

W. C. DURANT.
Cooking Stove.

2 Sheets—Sheet 1.

No. 89,391.

Patented April 27, 1869.

Fig. 1.

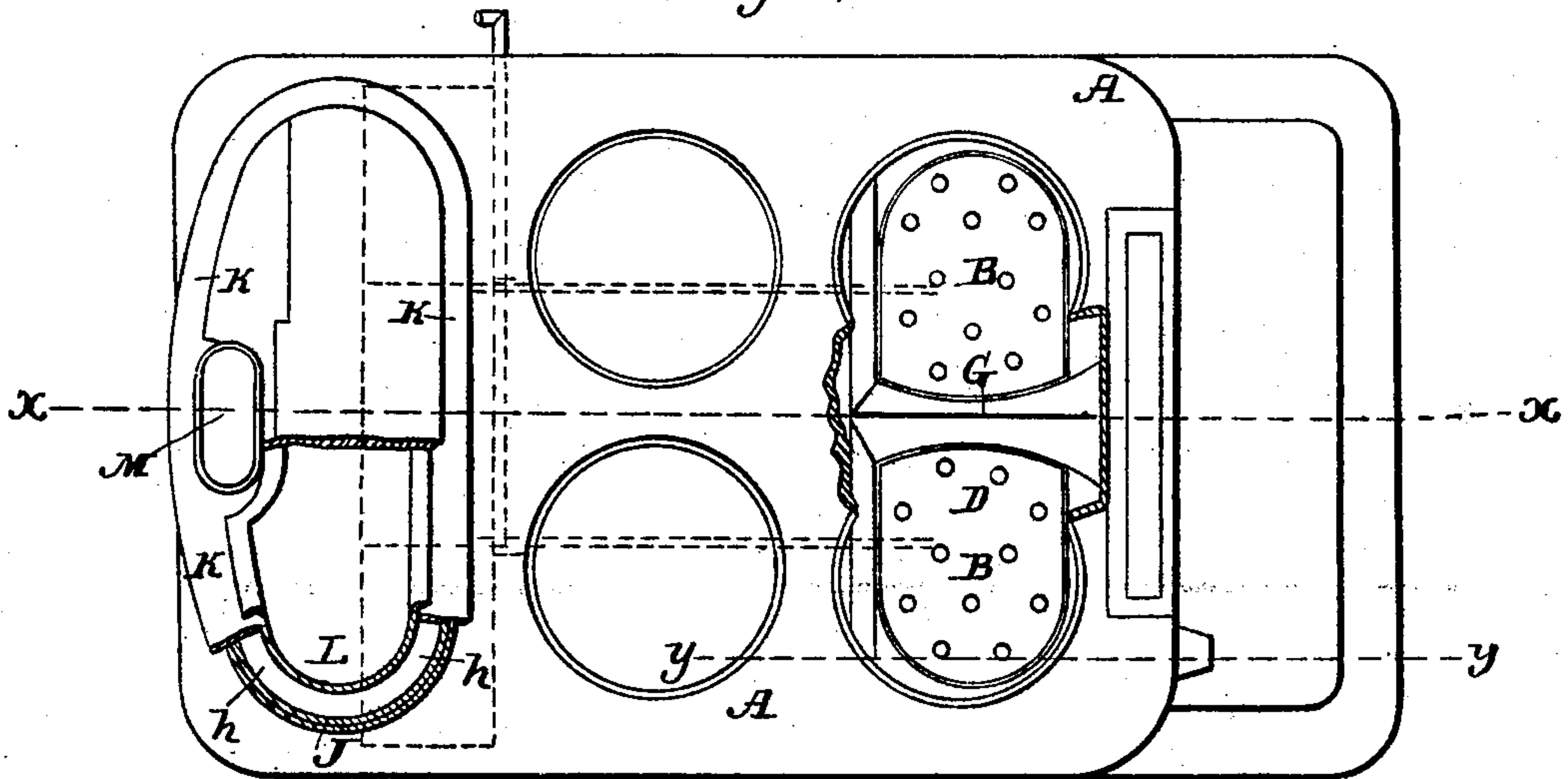
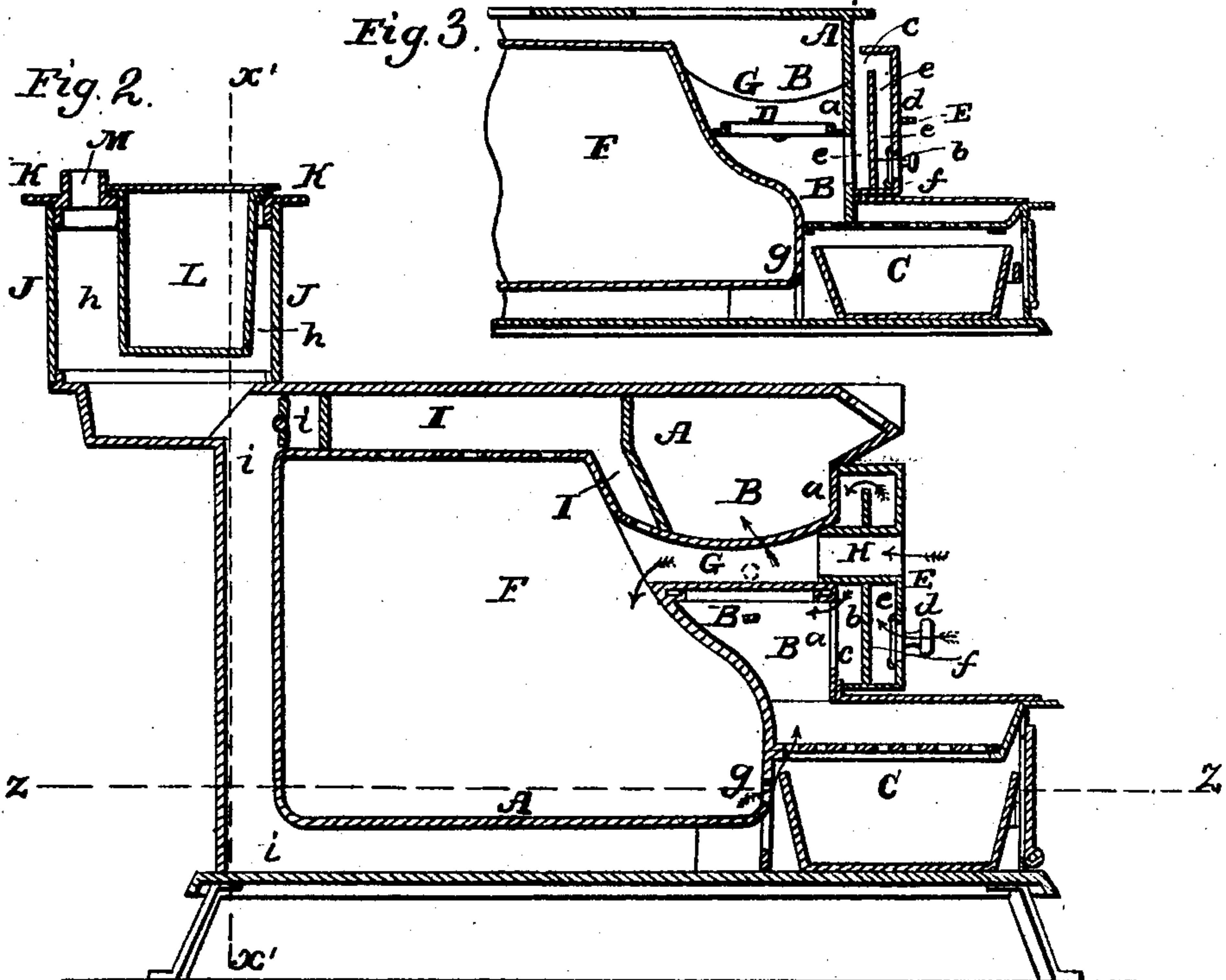


Fig. 3.



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per *Wm. M. C.*
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W. C. DURANT.
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2 Sheets—Sheet 2.

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Fig. 4.

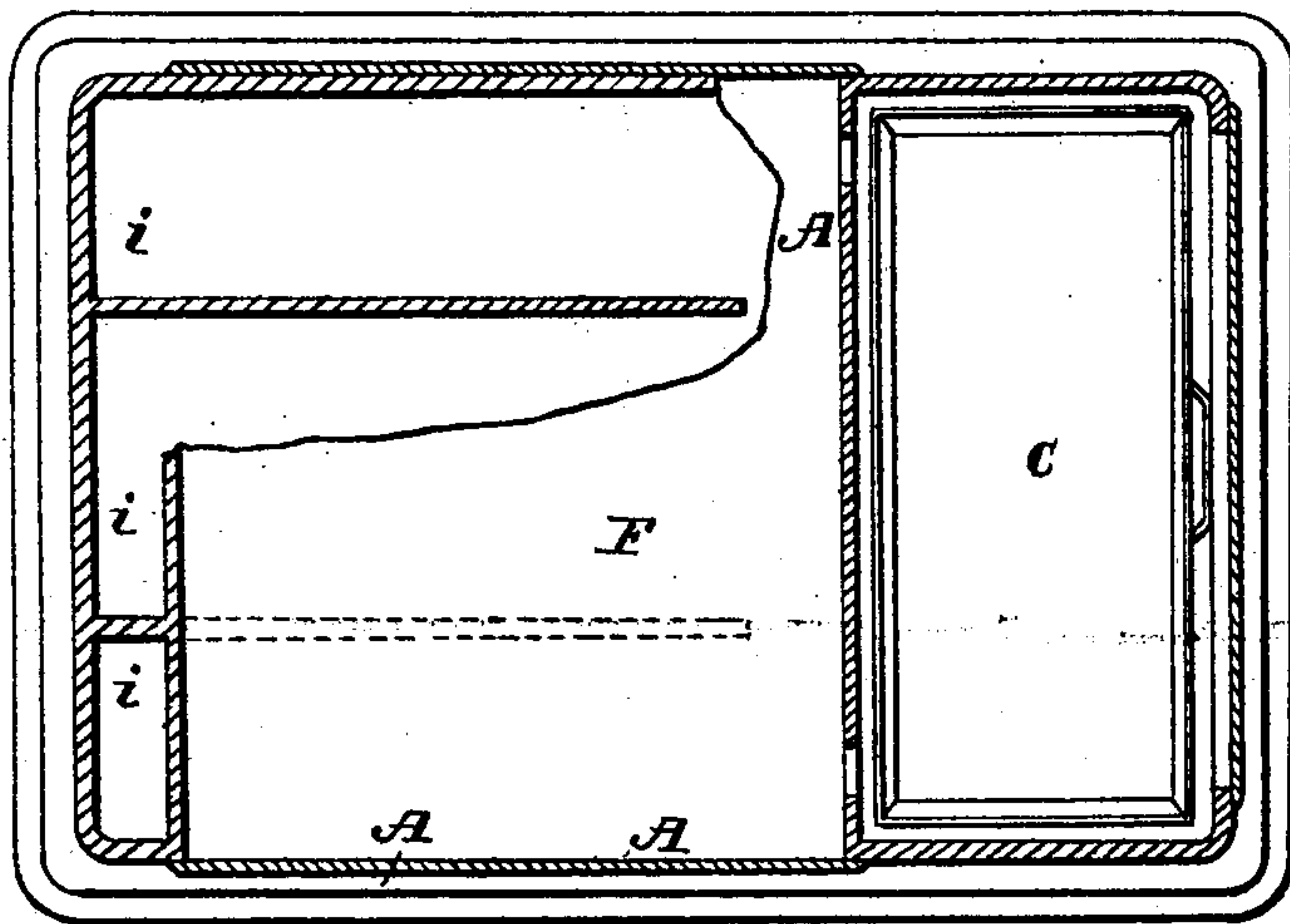
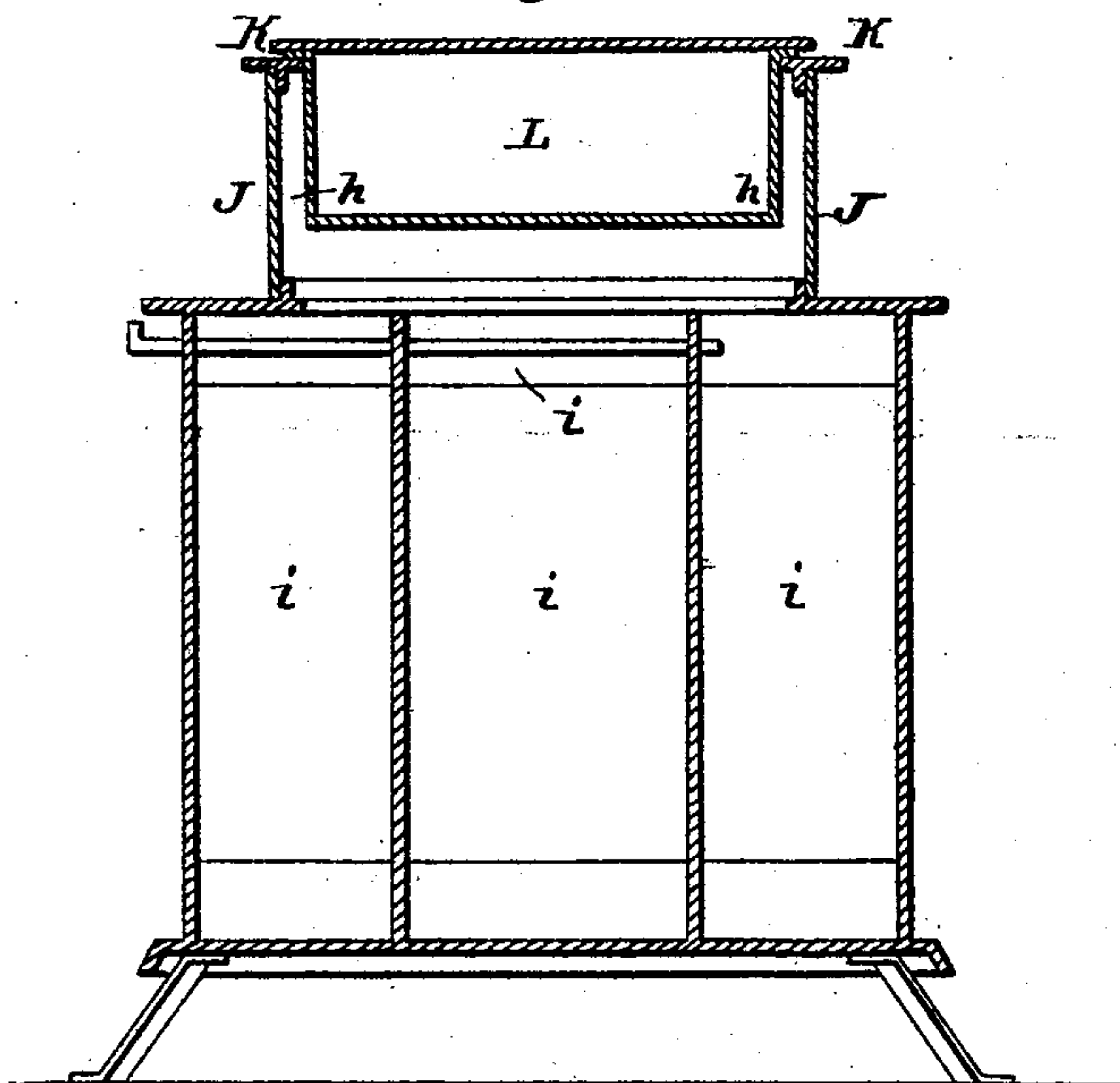


Fig. 5.



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WILLIAM C. DURANT, OF WEST TROY, NEW YORK.

Letters Patent No. 89,391, dated April 27, 1869.

COOKING-STOVE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, WILLIAM C. DURANT, of West Troy, in the county of Albany, and State of New York, have invented a new and improved Cooking-Stove; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1, Sheet I, represents a plan or top view, partly in section, of my improved stove.

Figure 2, Sheet I, is a vertical longitudinal section of the same, taken on the plane of the line *x x*, fig. 1.

Figure 3, Sheet I, is a detail vertical longitudinal section of the same, taken on the plane of the line *y y*, fig. 1.

Figure 4, Sheet II, is a horizontal section of the same, taken on the plane of the line *z z*, fig. 2.

Figure 5, Sheet II, is a vertical transverse section of the same, taken on the plane of the line *x' x'*, fig. 2.

Similar letters of reference indicate corresponding parts.

This invention relates to a new cooking-stove, in which a new device for heating the air that is brought to the fire-box, is provided, by the peculiar construction of a hollow door, and in which a circulation of air is provided through the oven into the fire-place, so that the oven may receive a constant supply of fresh hot air, and transmit a constant supply of hot air to the fire-place. Thereby the oven is kept fresh and clean, and does not emit disagreeable vapors when opened.

A, in the drawing, represents the case or body of a cooking-stove, of suitable form.

B is its fire-place;

C, the ash-pit; and

D, the grate.

The fire-place is in front, closed by a plate, *a*, which is open at its lower end, or perforated to allow air to enter below the grate.

E is the door of the fire-place. It is hollow, and its inner plate *b* is set back of the inner edge of the door, so that when the door is closed, a space, *c*, will be left between the plates *a* and *b*, as shown in fig. 3.

The plate *b* does not quite reach to the top, or is perforated at its upper part, as in fig. 3.

The front plate *d*, of the door E, is perforated near its lower end. Air can therefore enter through these apertures in *d*, rise in the space *e* between *b* and *d*, pass down in the space *c*, and then enter the fire-place through the apertures *a*. It will become considerably heated, while brought in contact with the several hot plates *d*, *b*, and *a*, and will be more adapted to aid combustion, than if it were in a cold state conducted to the fire.

By means of a slide, *f*, arranged on the plate *d* of the door E, can the size of the openings in *d*, be adjusted to allow greater or less draught to the fire.

F is the oven.

G is a pipe, extending from the oven through the fire-place, above or below the grate, and through the front plate *a*, communicating with a pipe, H, which is arranged through the door E, so that an independent passage is thus formed from the outside through the fire-place to the oven.

Two or more sets of such pipes, G H, may be arranged, if desired.

Air can thus enter the oven through said pipes G H, and is heated while passing through the hot pipe G.

There are openings *g g* in front of the oven, connecting the same with the ash-pit, or with the fire-place, as may be desired. A circulation of air is thus provided. Fresh hot air constantly enters the oven through G, and passes from the oven through *g* to the ash-pit and fire-place, aiding in the combustion of the fuel.

I am aware that hot air is frequently carried into the oven, and into the fire-place; but never yet has a circulation been so arranged that the air which is conducted to the oven, is utilized to aid in the combustion of fuel.

The pipe G may, if desired, be extended over the oven, as shown at I in fig. 2, to better distribute the air through a series of apertures, as shown.

The front end of the pipe G should be made flaring, to readily receive the pipe H, as in fig. 2, and to form a tight joint.

Upon the top plate of the stove is arranged, at the rear end of the same, an annular projecting flange, J, which has an annular cover, K, from which a water-reservoir, L, is suspended.

The reservoir is smaller than the flange J, so that a space, *h*, is formed all around it. This space *h* communicates with the smoke-passage *i* of the stove, so that all smoke will have to enter it to escape through a pipe, M, which projects from a cover, K, of the flange. The reservoir is thus constantly exposed to the heat of the smoke, and the water in it will be thoroughly warmed.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

1. The hollow door E, when arranged in connection with the plate *a*, so as to form two passages, *c* and *e*, for the air to be heated before it enters the fire-place, as set forth.

2. Conducting air through the fire-place to the oven, and from the oven to the fire-place to produce circulation, as specified.

3. The pipes G H, when arranged through the fire-place and fire-door respectively, to conduct fresh air to the oven, as set forth, in combination with the openings *g g*, through which the air can pass from the oven to the fire-place, as specified.

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Witnesses:

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