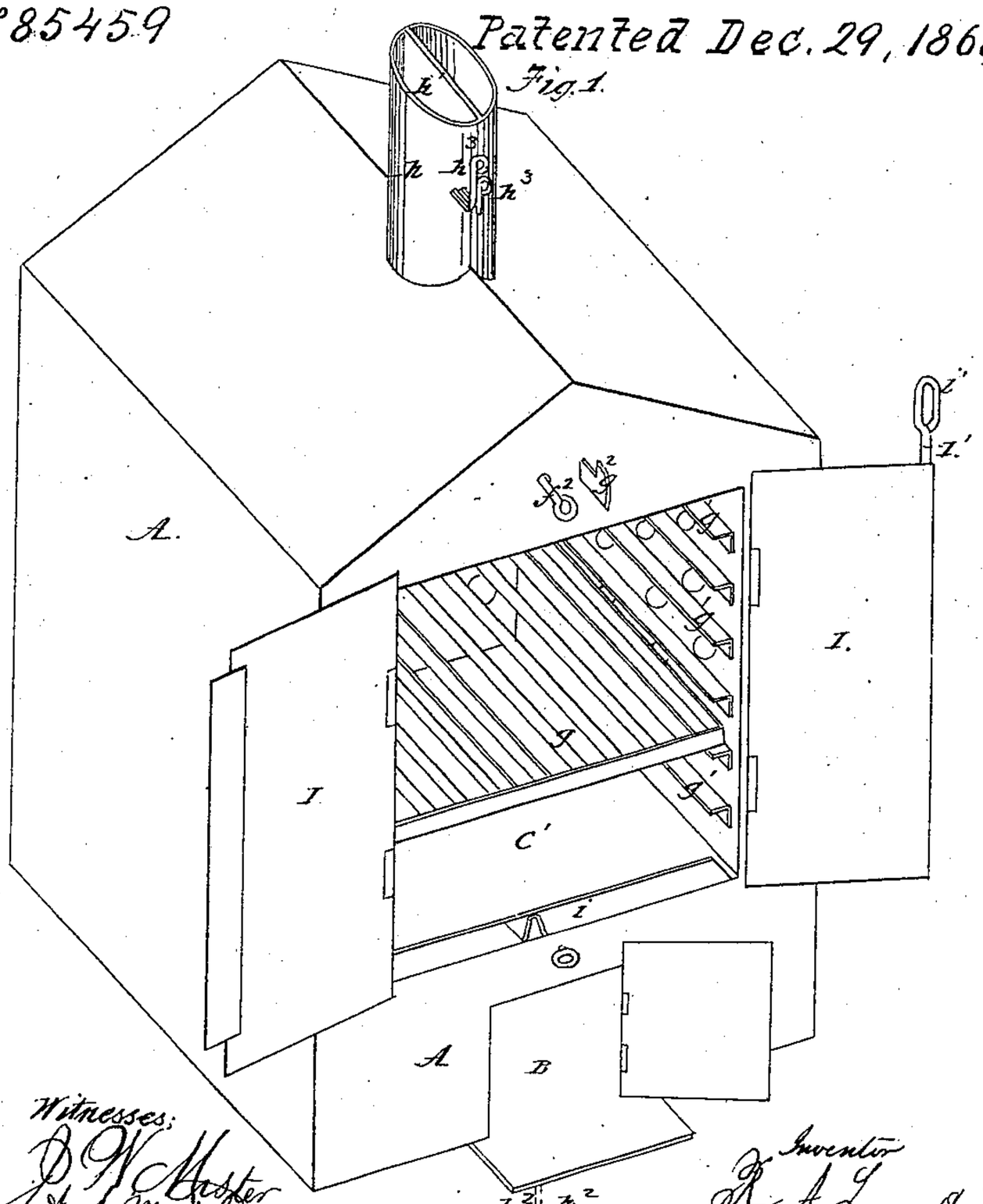
R. A. Lucas & I. S. Lehman.

Fruit-Drier.

No. 85459 Patented Dec. 29, 1868

Fig. 1.



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per T. H. Alexander
Atty.

Fig. 3

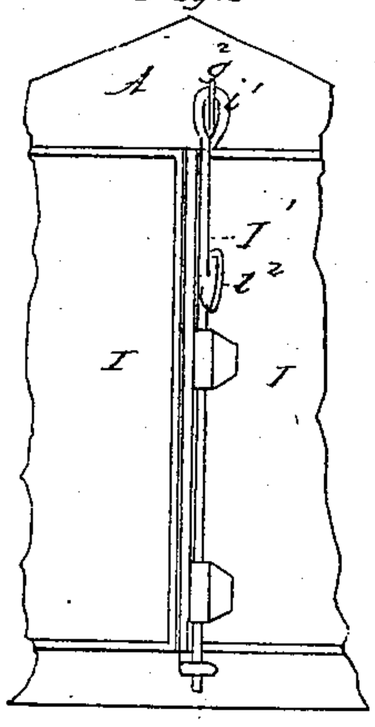
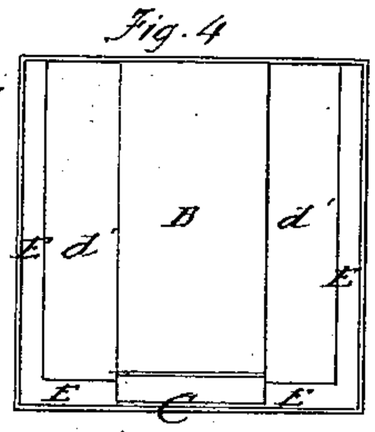


Fig. 4



United States Patent Office.

ROBERT A. LUCAS AND LOUIS S. LEHMAN, OF WOOSTER, OHIO.

Letters Patent No. 85,459, *dated December* 29, 1868.

IMPROVEMENT IN FRUIT-DRIERS.

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

To all whom it may concern:

Be it known that we, ROBERT A. LUCAS and LOUIS S. LEHMAN, of Wooster, in the county of Wayne, and State of Ohio, have invented certain new and useful Improvements in Fruit-Driers; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification, and in which—

Figure 1 represents a perspective view of our dry-house, and

Figure 2, a vertical central section of the same.

Figure 3 is a front view of a portion of the dry-house, exhibiting the door-fastening, and

Figure 4 is an under-side view of the drier.

The nature of our invention consists in constructing the dry-house with a furnace, provided with openings for the escape of smoke; in the employment of a double perforated inner wall, with its perforations or apertures supplied with ventilating-tubes; in furnishing the upper part of the inner wall with ventilating-opening and cut-off; providing smoke-flue with two dampers; and lastly, in the peculiar mode of fastening the doors of the said dry-house; all constructed substantially as hereinafter set forth.

To enable others to make and use our invention, we will now proceed to describe it.

In the accompanying drawings—

A represents the outer casing or house, in the lower part of which is situated the furnace B, which is supplied with the legs *b b*, and openings *c c*, for the escape of smoke.

C designates an air-chamber, constructed on the rear side of furnace B, and permitting air to pass up over said furnace, or into a chamber, *i*, formed by it, and a plate, *c'*, fastened to the inner wall, a short distance above the furnace, and made a little shorter than the top of said furnace, to allow the air to enter the main chamber of the drier.

D designates the double inner wall, which consists of the inner house *d*, and partition *d'*, secured at its upper end to the top of casing A, and formed at its lower end with an inclined surface secured to the furnace B.

The partitions *d d'* of wall D are provided with holes or apertures, which are supplied with ventilating-tubes *d² d²*. (See fig. 2.)

These tubes are designed to permit air from the air-chamber E to enter the inner chamber F, in which are placed the pans or pan *g*, for holding the fruit to be dried.

The pan or pans *g* are provided with openings in their bottoms, to allow the heat to have the desired effect on the fruit placed in them, and are made to rest on supports or strips *g' g'*, secured to wall D.

G designates the smoke-chamber, situated between the house or inner partition *d* and partition *d'* of wall D and the inclined surface of outer house A.

Secured across the upper part of the inside of the drier is a piece or partition, *d³*, which is made with an opening, *f*, for ventilation, and over which is hinged a cut-off, *f'*, operated by a bar or shaft, *f²*.

The inner house *d*, directly above this partition *d³*, or thereabouts, is furnished with ventilating-openings *f³*.

The smoke-flue *h* is provided at its centre with a partition, *h'*, on each side of which is pivoted or hinged a damper, *h²*, opened or shut by a bar or crank-shaped arm, *h³*. By means of these dampers, the excess of heat on either side of the fruit-pans, if there be such, can be let off, thus avoiding the burning of the fruit.

I I designate the doors of the drier, which are fastened by means of the rod or bar I', formed at its upper end with an eye or loop, *i'*, catching over a hook, *g³*, on house A, and provided at or near its centre with a ring or loop, *i²*, for sliding it up and down in clips on one of the doors, in order to lock the doors.

What we claim, and desire to secure by Letters Patent, is—

1. The air-chamber C, constructed on the rear side of furnace B, and communicating with the chamber *l* over said furnace, and operating substantially as set forth.

2. The employment, in a dry-house, of the perforated inner double wall D, supplied with the air-tubes *d² d²*, and consisting of the inner house *d* and partition *d'*, all constructed and operated substantially as and for the purpose set forth.

In testimony that we claim the foregoing as our own, we affix our signatures, in presence of two witnesses.

ROBERT A. LUCAS.
LOUIS S. LEHMAN.

Witnesses:

HENRY LEHMAN,
LUCIAN ADAMS.