

COX & GAUSE.

Fruit Drier.

No. 98,470.

Patented Jan'y 4, 1870.

Fig. 1.

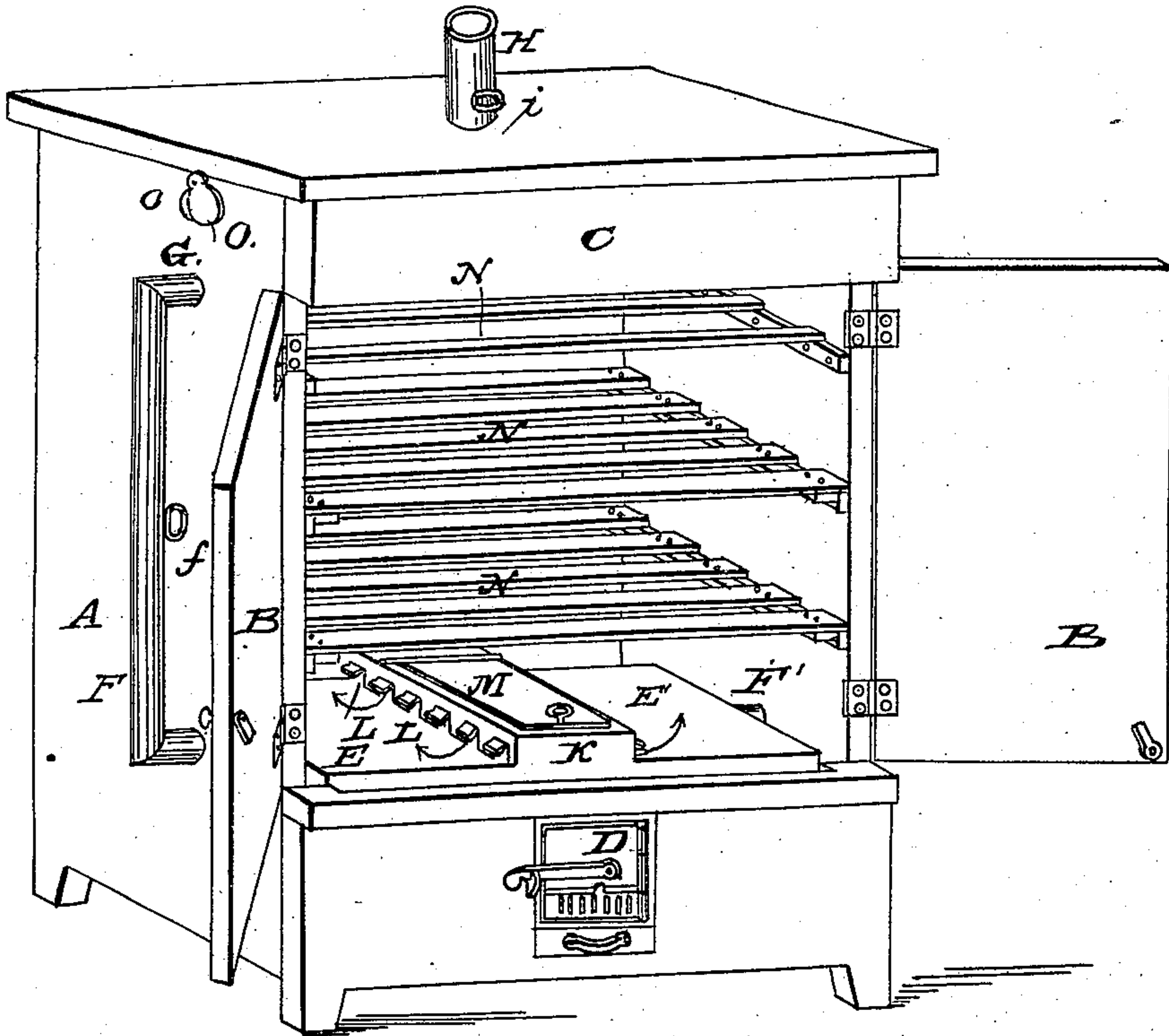


Fig. 2.

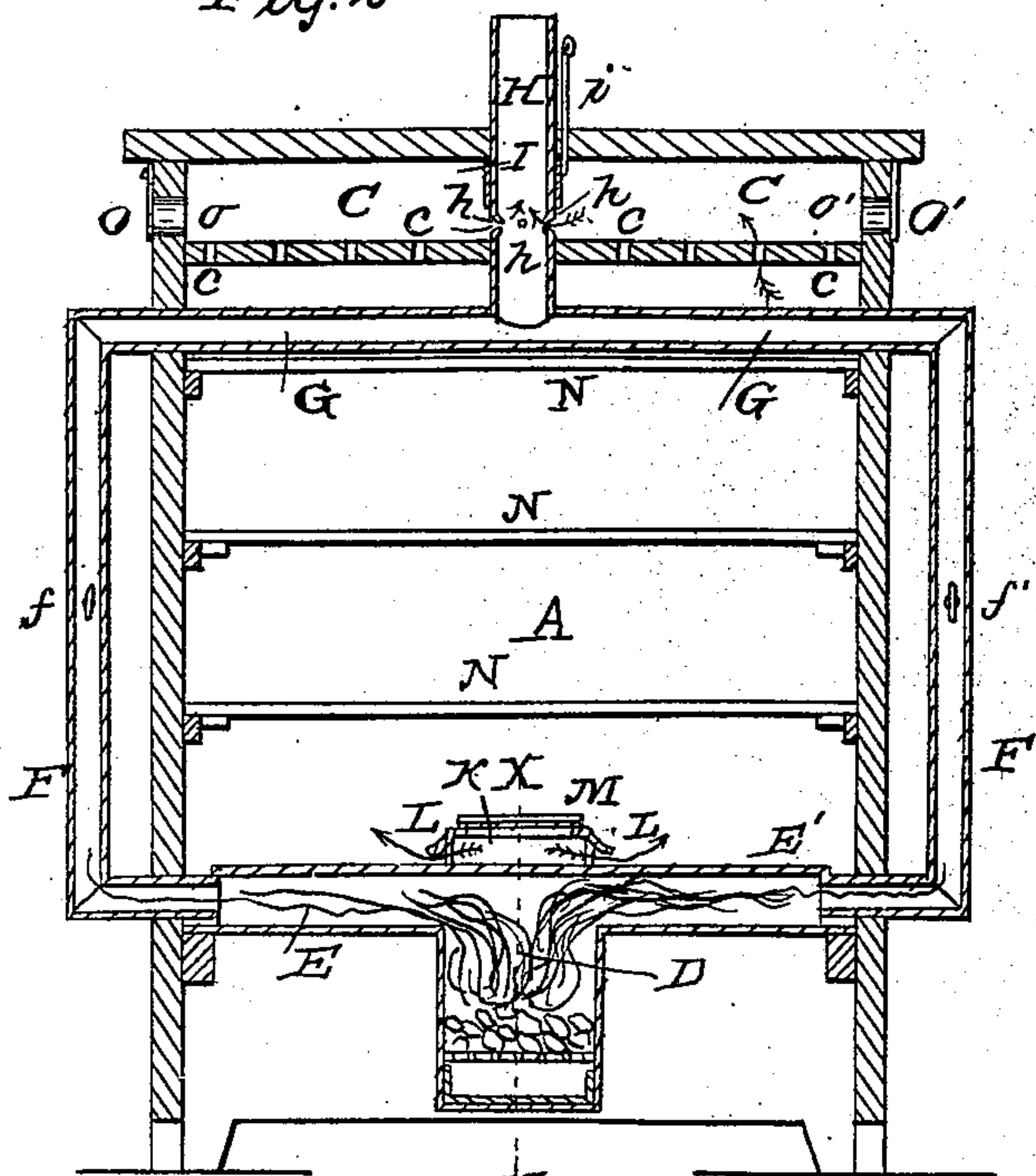
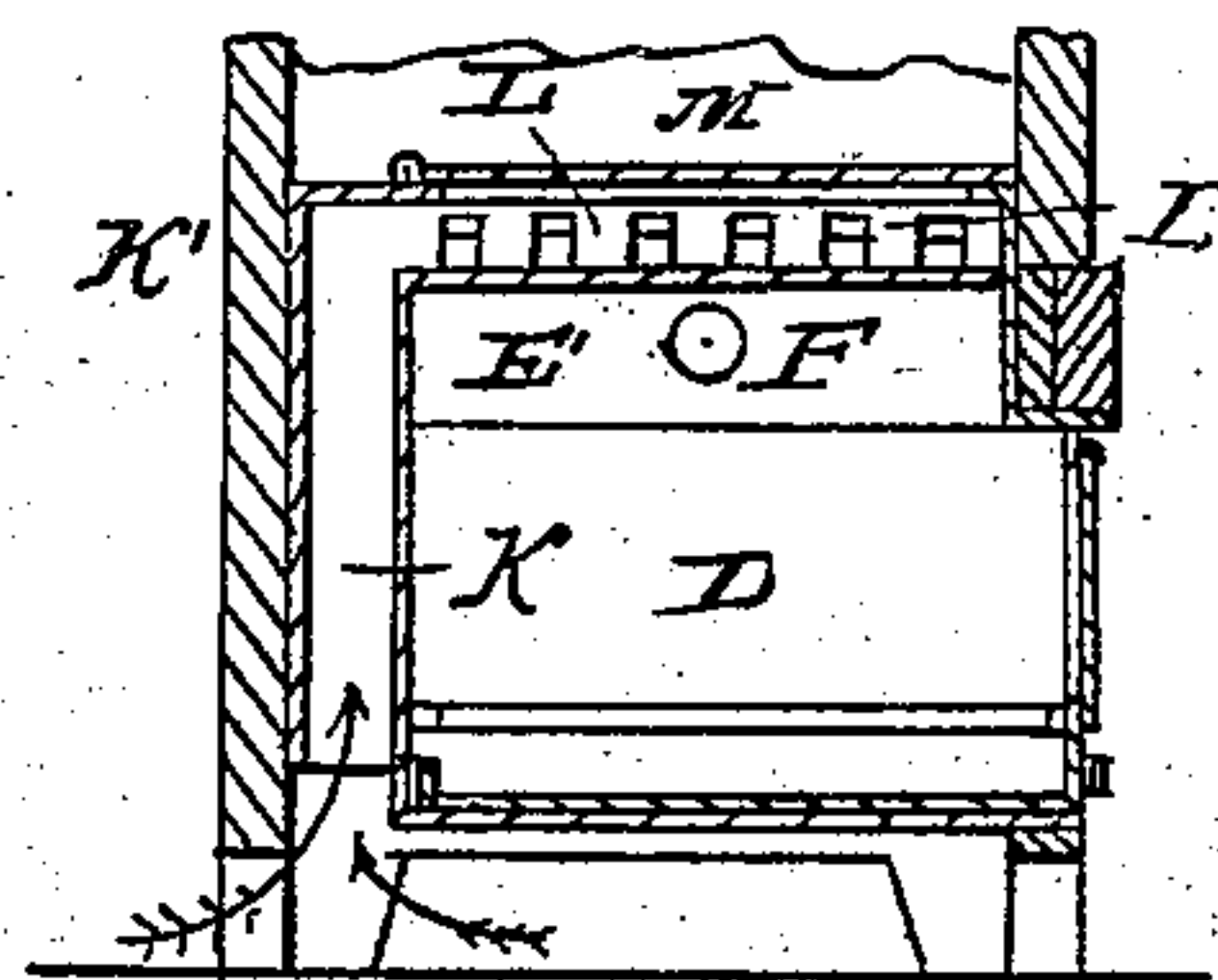


Fig. 3.



WITNESSES

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# United States Patent Office.

ALBERT W. COX AND WILLIAM GAUSE, OF INDIANAPOLIS, INDIANA.

Letters Patent No. 98,470, dated January 4, 1870.

## DRIER.

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

We, ALBERT W. COX and WILLIAM GAUSE, both of Indianapolis, Marion county, Indiana, have invented a new and useful Drying-House, of which the following is a specification.

### *Nature and Object of the Invention.*

This is an improvement in the class of apparatus employed for drying fruit, vegetables, clothing, &c., and which comprises a more or less closed chamber, having suitable racks or shelves, for the articles to be dried, and a stove, for producing the requisite heat; and

Our invention consists in—

First, an arrangement of smoke-flues and caliducts, for the equable and effective distribution of heat.

Secondly, a provision for drawing or directing the heat to one or other side of the chamber.

Thirdly, a means of superheating or drying all moist air or vapor that may accumulate in the upper part of the drying-chamber.

### *General Description, with Reference to the Drawings.*

Figure 1 is a perspective view of our drying-apparatus, with its doors open.

Figure 2 is a vertical section in the plane of the smoke-pipes.

Figure 3 is a section of the heater on the line *x-x*.

A is the drying-chamber, similar to a wardrobe, having in front one or more doors, B, and at top a steam or vapor-receptacle, C, which communicates with the drying-chamber below, by orifices *c*.

The drying-chamber is occupied at bottom by our heater, which consists of a stove, D, from whose upper part there branch off two flat and broad flues E E', which, outside of the chamber, enter vertical flues F F', having dampers *f f'*.

The flues F F', at their upper ends, enter a pipe, G, which traverses horizontally the upper part of the drying-chamber.

From the middle of the pipe G, the smoke-discharge pipe H rises through the steam-receptacle C, and above the top thereof.

The smoke-discharge pipe H has a vertical series of apertures, *h*, whose size permits the free passage of vapor into the pipe, while preventing the escape of sparks or ignited fragments therefrom.

A sliding register, I, having a handle, *i*, which projects through the top of the house, enables the opening or closing of the apertures *h*, at will.

Our hot-air passage or caliduct passes up in rear of the stove at K, and over the top thereof at K', and discharges into the drying-chamber, through orifices

L L', immediately over the broad flues E E', whose heat, being abstracted by the air, ascends with a nearly equable flow through the drying-chamber.

M is a flap, to afford access to the caliduct, for cleansing or otherwise.

N are racks, to receive articles to be dried.

Openings *o o'*, closable by shutters O O', enable a portion or all of the heat generated in the drying-house to be quickly liberated, so as to reduce the temperature within, and this heat may be employed to warm one or more apartments, when desired.

### *Operation.*

A fire being made in the stove, and fruit, or other articles to be dried, being placed upon the racks N, the air escaping from the caliducts K K', impinges on the tops of the flues E E', and becoming highly heated, passes upward through the racks, and about the articles to be desiccated.

Should any irregularity of action occur, it can be instantly checked by opening the damper *f* or *f'*, on the coolest side, and closing that on the hottest side.

In case the current of heated air should be too sluggish, it may be expedited, in any desired degree, by simply raising the register I, so as to open one or more of the orifices *h*.

The drying-chamber A, communicating with the vapor-chamber C, by numerous orifices *c*, the ascending currents of heated air are drawn equally upward and with uniform effect at every part.

### *Claims.*

We claim, as our invention—

1. The described arrangement of stove to caliduct K K', orifices L L', and broad flues E E', for the object designated.

2. In combination with the elements K K', L L', E E', the side pipes F F', with the dampers *f f'*.

3. The arrangement of side pipes or flues F F' and the pipe G, traversing the upper part of the chamber A, as and for the object stated.

In testimony of which invention, we hereunto set our hands.

ALBERT W. COX.  
WILLIAM GAUSE.

Witnesses as to COX:

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JAMES H. LAYMAN.

Witnesses as to GAUSE:

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