A. WARREN.

Cooking Stove.

No. 112,397.

2 Sheets—Sheet 1.

Patented Mar. 7, 1871.

Fig. 1.

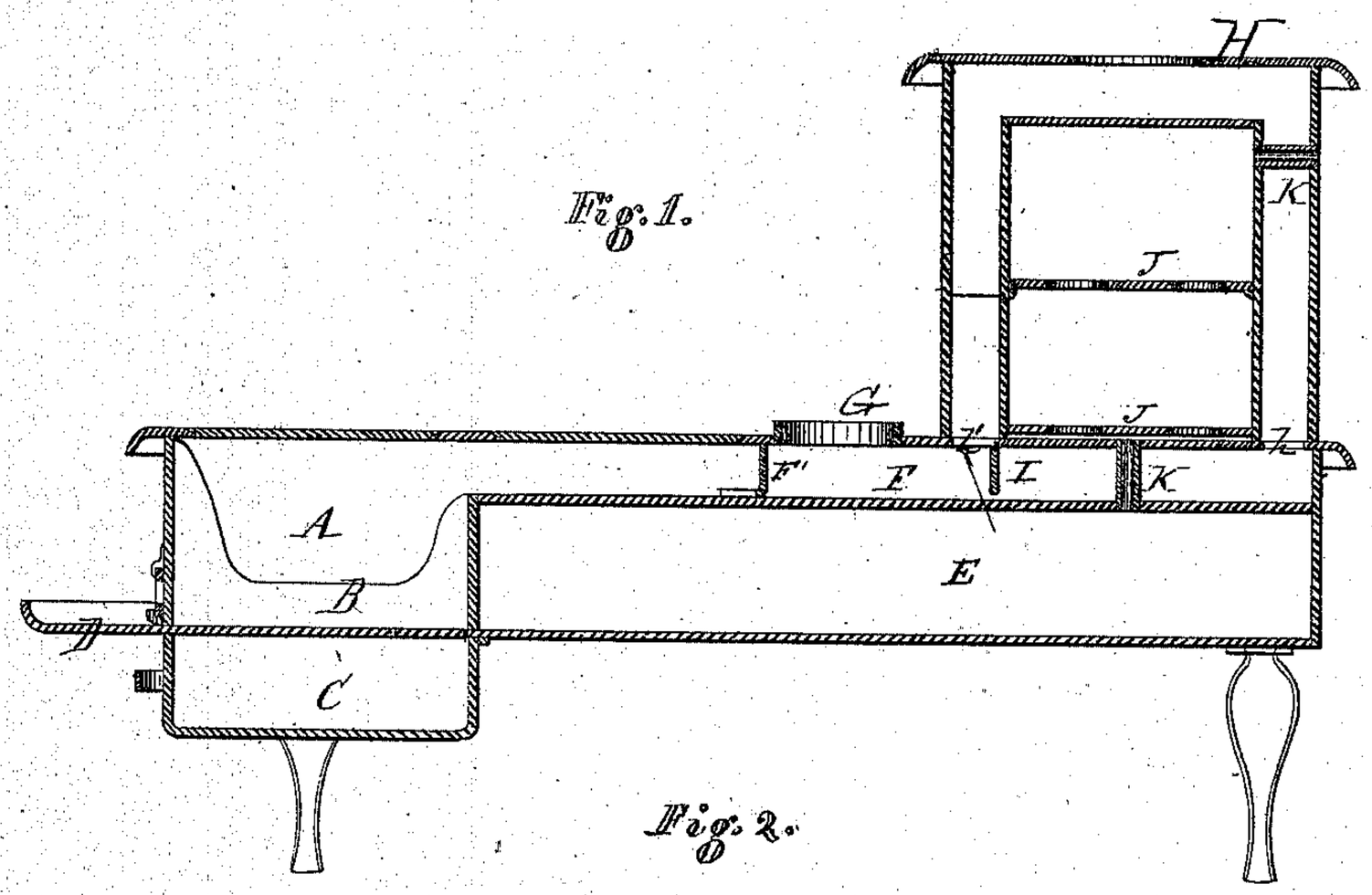


Fig. 2.

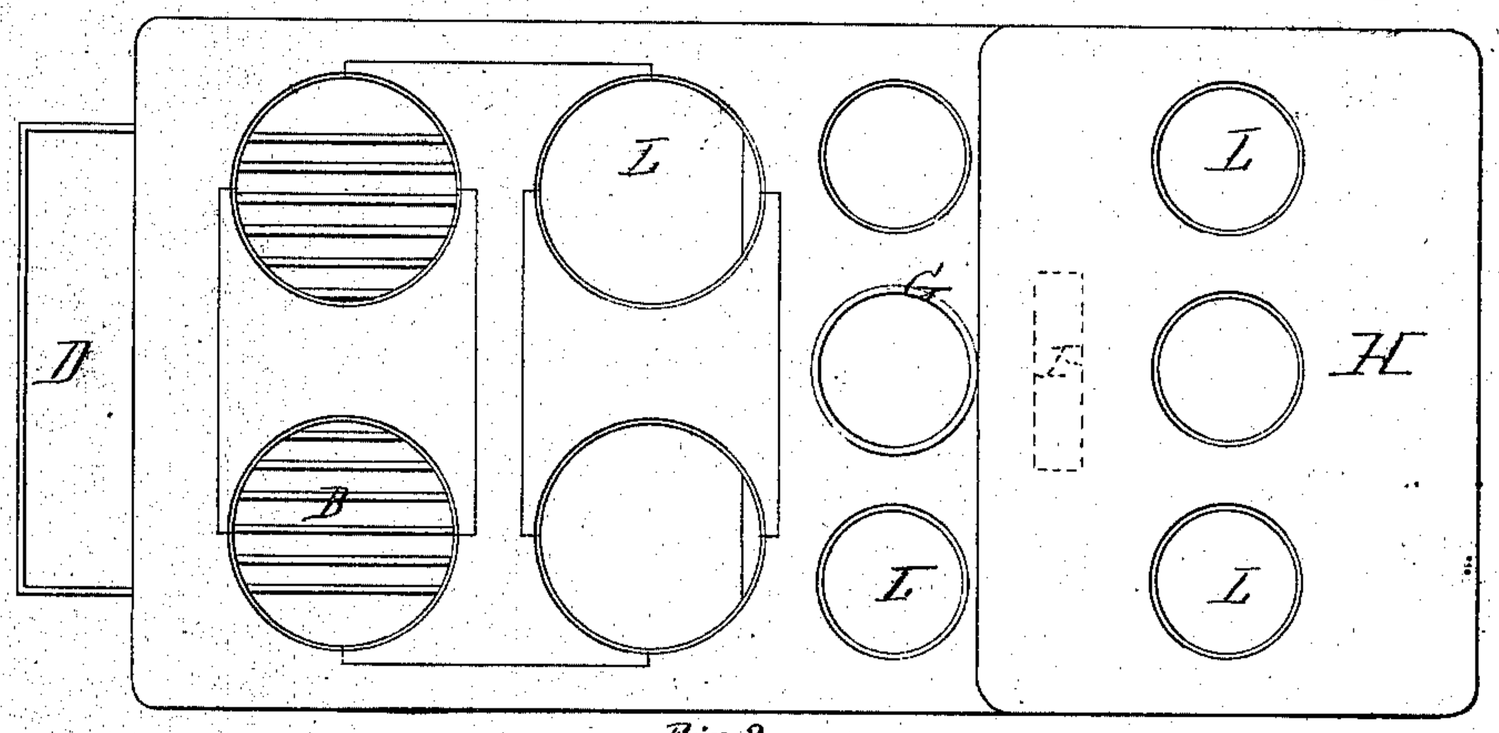
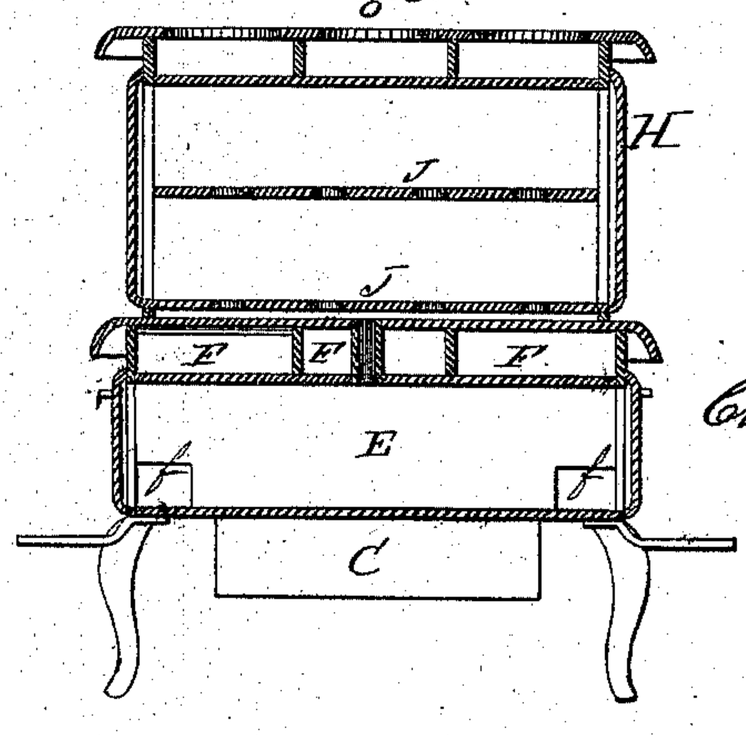


Fig. 3.



Witnesses

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Fig. 4.

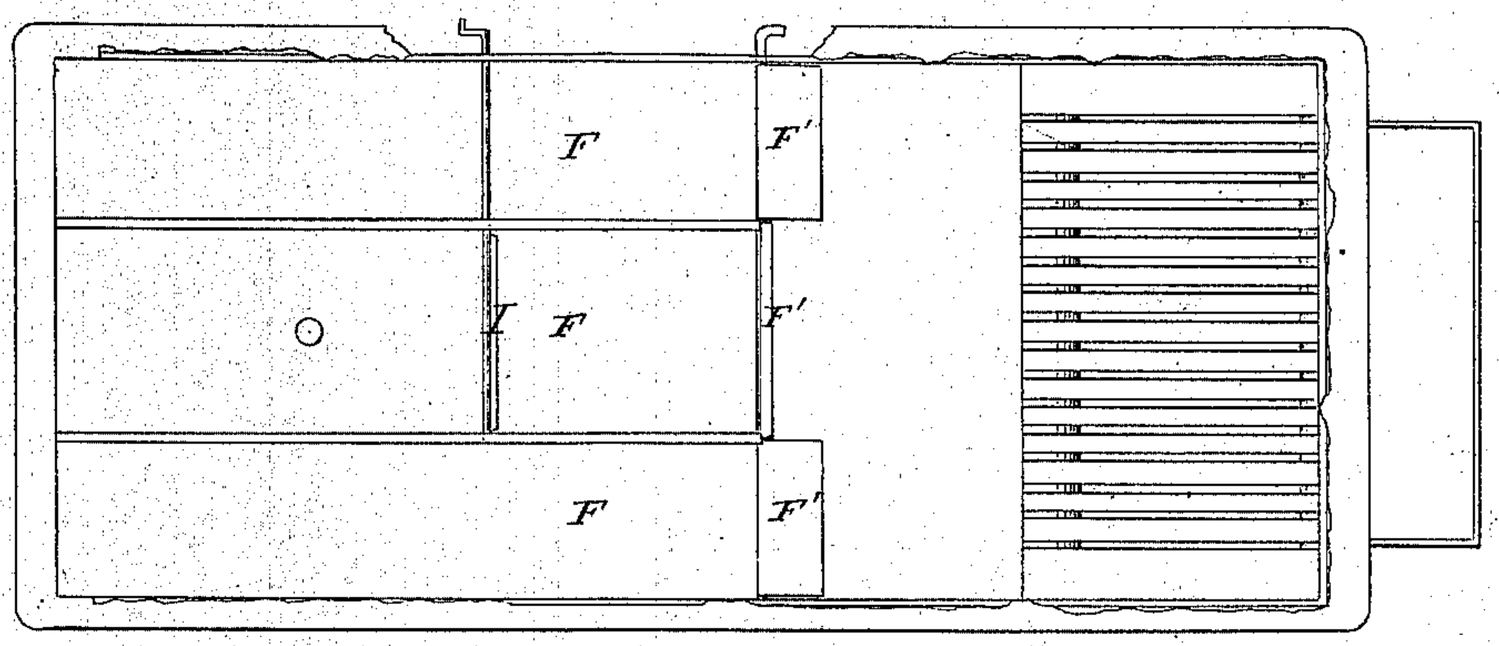
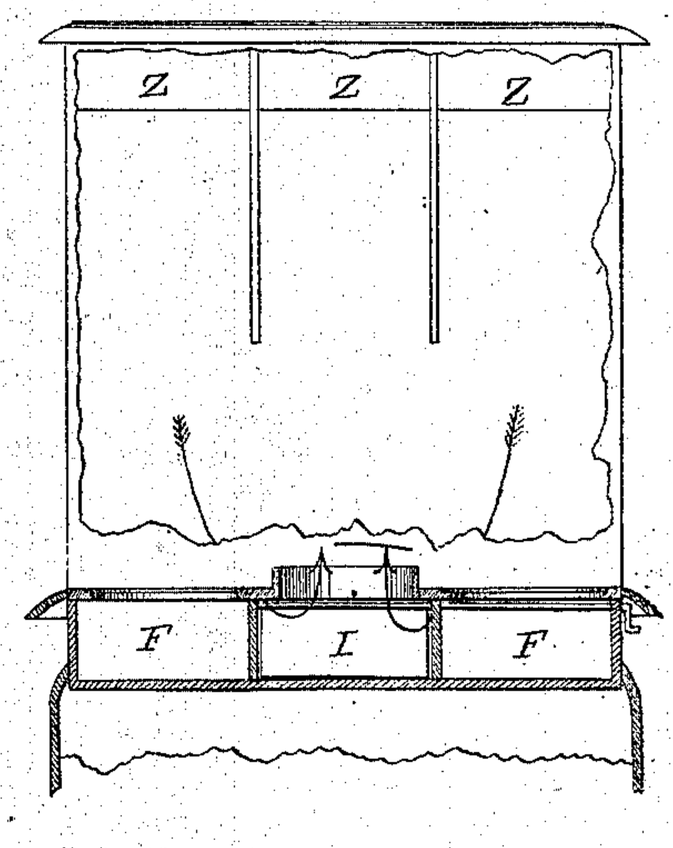


Fig. 5.



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ALVIN WARREN, OF SWANTON, OHIO.

Letters Patent No. 112,397, dated March 7, 1871.

IMPROVEMENT IN COOKING-STOVES.

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, ALVIN WARREN, of Swanton, in the county of Lucas and State of Ohio, have invented a new and valuable Improvement in Cooking-Stoves; 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 annexed drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a vertical longitudinal section.

Figure 2 is a plan view.

Figure 3 is a vertical transverse section.

Figure 4 is a top view of the upper flues, the upper plate of the furnace being removed.

Figure 5 is a partial vertical cross-section, with the front wall of the oven broken away to show the flues.

This invention consists in locating the oven or drum of a cooking-stove behind the smoke-flue, and in arranging the hot-air flues and dampers so that, when desirable, all the parts of said oven may be equally heated, or, where heating the oven is unnecessary, that the hot-air currents may be shut off therefrom without impairing the efficiency of the draught.

It also consists in providing a stove so constructed with a drying-chamber, located below the oven and behind the fire-box.

In the accompanying drawing, which represents a cooking-stove embodying the elements of my invention in its constructions—

A is the fire-box;

B, the grate;

C, the ash-box;

D, a longitudinally-sliding hearth and ash-box cover.

E represents a drying-chamber, provided with suitable doors, *e*, and communicating with the open air through passages *f f*, located on either side of the grate.

Between the top of the drying-chamber and the top of the stove are the horizontal flues and chambers for the circulation of heated currents.

The space thus occupied is divided into three flues, F, by partitions, commencing a short distance back of the fire-box, and extending thence to the end of the stove.

At the mouth of said flue a triple-winged damper, F′, is located, the side wings being arranged at right angles with the middle wing, so that, the middle flue being closed, those at the side are open, and *vice versa*.

G represents the smoke-flue, and

H, the oven, elevated on top of the stove, behind it, and provided with surrounding air-chambers, divided, by partitions, into flues, *z*, corresponding with those in the stove, with which they respectively communicate through the passages *h h*.

The side flues of the oven communicate with the side flues of the stove at the back of the oven only.

The middle flue communicates at both the front and back of the oven.

The partitions dividing the oven-flues terminate, as will be observed in fig. 1, at a sufficient distance above the top of the stove to allow the heated currents to pass from one to the other.

I is a damper for directing the hot currents passing through the middle flue.

J are perforated oven-plates.

K are ventilating-tubes.

L are boiler-holes.

The oven is properly heated by turning the triple-winged damper down and letting the heated currents flow back and around the oven, heating the outer portions first, thence returning through the middle flue, and ascending the smoke-flue.

Until the proper temperature is reached the damper I should be turned up. The products of combustion will then pass from the side flues *z*, through the opening *h′*, and out through the smoke-pipe.

When the fire is thoroughly kindled the damper I may be turned to close the opening *h′*, and the products of combustion will then be directed back through the middle flue *z*, and then forward through the middle flue F, and out at the smoke-pipe.

When the triple damper is turned up the side flues are closed and the middle flue open. In this position the damper I should close the middle flue F, and the products of combustion will pass from the fire-box directly out through the smoke-pipe.

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

In a cooking-stove, the arrangement of the oven H behind the smoke-flue, and on top of the stove, the triple flues F F F, the triple-winged damper F′, and the drying-chamber E, as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ALVIN WARREN.

Witnesses:

HENRY SOHN,

ROBERT HATTON.