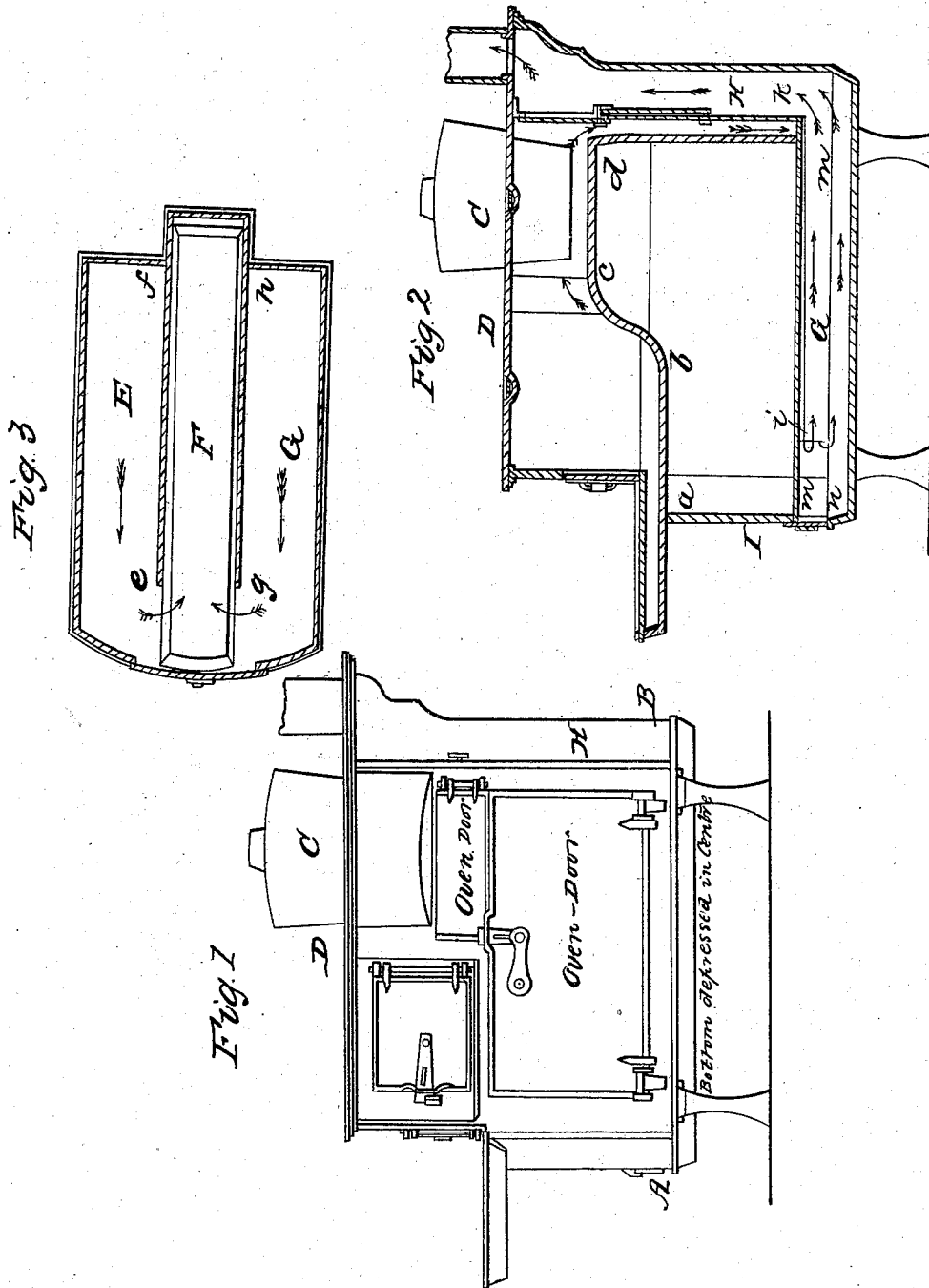


Cook Stove.

No. 3.307.

Patented Oct. 18, 1843.



UNITED STATES PATENT OFFICE.

LABEN EDDY, OF TAUNTON, MASSACHUSETTS, ASSIGNOR TO HENRY T. BUTLER.

COOKING-STOVE.

Specification of Letters Patent No. 3,307, dated October 18, 1843.

To all whom it may concern:

Be it known that I, LABEN EDDY, of Taunton, in the county of Bristol and State of Massachusetts, have invented new and useful Improvements in Certain Parts of Cooking-Stoves, for which Letters Patent were granted to Jonathan G. Hathaway, of Painsville, in the State of Ohio, on or about the seventh day of December of the year 1837, the following description, taken in connection with the accompanying drawings, constituting a full and exact specification thereof, wherein the nature and principles of my improvements, together with such parts as I consider new and claim as my invention, are duly represented.

Figure 1 of the drawings above mentioned exhibits a side elevation of a stove of the above kind, as improved by me. Fig. 2, is a vertical, central and longitudinal section of the same, while Fig. 3, is a horizontal section taken in a plane passing through the line A B, Fig. 1.

In the "Hathaway stove," as heretofore constructed, the oven has been rectangular in its vertical cross section, the top plate thereof, upon the front part of which the fire rested, having been a horizontal metallic plane—arranged parallel with the bottom plate and plate above it, through which the boiling kettles or vessels were inserted and exposed to the action of the smoke and flame, passing over the oven.

My improvement consists in giving to the top plate in its vertical section, the form or configuration represented at *a b c d*, in Fig. 2, or in other words elevating the rear part *c d* of said plate above the front portion *a b*, the fuel resting upon the portion *a b*. By this method of forming the top of the oven I am enabled to increase the size of the oven or render the rear part of it deeper than the same has before been constructed. The flame and smoke escaping over the rear part *c d* are raised more directly in contact with the boiling vessel C arranged in the rear orifices of the top plate D of the stove.

The ordinary method of shaping or arranging the flues which conduct the smoke in contact with the rear side and bottom plates of the oven of the Hathaway stove, has been to form two vertical partitions in the flue space adjacent to the back and bottom of the oven so as to divide said space into three equal parts. The smoke descended through the side portions of the

flue space at the back of the oven and passed through their continuation at the bottom of the oven, thence through openings or orifices (in the front part of that portion of the vertical partitions beneath the oven), and into and through the central portion or part of the flue space, below the oven, and ascended through the central part of the space in rear of the back plate of the oven, from whence it escaped into the discharge pipe. The upper part of the central flue at the back of the oven was covered over by a horizontal plate or damper.

By my arrangement or form of the flue I am enabled to diffuse the heat more equally over the surfaces against which the smoke impinges, and for this purpose, I divide that portion of the flue space beneath the oven into three parts E, F, G, Fig. 3, by means of two vertical partitions *e f, g h*, Fig. 3, the former of which is denoted in Fig. 2, by the letters *i k l m*, and extends as seen in said figure rearward to the discharge flue H. Its front end, viz. *i l*, is at a distance *i m'* from the front plate I of the stove, so as to form a rectangular or square opening *i m' n l* for the passage of the smoke into the center horizontal flue F. A horizontal plate *o k* Fig. 2, extends over those parts of the vertical partitions *e f, g h* projecting rearward of the bottom of the oven, so as to form a continuation of the central part F of the flue to the discharge flue H. The vertical partition *g h* is formed and arranged in every respect similar to the partition *e f*.

Therefore, from the above, it will be seen, that the smoke and heat pass down or through the whole of the flue space in rear of the oven, and is divided and caused to pass forward underneath the oven, through the spaces E, G and thence into the central part F and rushes from the same directly into the chimney, or discharge flue, without coursing upward or in contact with the back plate of the oven, as in the ordinary stoves.

When the smoke descends in rear of the oven through the two side flues as before described, and thence, after passing under the oven is brought into contact with the central part of the back plate of the oven, it heats the back plate unequally or so as to cause it to impart heat in an unequal degree to the articles in the oven contiguous thereto. But by causing the smoke and

heat proceeding from the fire to descend through an undivided space in rear of the oven as above set forth, the important advantage of an equal diffusion of heat over
5 the back plate is attained.

I claim the improvement in the Hathaway cooking stove as above set forth, that is to say—

10 The peculiar form or arrangement of the flue which conducts the heat and smoke in contact with the back and bottom plates of the oven—that is to say the combination of the vertical undivided flue space in rear of the oven, through which the smoke descends

with the two lateral horizontal flue spaces 15 and central flue underneath the said oven and connecting with the discharge flue, the whole being as exhibited in the drawings and substantially as above described.

In testimony that the foregoing is a true 20 description of my said invention and improvements I have hereto set my signature this ninth day of November in the year eighteen hundred and forty two.

LABEN EDDY.

Witnesses:

JAMES P. ELLIS,
JAMES H. SPRAT.