

W. E. & H. BLEECKER & S. D. VOSE. 2 Sheets—Sheet 1.
Cooking Stove.

No. 6,564.

Patented July 3, 1849.

Fig. 1

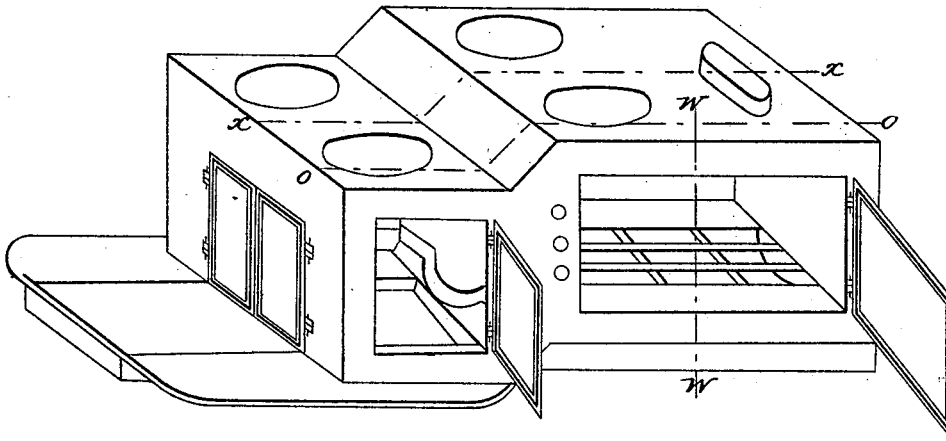


Fig. 2

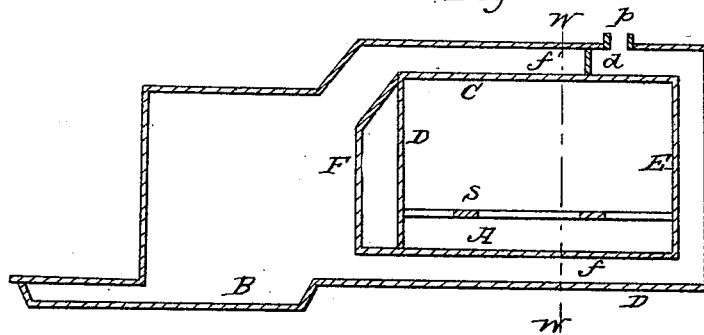
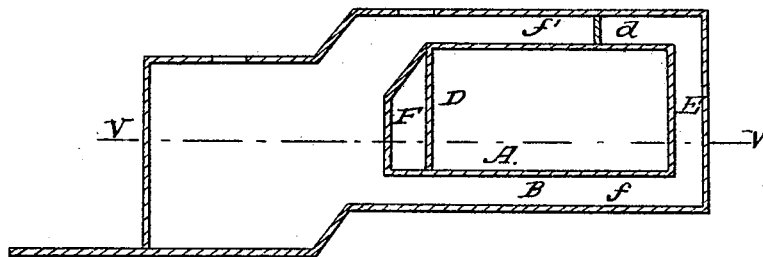


Fig. 3



W. E. & H. BLEECKER & S. D. VOSE. 2 Sheets—Sheet 2.

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Fig. 4

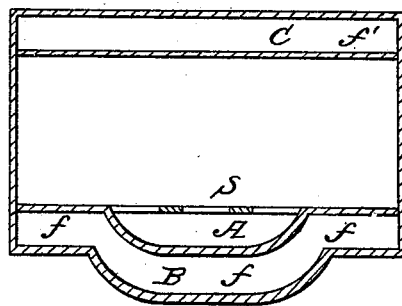
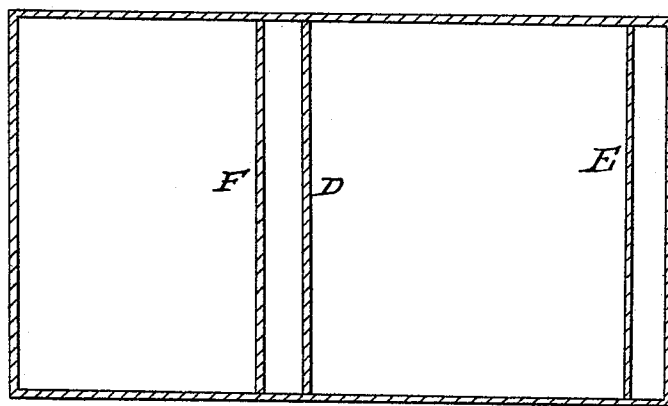


Fig. 5



UNITED STATES PATENT OFFICE.

W. E. BLEECKER, H. BLEECKER, AND SAM. D. VOSE, OF ALBANY, NEW YORK.

COOKING-STOVE.

Specification of Letters Patent No. 6,564, dated July 3, 1849.

To all whom it may concern:

Be it known that we, WM. E. BLEECKER, HENRY BLEECKER, and SAM. D. VOSE, of the city and county of Albany and State of New York, have invented a new and useful Improvement in Cooking-Stoves, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is a perspective view of the stove. Fig. 2 is a vertical longitudinal section at the line *x, x*, Fig. 1. Fig. 3 is a vertical longitudinal section at the line *o, o*, Fig. 1. Fig. 4 is a vertical transverse section at the line *w, w*, Figs. 1 and 2. Fig. 5 is a horizontal section at the line *v, v*, Fig. 3.

Similar letters in the several figures refer to corresponding parts.

This stove consists of a fire chamber, of a lower flue *f* and of an upper flue *f'*; of an oven composed of the plates A, D, C, E, also of a guard plate F and bottom plate B and other necessary parts to complete a stove, viz, top, front, back, sides &c. It is also provided with a valve or damper *d*. When the damper *d* is open the current of fire passes through both flues *f* and *f'*, but principally through *f'*. When the damper *d* is closed, the whole of the current passes through the flue *f*, under the oven, up the back flue, between the back and the plate E, partially over the top of the oven, to the escape pipe or chimney (*p*). Between the guard plate F and the plate D, cold air is admitted in front of the oven through apertures in the sides of the stove.

The invention or improvement, for which letters patent are solicited consists of the elevation of the sides of the flue *f*. The object to be gained by giving this particular shape to each of these plates is to equalize the heat in the flue *f* under the bottom of the oven. The inequality of heat between the outside and the central part of the bottom of the oven in a straight horizontal flue is very great. There are two reasons for this inequality. One is that the focus of heat in the fire chamber is always in the center; and throughout the flue, the same concentration of heat to the center is always found to exist. The other is that the outer portions of the current of fire are of necessity exposed to radiations through the sides of the stove. Also the sides or ends of the oven chamber, itself, are necessarily much exposed, every other part being enveloped by

a chamber of heat, while these ends are protected from the surrounding air only by the oven doors. The manner by which this invention removes this inequality of heat, is by forming the flue *f* so that the outer wings of the flue shall be elevated to a proper level above the central part of the flue. This construction causes the draft at the sides to be stronger than in the center, the wings of the flue being more elevated and nearer channels to the escape pipe (*p*.) The natural concentration of heat at the center is thus broken up and the supply of heat at the sides is largely increased. The depression in the plate A assists very much by its shape, in forcing heat to the sides of the stove. The circular sides of this depression receive the rays of heat at such an angle as to reflect or repel a considerable quantity of heat to the outside of the flue. So that the current of fire is not only passing in more desirable proportions through the wings of the flue, but is continually rising up from the center to the outsides, by its natural tendency to ascend. The chamber or flue *f* is of equal vertical depth throughout, the horizontal and the indented parts of the plates A and B being parallel to each other. The bottom oven plate A has a broken surface on the upper side which is made level by the false plate S which is a light perforated plate movable at pleasure. The plate S also aids very much in restoring the inequality between the center and the outsides, as the article to be cooked in the oven is thus removed from the central and hottest part of the bottom oven plate, which further diminishes the chance of "overdoing" on the inside and "underdoing" on the out.

A moderate fire and a slow process of baking are usually required to prevent the center from overcooking, before the outsides cook enough; but as the outsides can rarely be overheated, if the article be removed from immediate contact with the points liable to cook too much, a more active fire may be used and the baking process much accelerated.

By the elevation of the horizontal wings and the use of the plate S, the inequality of heat is, thus, in practice perfectly reduced. Between the plate S and the depression in the bottom oven plate A a false oven is formed which is very useful for cooking certain articles, the false plate S being removed. This false oven is so well protected

from outward radiation, that without imparting to the whole oven a baking heat, many articles may be cooked, here, with a moderate fire. It is also extremely service-
5 able in connection with the main oven, for vegetable cooking, this latter process going on when the principal oven is in use for other purposes. The false oven is also exceedingly well adapted to the baking of
10 meats and all articles requiring side heat. Being deposited in this false oven they receive heat, laterally, through the circular sides of the depression, which cannot be imparted at the sides of the principal oven.
15 The flue *f* is of simple construction, not

liable to derangement and easily freed from ashes &c.

What we claim as our invention and desire to secure by Letters Patent is—

Making the lower flue (*f*) under the oven, 20 elevated at the outsides, formed between the bottom and the bottom-oven plates B and A, as herein described.

WM. E. BLEECKER.
HENRY BLEECKER.
SAML. D. VOSE.

Witnesses:

HENRY L. WILSON,
JOHN W. SESSIONS.