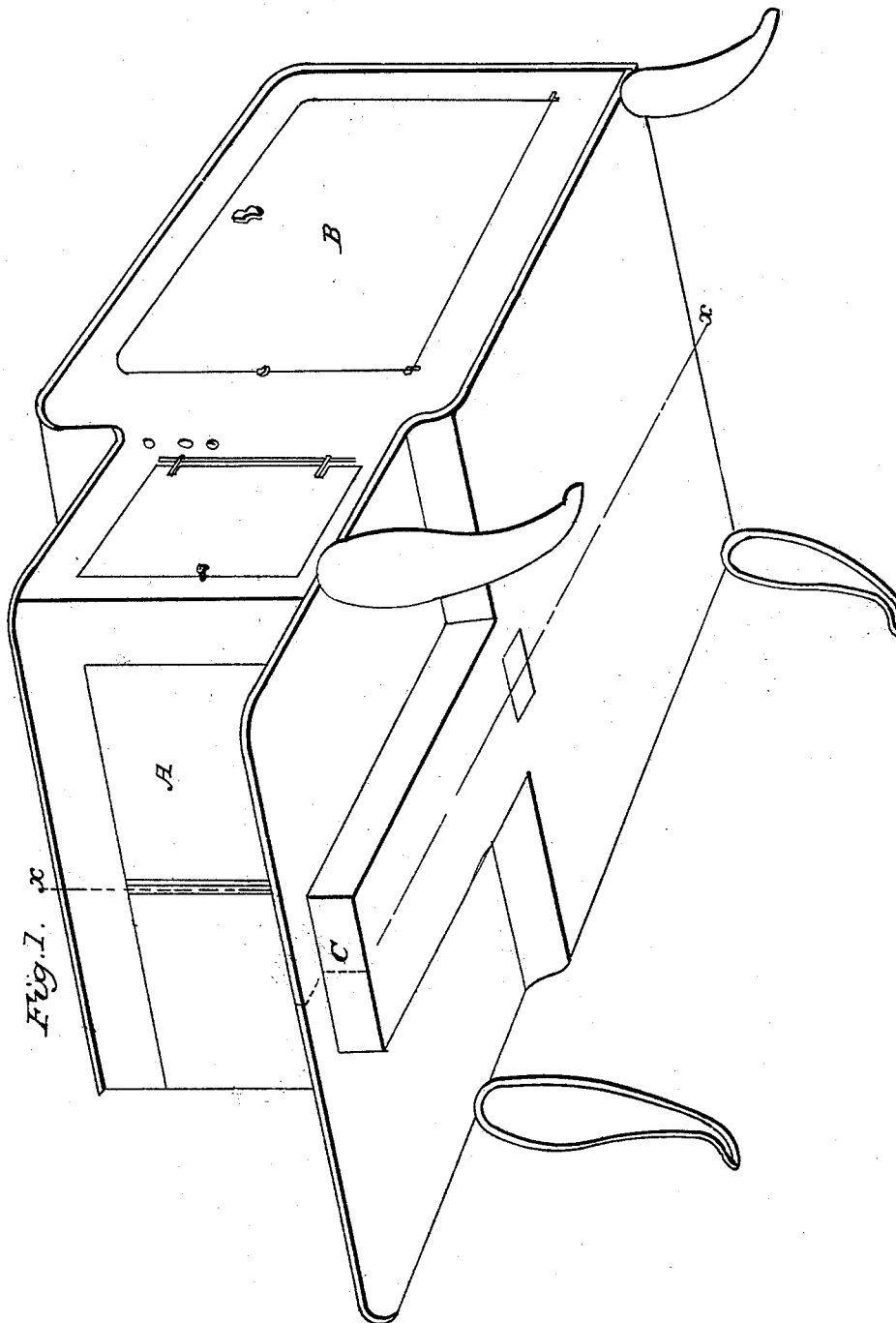


E. VANCE.
Cooking Stove.

2 Sheets—Sheet 1.

No. 6,086.

Patented Feb. 6, 1849.

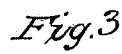
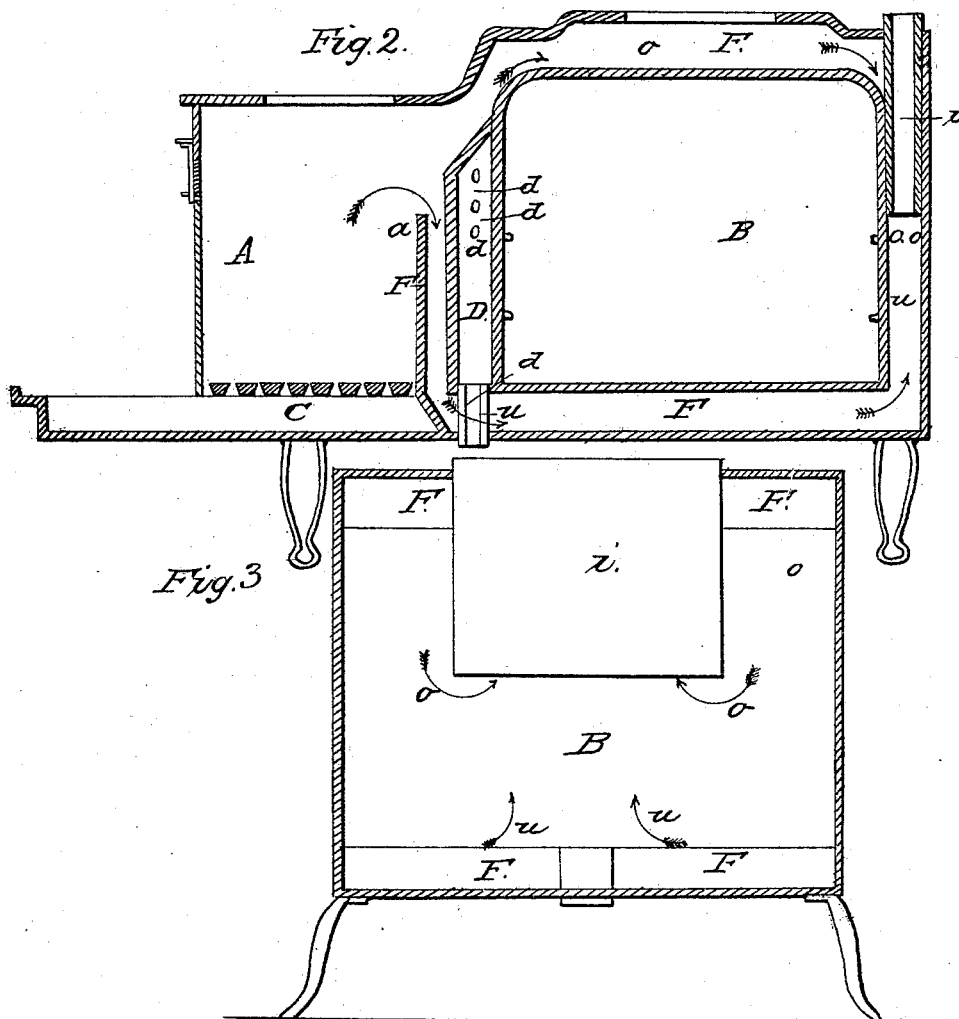


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Patented Feb. 6, 1849.



UNITED STATES PATENT OFFICE.

ELISHA VANCE, OF WILMINGTON, OHIO.

COOKING-STOVE.

Specification of Letters Patent No. 6,086, dated February 6, 1849.

To all whom it may concern:

Be it known that I, ELISHA VANCE, of Wilmington, in the county of Clinton and State of Ohio, have invented certain new and useful Improvements in Cooking-Stoves, of which the following is a full, clear, and exact description, reference being had to the annexed drawings of the same, making part of this specification, in which—
Figure 1 is a perspective view of a premium cooking stove having my improvements applied thereto, the bottom, one end, and part of the front being shown. Fig. 2 is a vertical section taken through the line *x x* of Fig. 1, and Fig. 3 is an elevation of the back end of the stove, the back plate being removed to expose the diving pipe, and shows the arrangement of the flues.

The same letters indicate the same parts in all the figures.

In the accompanying drawings of a "premium cooking stove" A is the fire box, B the oven, C the ash box, which together with the external plates of the stove may be formed and arranged in the usual, or in any convenient and approved manner.

In all stoves heretofore constructed upon this plan, it has been found very difficult to make the bottom and back plates of the oven sufficiently hot, and equally difficult to prevent the front and top from becoming too much heated, but while the premium stove is admitted to be liable to this very serious objection, it is, at the same time acknowledged to be in other respects, the very best stove in use. For this difficulty in baking in these stoves, I have devised an effectual remedy, which consists in a particular arrangement of the flues for the purpose of equalizing the draft above and below the oven, and in placing a cold air chamber D between the oven B, and the flue F, which prevents the front of the oven from becoming unduly heated. To insure a free circulation of cold air in the chamber D I insert a pipe *d* into its bottom, which admits a continual current of cold air, and make apertures *d'* in the upper part of its ends, which admit of a constant escape of rarefied air. To heat the oven equally on all its sides it must be uniformly enveloped with the heated products of combustion—to this end the flue is divided

at the front of the oven into two branches, one passing above, the other below the oven, and which re-unite near the middle of the back flue, where they enter the pipe *i* which is made to descend to that point, but the placing of the pipe *i* with its lower end in this position, although necessary to divide the heat equally between the top and bottom of the oven is not alone sufficient because of the tendency of the current to take the shortest and most direct path to the place of exit, and without the plate *a* at the front of the cold air chamber, with a low fire, most of the heat would pass beneath the oven, and with the fire box full of fuel most of the heat would pass over the oven, which under these differing circumstances would present opposite extremes of irregularity in the diffusion of heat—to prevent such irregularities therefore, I place the plate *a* as seen in Fig. 2 so that it will form a flue in front of the cold air chamber, whose mouth is at the same distance from the flue above the oven, that the lower end of the pipe *i* is above the flue below the oven, and these flues being at all times unobstructed their action is uniform, and the heat is equally distributed under all circumstances on the several sides of the oven. The arrows *o* indicate the course of the upper branch of the current of heat, and the arrow *u* that of the lower branch. By this arrangement of the flues, and the exit pipe *i*, the heat is not only at all times uniformly distributed over the oven, but it is also directed so as to bring it, at the best advantage, into contact with such culinary vessels as may be placed on the stove and containing water, or other substances which it is required to boil, so that dampers are in no case required, as the stove is at all times adjusted, and in perfect order to perform any culinary operation for which it is adapted, an advantage which all can appreciate who are acquainted with the extreme difficulty of instructing those persons who are in general more immediately intrusted with the management of cooking stoves, in the proper use and adjustment of dampers.

Having thus described the construction and arrangement of my improved premium stove, what I claim therein as new, and desire to secure by Letters Patent, is,

The combination of the diving pipe *i* with the flues F arranged as herein described, for the purpose of evenly distributing and equalizing the heat on the four sides of the
5 oven, without using or requiring dampers, as herein set forth.

In testimony whereof I have hereunto set

my hand in presence of the subscribing witnesses.

ELISHA VANCE.

Witnesses:

AMOS L. SEWELL,
ROBERT H. KILLIN,
D. C. HERRMANS.