

T. B. WALKER.
Cooking Stove.

No. 89,903.

Patented May 11, 1869.

Fig. 2.

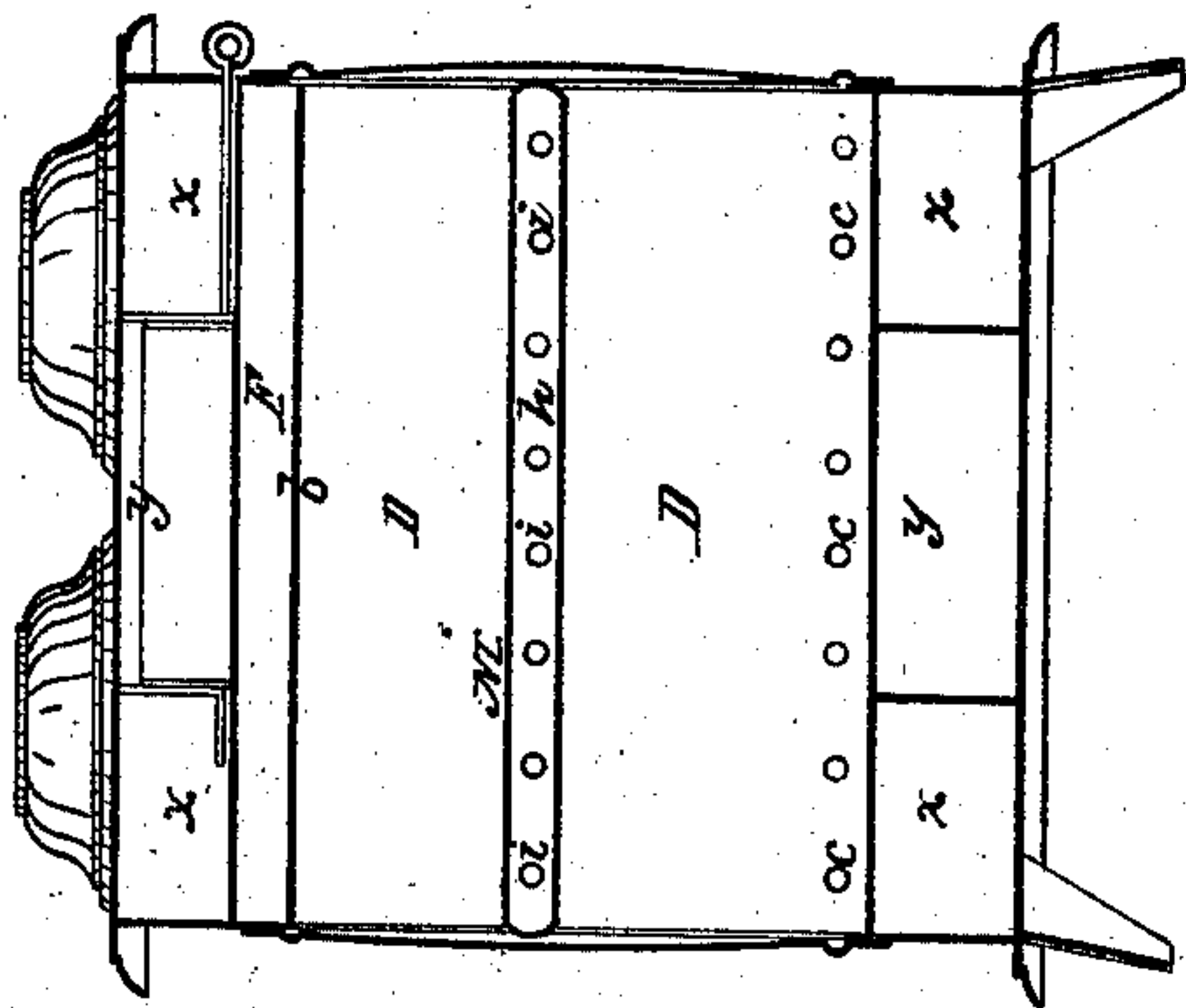


Fig. 4.

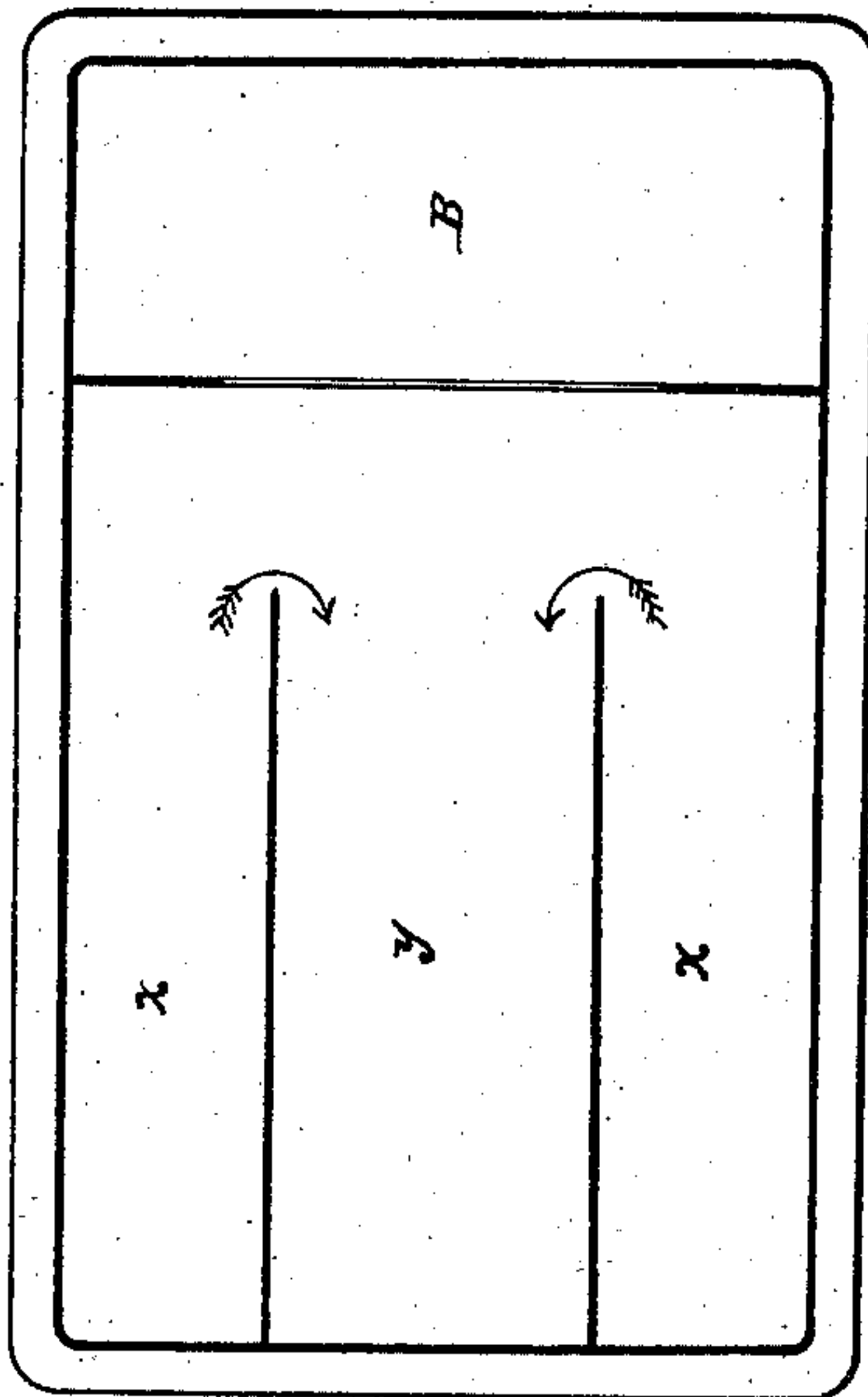


Fig. 1.

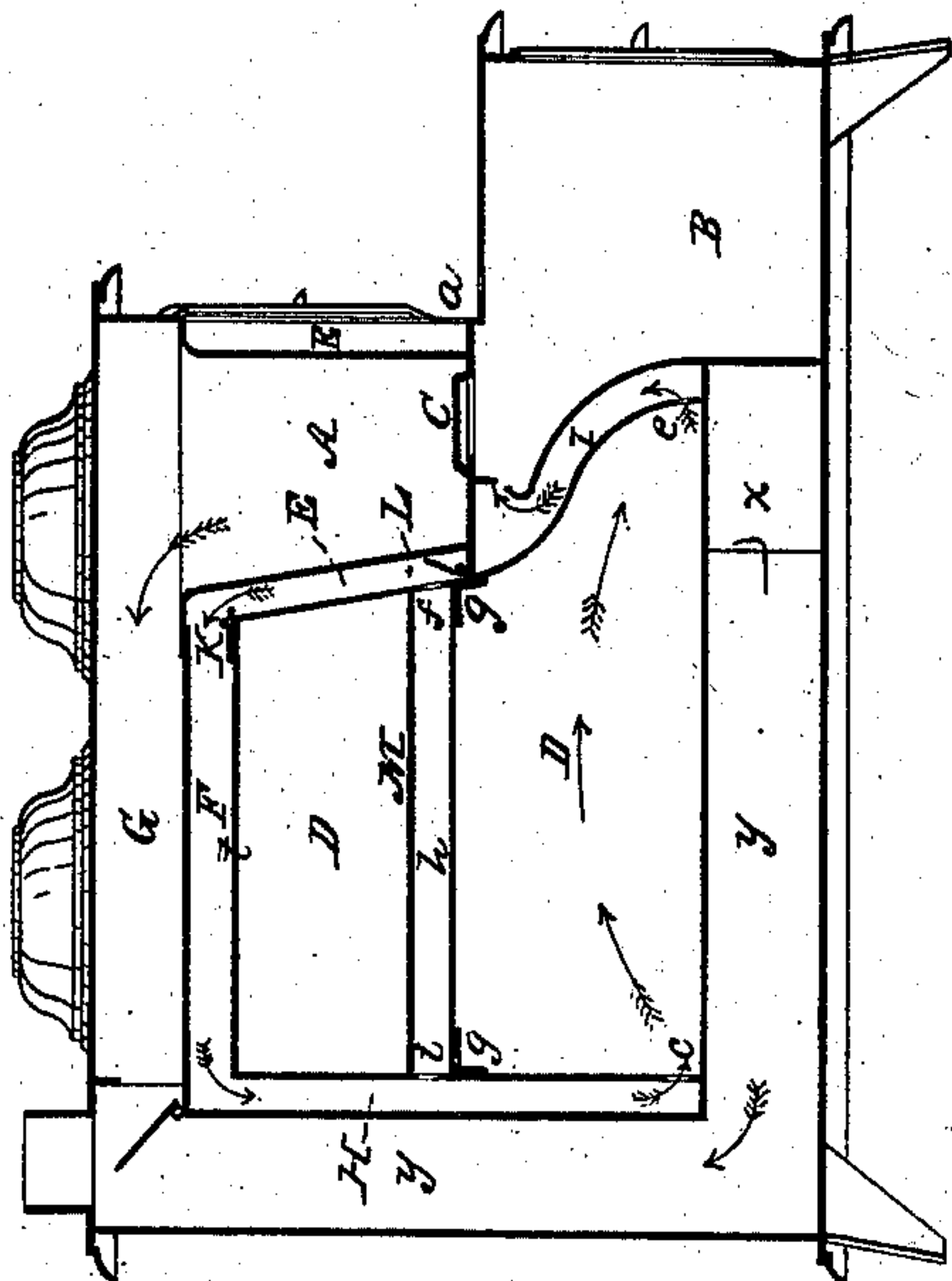
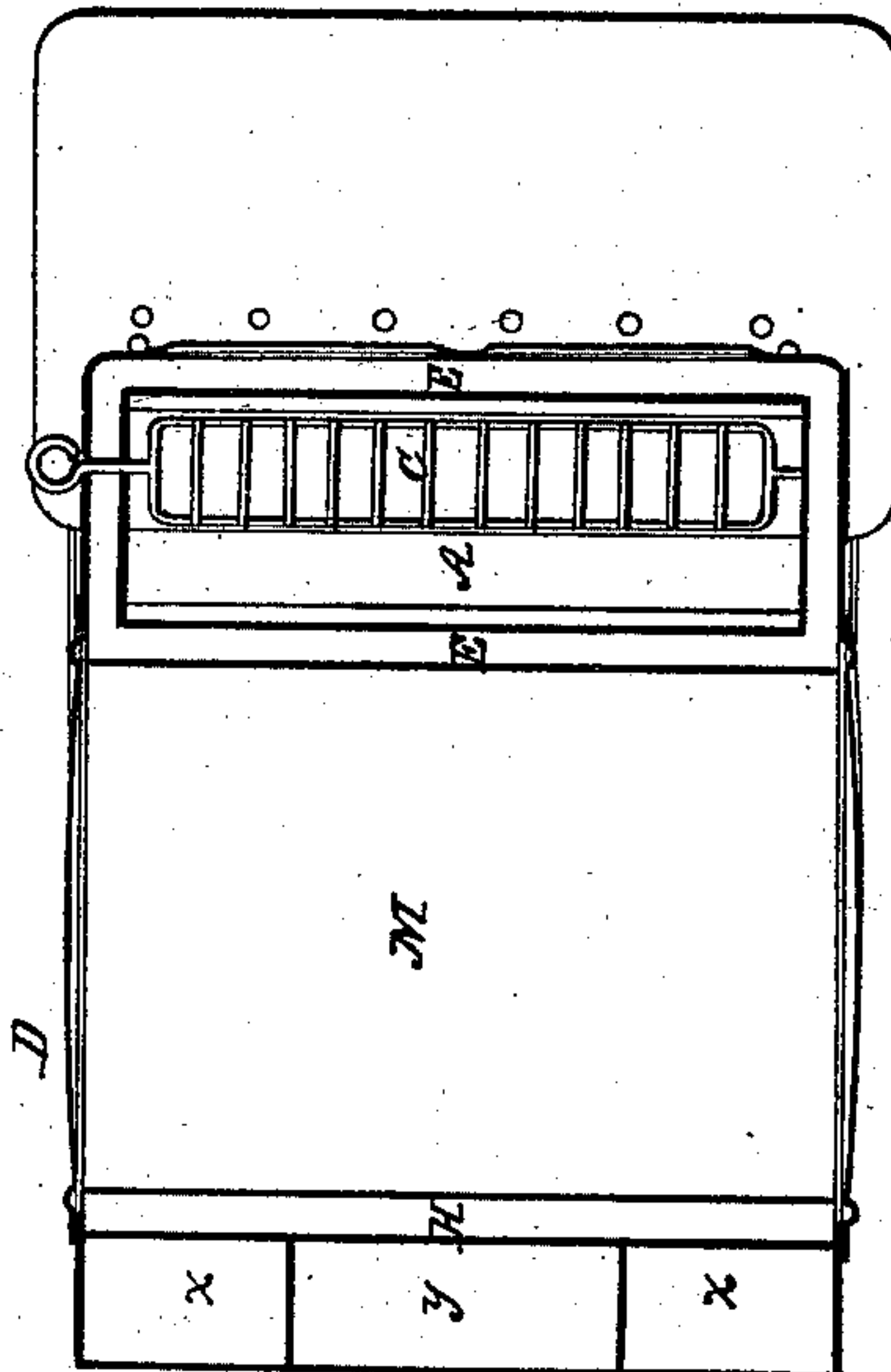


Fig. 3.



Witnesses:

S. W. Piper
J. H. Brown

Inventor:

Thomas B Walker
by his attorney
R. H. Bailey

United States Patent Office.

THOMAS B. WALKER, OF WAKEFIELD, MASSACHUSETTS.

Letters Patent No. 89,903, dated May 11, 1869.

COOKING-STOVE.

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

To all persons to whom these presents may come:

Be it known that I, THOMAS B. WALKER, of Wakefield, in the county of Middlesex, and State of Massachusetts, have invented a new and useful Improvement in Cooking-Stoves; and I do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a longitudinal section of a stove provided with my invention.

Figure 2 is a transverse section of it taken through the oven.

Figure 3 is a horizontal section taken through the fire-place.

Figure 4 is a horizontal section taken through the return smoke-flues underneath the oven.

In such drawings—

A denotes the fire-place, or chamber;

B, the ash-chamber;

C, the grate; and

D, the oven.

The fire-place is surrounded by an air-heating space, or chamber, E, provided with one or more air-inlets, *a*, at its front.

From the upper part of the said air-heating chamber, an air-flue, F, extends over the entire top, *b*, of the oven, and between the same and the flue G, which leads from the fire-place over the oven, and conveys the smoke and volatile products of combustion into flues *x x y*, arranged in rear of the back and against the bottom of the oven, as in most cooking-stoves.

The hot-air flue F opens into another such flue, H, arranged against the back of the oven, and between such and the back smoke-flue or flues thereof, and there are one or more air-openings, *c*, leading from the lower part of such flue H directly into the oven.

Furthermore, through the lower part of the front plate *d* of the oven, there are one or more air-inlets, *e*, which open into an auxiliary air-flue, I, which runs up against the plate *d*, and at top opens into the ash-chamber, and directly below the grate.

There is a damper, K, in the entrance of the upper air-flue F.

Another damper, L, is disposed in the lower part of the air-heating chamber E, and so as to cover or uncover one or more openings, *f*, leading from the lower part of such chamber E into the oven, or into a chambered shelf, M, arranged within the oven, and so as to slide endwise into and out of it on ledges shown at *g g*.

This shelf is hollow, or formed with a chamber, *h*, extending through it from front to rear, and at the rear of such chamber there are one or more openings, *i*, leading from the chamber into the air-flue at the back of the oven.

In the operation of this stove, the air which enters the chamber E, after having become heated by the heat radiated from the sides of the fire-place, will pass through the flues F and H, thence through the opening *c* into the oven D, thence through the oven, thence through the exit-opening *e* into the flue I, and next through such flue and up through the grate, and into the fuel when thereon.

By moving the damper L so as to uncover the opening *f*, the hot air may be caused to pass through the hollow shelf M before going into the ash-chamber, and up through the grate.

In its passage through the flues F and H, the air will be still further heated by contact with the top and back smoke-flues of the oven, and in this state will pass through the oven, and not only ventilate it, or carry off the waste steam and gases produced during the process of baking in such oven, but, charged therewith, will next flow into the conduit I, and thence into the fuel, and operate to facilitate the combustion thereof.

When made to flow through the shelf M, the hot air will operate to heat both the top and bottom plates of such shelf, so as to facilitate the process of baking of articles which may be in both parts of the oven which are over and beneath the said shelf.

With the air-flues and chamber applied to the fire-place and oven, and the smoke-flues of the latter, in manner as explained, heat from the sides of the fire-place may be economized by currents of air, and employed to advantage in heating the oven, and in improving the combustion of the fuel in the fire-place.

I claim the combination of the hot-air flues F, H, and I, and the openings *c e* thereof, with the air-heating chamber E, the fire-place A, the oven D, and the smoke-flues over the top, in rear, and underneath the oven, the whole being as set forth.

I also claim the combination of the chamber *h*, (in the shelf M,) and its openings *i f*, the fire-place A, the chamber E, with the oven D and the air and smoke-passages, arranged about the same, in manner as described.

I also claim the arrangement of the air-flues F, H, and I, and the openings *c e* with the oven, in manner as set forth, when such flues are employed with a fire-place and an air-heating chamber about the same, and with smoke-flues, as specified.

I also claim the arrangement of the shelf-chamber *h*, and its openings *i f*, with the oven D, and the air and smoke-flues about the same, and combined with a fire-place and air-heating chamber, as set forth.

THOMAS B. WALKER.

Witnesses:

R. H. EDDY,
J. R. SNOW.