

J. H. GOODFELLOW.

Cooking Stove.

No. 106,688.

Patented Aug. 23, 1870.

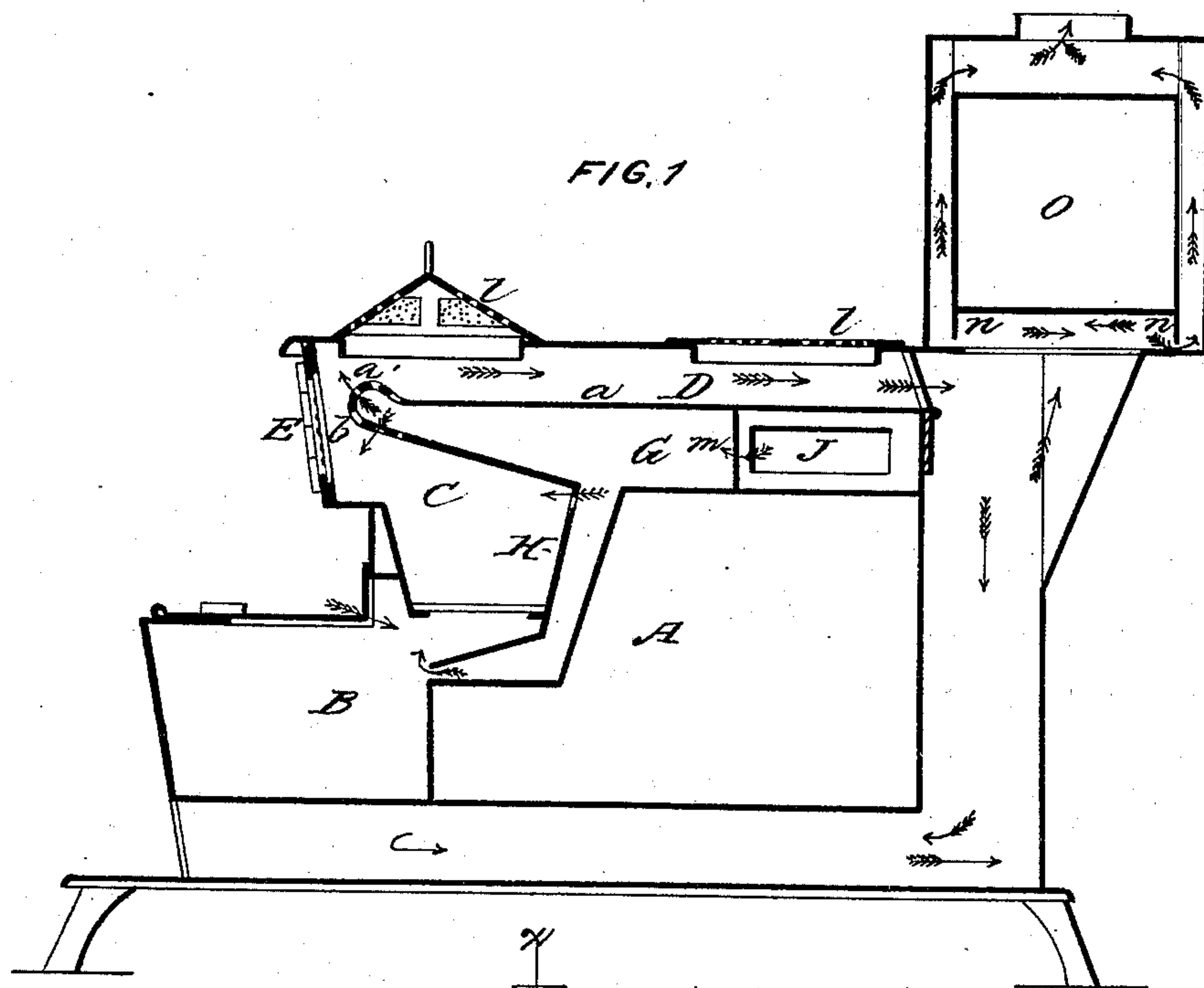
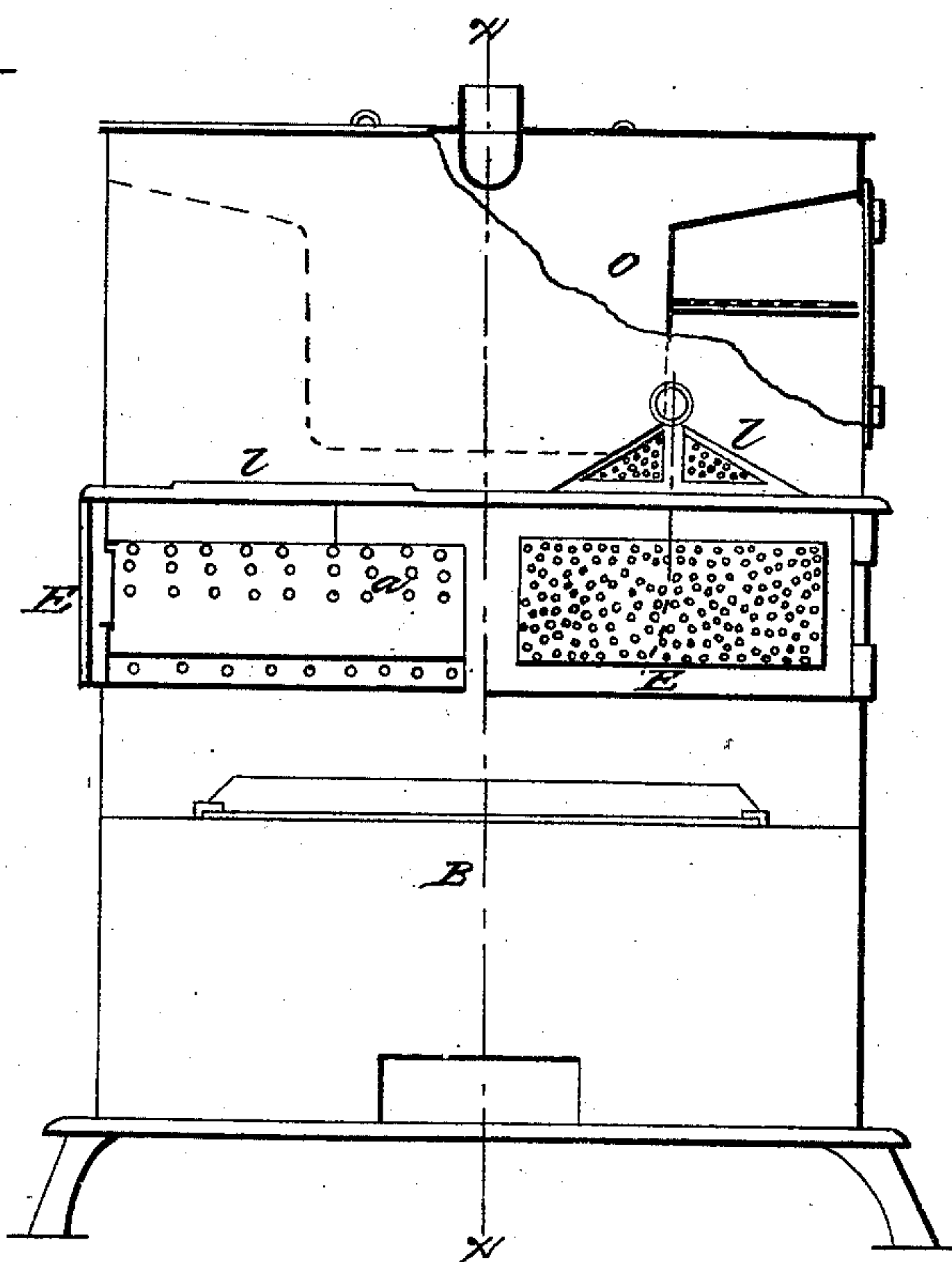


FIG. 2



WITNESSES:

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# United States Patent Office.

JOHN H. GOODFELLOW, OF TROY, NEW YORK.

Letters Patent No. 106,688, dated August 23, 1870.

## 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, JOHN H. GOODFELLOW, of Troy, in the county of Rensselaer 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 of the construction and operation of the same, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a longitudinal vertical section in the line *x x*, fig. 2, and

Figure 2 is a transverse vertical section.

This invention consists in providing, in the upper part of the fire-box of a cooking-stove, a bridge, extending lengthwise of the box, which bridge forms the front side of an air-chamber, lying horizontally over the ovens; and is perforated with a number of holes, made for the purpose of letting out jets of heated air from the said chamber directly upon the smoke and gases rising from the fire-box, so that the same may be more thoroughly consumed, the fire-box being also provided with perforated doors, so as to let in air in jets for a similar purpose.

The invention also consists in the attachment to the stove of a hot-water tank, combined with heating-chambers; also, in providing flue-strips, for conducting air in the central parts of air-chamber over the oven; also, in perforated pot-hole covers.

In the drawing is shown a cooking-stove, in which—

A is the oven;

B, the ash-pit;

C, the fire-box; and

D, the fire-flue, extending round the oven.

Upon the top of the oven is formed a horizontal air-chamber, G, made by extending a sheet-metal plate, *a*, from the rear side of the oven forward nearly to the front doors of the fire-box, and thence bending said plate back under itself, and connecting it with the top of the rear side of the fire-box, so that the said air-chamber G extends over the whole fire-box, and its front side forms a bridge, *b*.

The plate *a*, that forms said chamber, is perforated at its front side, opposite the doors E, with many holes, *a'*.

The chamber G receives air both from perforations in the sides of the stove, which perforations are guarded by dampers J, and also from a flue, H, extending downward in rear of and forward under the fire-box, and opening into the ash-pit.

The air received from either opening is warmed by passing over the oven or in rear of the fire-box, and issues from the perforations *a'* of the bridge *b* in a heated condition, and therefore, more readily disposed to combustion, and these warm jets strike into the current of smoke and gas rising from the fuel in the fire-box below, and supply oxygen for the consumption of the same.

The doors E of the fire-box are also perforated, and furnish an abundance of air in jets, so that it may be thoroughly intercommingled with the smoke and gases.

By this arrangement, I am enabled to converge upon the smoke and gases rising from the fire-box two currents of air, the effect of which is the almost entire consumption of all the products of combustion.

In order to conduct the external air into the central part of the chamber G, I provide two flue-strips, *m m*, extending inward parallel with the rear wall of the stove, and so placed as to form passages leading from the side dampers J.

The object of thus conducting the air is to convey it at once to the warmest part of the chamber.

Upon the upper part and rear side of the stove I place a chamber, O, divided into three compartments, the central part being intended for a hot-water tank, and the two end compartments being provided with shelves, so as to serve as heating chambers, for keeping food warm.

I also attach similar flue-strips, *n n*, to those above described to the lower side of the chamber O, and upon each side of the passage, by which the hot air passes under the said chamber.

The strips *n* are extended nearly the whole length of the chamber O, so as to keep the heated air directly under the same until it reaches the ends, where the strips terminate sufficiently short of the ends of the chamber to leave passages for the exit of the gases and smoke.

I provide a number of the above covers with perforations, as shown at *l l*, in order that, when the products of combustion are burning near the covers, in the night time the light of the blaze may shine out through the perforations.

Having thus described my invention,

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

1. The flue-strips *m m*, in combination with the chamber G, as and for the purpose described.

2. In combination with a cooking-stove, a chamber, O, provided with a central water-tank and end heating-chambers, substantially as set forth.

3. A hot-water tank, in combination with a stove, constructed as and for the purpose described.

4. Extending the air-chamber G, by means of the passage H, downward, in rear of the fire-box, and so as to open into the ash-pit, substantially as described.

5. Perforated pot-hole covers, substantially as described.

JOHN H. GOODFELLOW.

Witnesses:

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A. M. TANNER.