S. MYERS.

Cooking Stove.

No. 4,338.

Patented Dec. 31, 1845.

Fig. 2

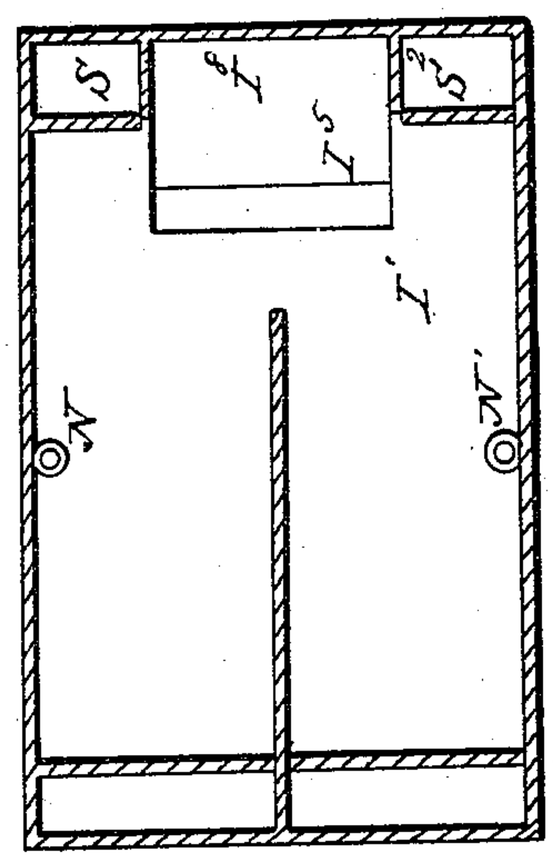


Fig. 1

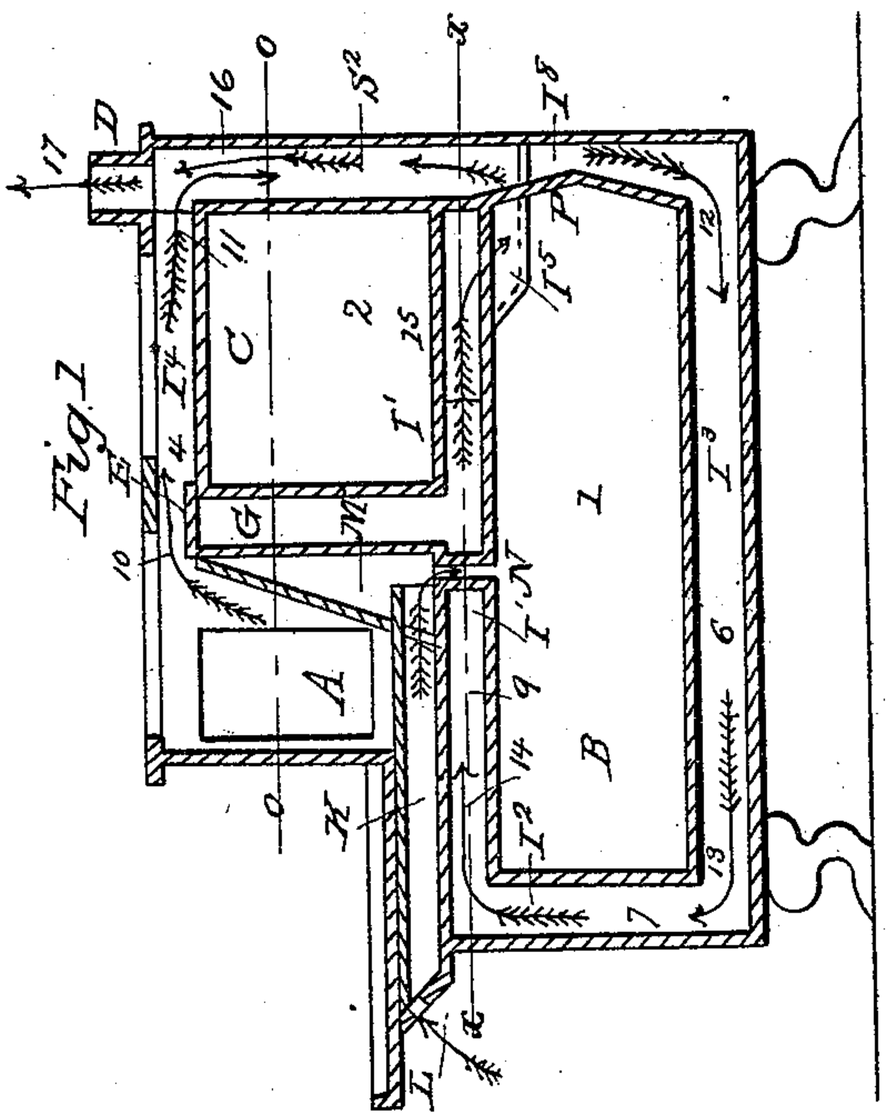


Fig. 3

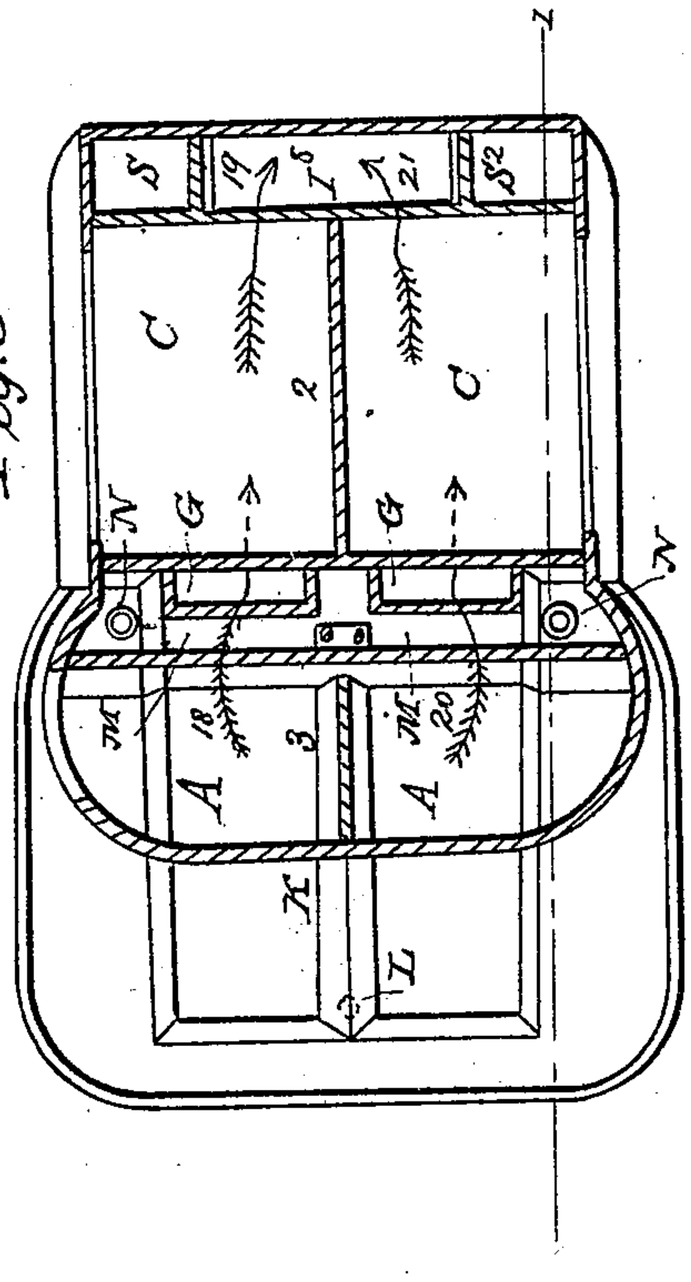
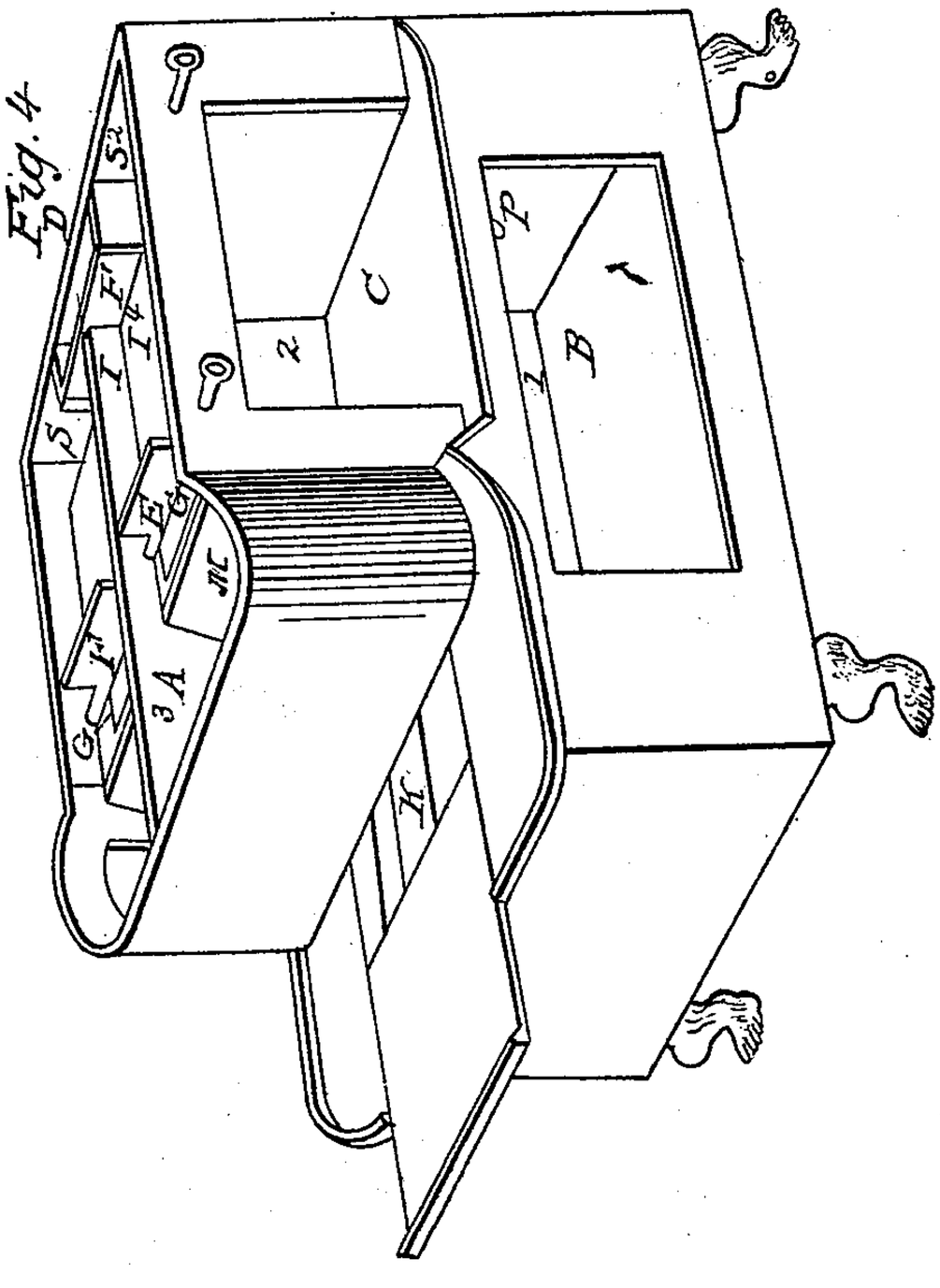


Fig. 4



UNITED STATES PATENT OFFICE.

SAMUEL MYERS, OF SCHENECTADY, NEW YORK.

COOKING-STOVE.

Specification of Letters Patent No. 4,338, dated December 31, 1845; Antedated August 9, 1845.

To all whom it may concern:

Be it known that I, SAMUEL MYERS, of Schenectady, in the county of Schenectady 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 vertical longitudinal section of the stove at the line 1, 1. Fig. 2 is a horizontal section at the line *x x* of Fig. 1. Fig. 3 is a horizontal section at the line *o o* of Fig. 1. Fig. 4 is a perspective view—the top plate being removed in order to show several of the vertical longitudinal dividing plates.

This stove in its external features resembles some other stoves in use. The fire is built in an elevated front chamber A, and the heat from the same is caused to pass around an oven B in two parallel columns through flues divided by vertical longitudinal plates, and thence partially around a smaller oven C at the rear of the fire chamber and above oven B and thence through the smoke pipe D being also provided with suitable dampers E F to change the direction of the draft and cause it to pass direct from the fire chamber under the boilers and over the small oven C to the smoke pipe;—or to pass down the two flues S S^2 at the back corner of the stove and communicate with flue I^3 at the back of the lower oven, then under and up the front of said oven and back between the two ovens B and C to the back flues I^5 and I^8 between flues S S^2 to the smoke pipe D—as indicated by the arrows 10, 11, 12, 13, 14, 15, 16 and 17, in Fig. 1.

My principal improvement consists in forming a triangular flue K in the bottom of the fire box with which there is a direct communication from the outside of the stove by means of an aperture in the hearth plate at L, Fig. 1, for the admission of fresh air to be heated; and from which there is another communication leading into the hot air chamber M between the fire chamber A and oven C for the discharge of the air thus heated into said hot air chamber; from whence the hot air is conveyed through vertical descending pipes N, passing through the horizontal flue I′ into the upper part of the large oven B, and from thence, mixed with the gases generated in the large oven during the culinary operation it passes through small apertures P in the back of the oven to the main flue I^8, leading to the smoke pipe D. The apertures P in the back of the oven for the discharge of the heated air are made smaller than those in the top for its admission for the purpose of causing a portion of the hot air to remain a longer time in the oven to heat the upper part thereof.

The above described arrangement of flues for introducing a column of air—heating the same as it passes through the triangular flue K and causing it, when heated, to circulate freely through the oven for the purpose of heating the oven, as well as taking off the impure gases, which, by remaining in the oven, would injure the flavor of the article undergoing the operation of being cooked, is of greater importance than may appear from a slight examination of the subject. It has heretofore been found difficult to heat the top of the oven owing to the ashes and dirt accumulating on the top thereof—the ashes absorbing the heat and preventing its passing to the plates. Besides, the greater part of the heat rises to the top of the flue (heat always having a tendency to rise).

There are other evils existing in the common double oven cook stove. Among them is that of rendering the small oven useless by reason of the great heat required in heating the large oven. The air flue in the fire chamber may be of a triangular or other more convenient form for the purpose intended. The use of this flue lessens the quantity of wood necessary to heat the oven and renders the articles cooked therein of a finer flavor and enables the user to graduate the heat of the two ovens to the degree required.

Another improvement consists in dividing the fire chamber A, the several flues I^1 I^2, &c., and the ovens B, C, of the stove longitudinally by means of vertical longitudinal plates 1, 2, 3, 4, 6, 7, 9, corresponding in size and form with the respective apartments and flues for which they are intended, placed in the center of the said apartments, in such a manner that when the cooking required can be performed in one half of the space of the stove the fire may be built in one apartment of the fire chamber, and the heat caused to pass around one half of the upper and lower ovens, or under only two of the boilers, thus saving one half the fuel

and rendering the stove more convenient for use in the summer season, or in very warm weather.

Another improvement consists in having diving or descending flues G G in front of the upper small oven C for directing the heat around three sides of the said oven, C and thence to the smoke pipe D, first passing through the enlarged portion of the flue at I^5 and the central vertical flue I^8 with which all the flues communicate. Also in constructing the stove with an oblique diving flue I^5 at the back of the oven B and over the rear part thereof.

The several plates 1, 2, 3, 4, 6, 7, 9 for dividing the stove into two stoves are in part represented in Figs. 1, 2, 3, 4 in the respective positions they bear to each other when placed in the stove. Plates No. 3, 4, being placed longitudinally in the fire chamber and flue I^4 and plates 9, 6, 7, in the flues I^1 I^2 I^3 and plates 1, 2 in ovens B and C in the order named and represented for dividing every apartment of the stove into two distinct parts for the purpose before stated of using either side of the stove, or both, at pleasure as may be desired.

The diving flues G are formed in front of the upper oven and extend down to and communicate with the flue I′ between the upper and lower ovens, being provided with dampers E E. When said dampers are open or raised to a vertical position as represented in Fig. 4, and the damper F closed or turned upward to a vertical position, the heat will pass down the diving flues G G to the flue I′ and through that flue under the oven C to the flue I^5 and flue I^8 and thence to the smoke pipe D, as indicated by the arrows 18, 19, 20 and 21 in Fig. 3.

I do not claim the supplying the oven with heated air by means of a flue in contact with the fire chamber; but

I do claim—

The peculiar construction and particular arrangement of the flue K in combination with the chamber M and pipes N as I have arranged them in my stove for conveying heated air through the oven for the purpose of heating the upper part thereof as described.

SAMUEL MYERS.

Witnesses:
WM. P. ELLIOT,
A. E. H. JOHNSON.