and opens into the flue space formed by said oven bottom and the bottom plate of the range. This descending flue space is lined with soap-stone, fireclay, or any other bad conductor of heat in order to prevent the loss thereof. The heated air from the fire descends through said lined flue space, then under the oven, and up the lateral flue space, thence over the oven to the exit or smoke pipe.

To cause the draft to pass directly down the rear flue space, and around the oven as described, there is a partition extending across the upper flue space, and dividing it from the fire chamber so as to include the exit pipe in said flue space; but there is an opening in this partition which is furnished with a valve or shutter which, when open, will allow the heated air from the fire chamber to pass thence to the exit pipe without passing down the rear flue but this valve or shutter is so situated, and the respective openings in the top plate so arranged, as to cause the heated air in its passage to act as effectually on the cooking utensils which are immediately over the oven plate, as when it is conducted down the rear flue and around the oven. There is a sliding damper also so arranged as to close the lateral flue at its upper part, when the oven is not to be used and the heated air is to pass directly to the exit pipe. The form given to the range is such as to adapt it to the sloping jambs of a fire place, and this form facilitates the bringing of the heated air into contact with the bottoms of the cooking utensils as above named. On the upper side of that part of the bottom plate of the range which is immediately below the bottom plate of the oven, there are cast a number of points or projecting ridges which may rise to the height of an inch more or less; the ashes which lodge between these will constitute an excellent nonconducting lining to this part and contribute greatly to the efficiency of the oven and will be retained there when the superfluous portion is removed by a shovel.

In the accompanying drawing Figure 1 is a perspective view of the improved range. Fig. 2 is a top view thereof with the top plate removed and Fig. 3 is a view of the inside of the bottom plate.

A is the top plate with its boiler openings and the exit or smoke pipe B; two of the boiler openings *a* and *b* are into the flue space above the oven and the others *c d* and *e* are over the fire chamber C. These openings are furnished with lift-outs of the ordinary kind, so that they may be enlarged if required.

D is the oven door which is sometimes made to slide in grooves, but it may be hung as a drop door, or otherwise.

f is the handle of a sliding valve which is made to close or regulate the opening of the lateral flue space, as shown distinctly in Fig. 2; in this figure E E is the top oven plate, and F F a partition extending from this plate to the top plate A, so as to divide the compartment containing the fire chamber C from that containing the boiler open-

ing *a* and *b*. In the fore part of the partition F there is a valve or shutter G by which a communication may be established between the two compartments; and by the situation of this valve, and the jamb like form given to the ends of the range, the heated air from the fire chamber will, on its way therefrom to the exit pipe, act with its whole power on the cooking utensils in the compartment over the oven.

H is the sliding valve that is made to close the lateral flue space I. The triangular opening J immediately behind the fire chamber is the descending flue which communicates with the flue space immediately under the oven; which flue space has a lining *g* of soap stone, &c. to prevent the loss of heat. The fire chamber also is similarly lined.

In the inside view of the bottom plate of the oven shown in Fig. 3, *h*, *h*, *h* are the projecting ridges to detain a lining of ashes under the oven; *i i* is the place of a partition plate extending up to the bottom plate of the oven, so as effectually to distribute the heated air which passes under the oven on its way to the lateral flue space. The form of the fire chamber, of the descending flue, and of the oven in horizontal section, are distinctly represented in this figure.

Having thus fully described the manner of constructing and arranging the respective parts of the improved kitchen range, what is claimed as new therein and desired to be secured by Letters Patent is—

The particular manner of arranging and combining the fire chamber, the descending flue in the rear thereof, duly lined as described, and the flue space under the oven so that the heated air shall operate first on the bottom plate of the oven; also the manner of arranging the partition F F and the valve or shutter G so as to compel the heated air, when allowed to pass from the fire chamber to the exit pipe, to operate with its full intensity on the cooking utensils that are placed in the compartment over the oven, and likewise the employment of ridges or points on that part of the bottom plate of the range that is immediately under the bottom oven plate, in the manner and for the purpose herein set forth.

GEO. E. WARING,

As joint inventor with Alexander S. Wolcott and one of the administrators of his estate.

RICHARD E. PETERSON,

As administrator of the estate of Alexander S. Wolcott conjointly with George E. Waring.

Witnesses:

JOHN JOHNSON,

JOHN BISSELL.