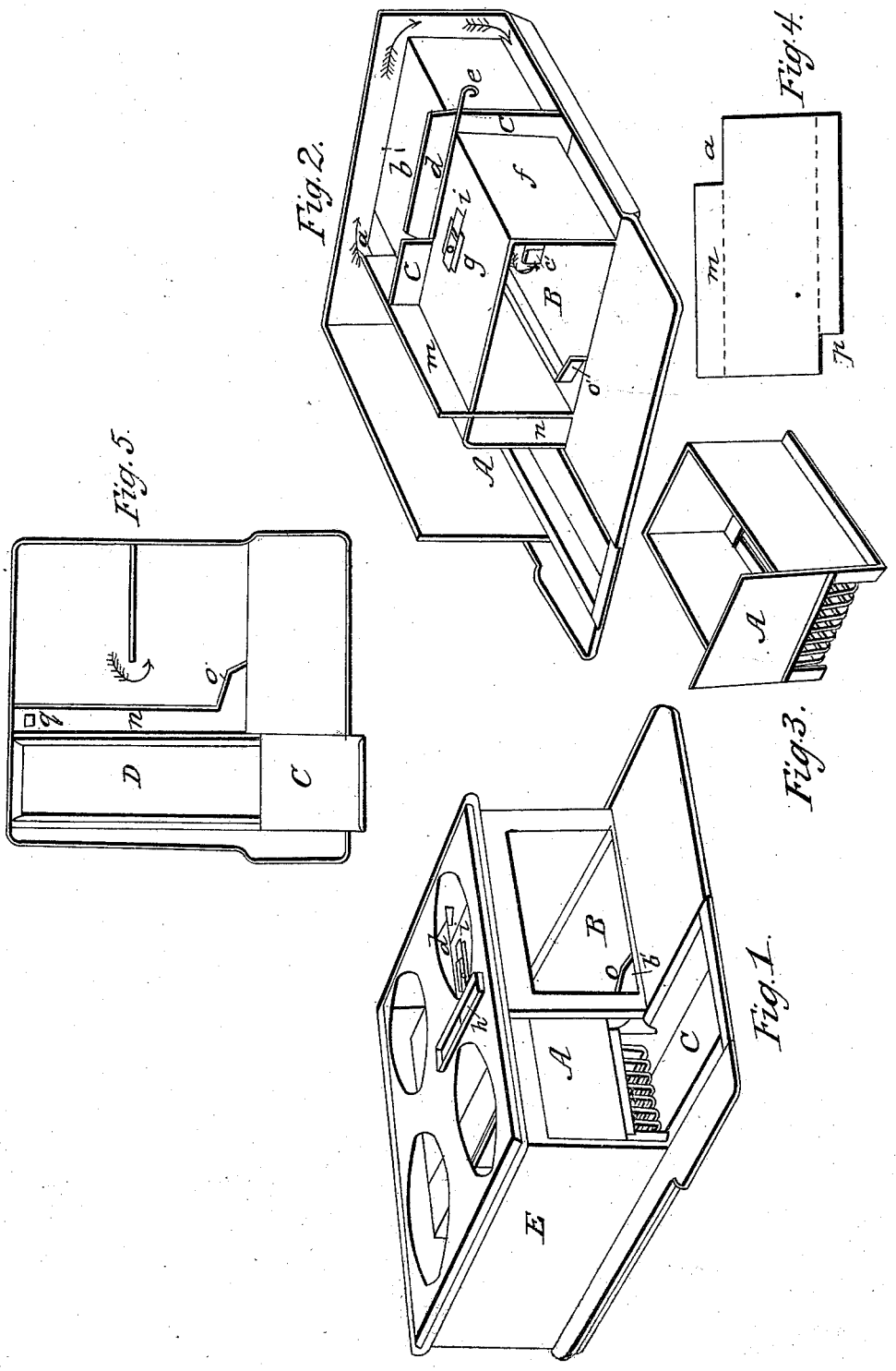
A. ATWOOD.

Cook Stove.

No. 2,607.

Patented May 4, 1842.



UNITED STATES PATENT OFFICE.

ANSON ATWOOD, OF TROY, NEW YORK.

COOKING-STOVE.

Specification of Letters Patent No. 2,607, dated May 4, 1842.

To all whom it may concern:

Be it known that I, ANSON ATWOOD, of the city of Troy, in the county of Rensselaer and State of New York, have made certain new and useful Improvements in the Manner of Constructing Stoves for Cooking; and I do hereby declare that the following is a full and exact description thereof.

In the accompanying drawing, Figure 1, is a perspective view of my stove, showing its external form and arrangement; Fig. 2, is a perspective view of its interior, the top plate, the front plate, one of the side plates and the bottom plate of the oven being removed for that purpose.

A, Fig. 2, is the fire-chamber, in which either wood, or coal, may be used as fuel. When wood is used, there may be grate bars at the lower part of the fire chamber, made in the usual way. When this fire chamber is allowed to occupy the whole depth of the stove, wood of considerable length may be burned within it, but it may be shortened, if desired, by brick work at its rear end. When coal is used, I prefer to employ a sliding box and grate, such as is shown in Fig. 3, which, for the purpose of supplying fuel, may be drawn forward on ledges that support it, just above the sliding hearth C; or there may be a stationary grate, or fire box, and the fuel may be fed in through the opening in the top, immediately above the fire, or through a door made in the front A, of the fire box, or grate, Figs. 1, and 3. Under the fire chamber there is a sunken ash-pit, extending from front to back.

B, is an oven, which, like the fire chamber, extends from the front to the back of the stove. Between the fire chamber and the oven there is an air heating chamber *n*, into which air is to be admitted from the room in which the stove is situated, there being a hole through the bottom plate of the stove, at its rear end, for that purpose; this air is to be admitted into the oven through an opening in the fore end of the bottom plate thereof, seen at O. The plate *m*, which forms one of the side plates of the oven, extends from the bottom to the top plate of the stove, and from the front to the back plate; but at its rear end, on its upper side, it is cut away, so as to allow the draft from the fire to pass into the flue space above the oven, and it is also cut away on its lower side, at its fore end, to admit the air into the oven, which has been heated in its passage through the air-heating chamber *n*.

Fig. 4, is a representation of the plate *m*, *a*, being the space for the passage of the draft into the upper flue space, and *p*, the space for admitting the heated air from the chamber *n*, through *o*, into the oven. There is a flue space under the oven, and beneath the opening *o*, there is a partition *o'*, which separates the flue space from that through which the air is admitted into the oven, as without this device the smoke and gases from the fire would pass through into the oven. By thus admitting heated air into the oven, the heat is equalized therein, so as to cause it to bake regularly in every part of it.

Fig. 5, is the bottom plate of the stove, with lines showing the course of the partition plates. D, is the sunk hearth, under the fire chamber; *n*, the air heating chamber; *q*, the hole for the admission of air into it; *m*, the main partition plates; *c*, the partition plate in the lower oven flue; *r*, the partition inclosing the heated air opening *o*.

The flue spaces extend over the top, down on one side, and under the bottom of the oven, as may be seen by examining the drawing, Fig. 2. These flue spaces are divided into two parts on the top and side, and in part at the bottom, by a partition *c*, *d*, *c*. The part *d*, of this partition, above the upper plate of the oven, constitutes a valve which may be opened, or closed, at pleasure. When opened, it admits the draft from the fire chamber to pass directly to the exit pipe *h*, in the top plate of the stove. The part of the partition marked *c'*, within the flue under the oven, would be hidden were the lower oven plate in place. This partition does not extend entirely across the lower flue, but terminates so as to allow the draft to pass around it from the rear to the fore flue space, as indicated by the arrow.

When the valve *d*, is closed, the draft from the fire passes through the opening at *a*, over the top of the oven at *b*, down the side at *e*, thence under the rear end of the oven and around the end of the partition plate *c'*, up the anterior side flue at *f*, and over the top *g*, of the oven, to the exit pipe *h*. I make an opening through the top plate of the oven, as shown at *i*, Fig. 2, which may be covered with a damper; this is nec-

essary, to facilitate the passing of the heated air through the oven, and, also, it allows the vapor from the articles that are being cooked to escape.

When additional cooking is required, a tin kitchen, or roaster, is to be placed against the side E, of the fire chamber.

Having thus, fully described the manner in which I construct my improved cooking stove, and shown the operation and use of the respective parts thereof, what I claim therein as new and desire to secure by Letters Patent, is—

1. The particular manner in which I have arranged and combined the flue spaces, so that the draft from the fire shall first pass around three sides of the posterior part of the oven, and then around three sides of the anterior part, as herein set forth.

2. I also claim the manner of supplying heated air to an oven by admitting air from the room, through an opening in the rear end of the bottom plate, into the air-heating compartment *n*, and thence into the oven through an opening *o*, in the fore end of the bottom plate of the oven; the respective parts being arranged substantially in the manner set forth.

ANSON ATWOOD.

Witnesses:

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A. F. CUNNINGHAM.