

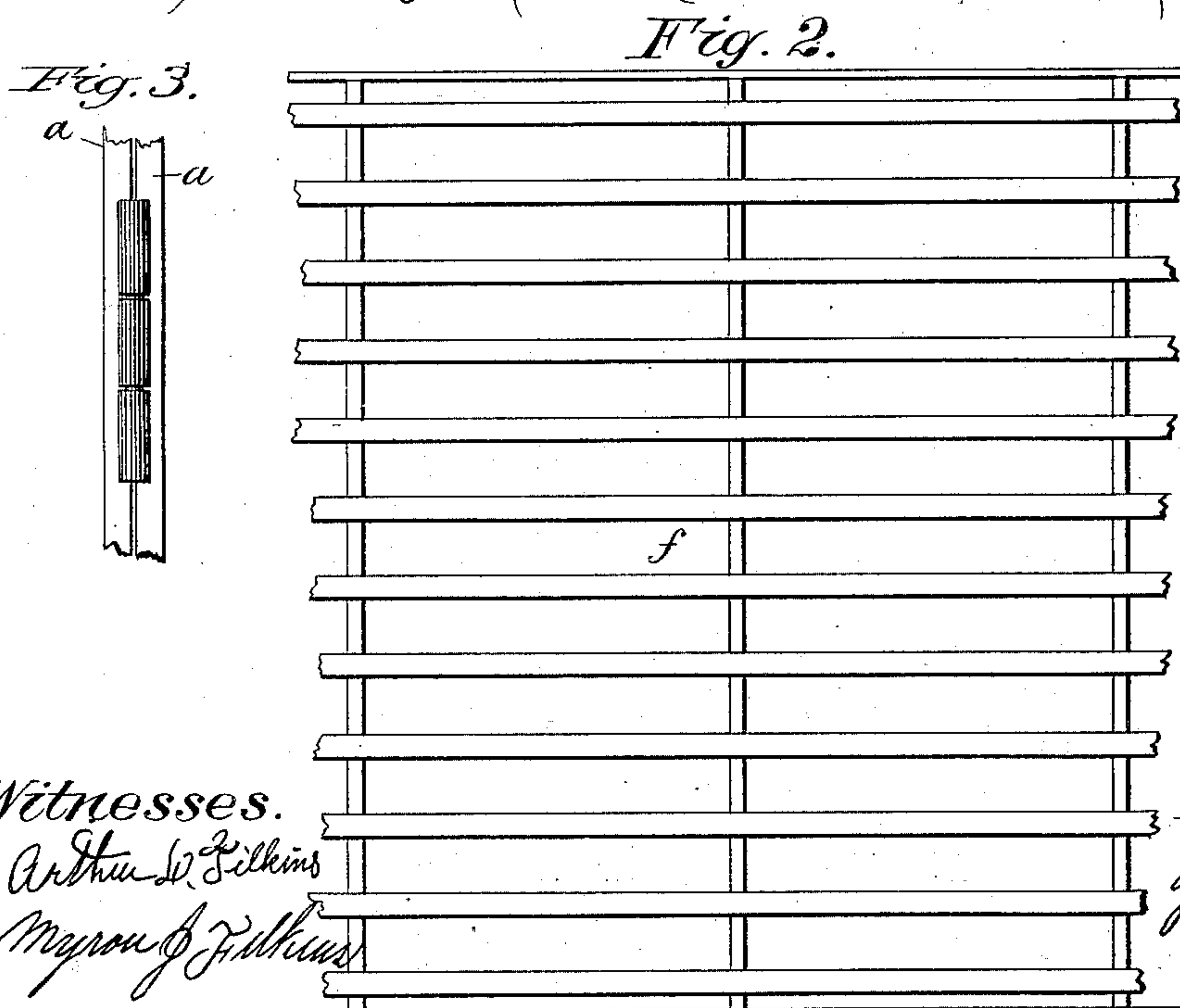
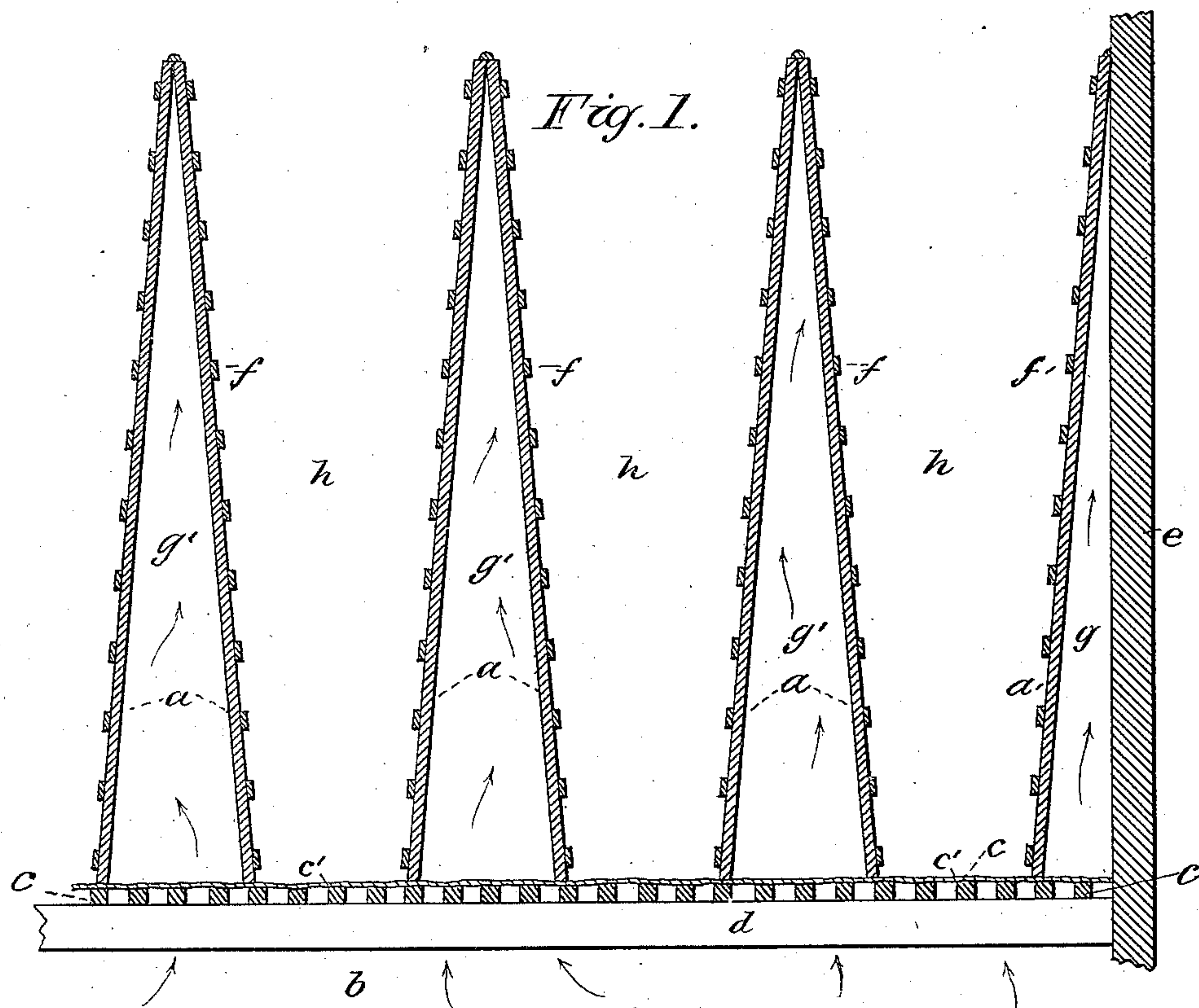
(No Model.)

J. L. FILKINS.

HOP DRIER.

No. 285,246.

Patented Sept. 18, 1883.



Witnesses.

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UNITED STATES PATENT OFFICE.

JAMES L. FILKINS, OF WATERVILLE, NEW YORK.

HOP-DRIER.

SPECIFICATION forming part of Letters Patent No. 285,246, dated September 18, 1883.

Application filed December 9, 1882. (No model.)

To all whom it may concern:

Be it known that I, JAMES L. FILKINS, of the village of Waterville, in the county of Oneida, in the State of New York, have invented certain new and useful Improvements in Driers for Hops and other Substances, of which the following is a complete description.

The invention consists in certain novelties in the construction and arrangement of the parts of which the apparatus is composed, as will hereinafter more fully appear.

In the drawings, in which like letters represent like parts, Figure 1 is a vertical transverse section of a drier embodying my improvements. Fig. 2 is a side elevation of a portion of one of the racks employed in the drying-chamber. Fig. 3 is a detail, showing two racks united by an ordinary metallic hinge.

e designates a portion of the outer wall of the drying-chamber, which wall may be of any approved construction.

b is the furnace room or chamber, in which air is heated before being discharged into the drying-room.

d is one of a series of joists, across which, at any desired angle, are placed slats *c*, upon which may be placed a kiln-cloth, *c'*.

a designates bars, to which are attached slats *f*, both these parts being preferably of wood, although other suitable material may be employed. One of these racks may rest at any desired inclination against the wall of the drying-chamber, or against a partition therein, and form in connection therewith a vertical air-passage, *g*; or two of these racks loosely connected together side to side by a hinge of metal, leather, or cloth, or by wire or twine, or any other suitable means, may form a similar tapering air-passage, the base of the walls of which being placed at any suitable distance apart, the spaces *h* between the outer surfaces of any two of these adjustable frames being adapted to receive the material which is to be dried.

In practice it is found that in ordinary foraminous-floored drying-chambers many articles are imperfectly and ununiformly dried because of their unequal exposure to heat, and it has been my purpose in making this invention to provide means which shall effectually remedy this imperfection, and by insuring equal exposure to the heated air-cur-

rents insure as a consequence uniform perfection in the dried product.

It is manifest that a portion of the weight of the article to be treated will be sustained by each of the slats which compose the horizontal portion of the racks, whether a single rack or two racks attached together be used, and it follows that the tendency of such article to become compressed or matted together will in a corresponding degree be diminished.

This partial support of the material by the racks is of especial advantage in drying light substances—such as hops—for the treatment of which the drier is well adapted. The twin racks themselves being readily adjustable at various distances from the wall, or from each other, and the two members of each being also adjustable at any desired distance asunder, depending on the nature of the material to be dried, such adjustment, whenever changed, effects simultaneously a corresponding change in the horizontal area of the air-flue and in the horizontal extent of the receptacle between each two of the flues.

The operation is clearly indicated in the drawings, the arrows showing the direction of the heated air-currents to be first through the orifices in the drying-floor, and next either directly into the material to be dried or indirectly after passing through the upwardly-tapering air-passages.

Having thus described my invention, what I desire to claim and secure by Letters Patent is—

1. In a drier, a tapering air flue or chamber consisting of two racks loosely connected at their tops, so that the intervening space may be widened or narrowed, substantially as described.

2. In a drier, the combination of a foraminous floor and a foraminous tapering air-flue, the latter resting upon the former, substantially as described.

3. In a drier, an imperforate wall, an inclined rack, forming in connection with such wall an air-flue and two inclined racks connected together and having between them an air-space, all in combination, substantially as described.

JAMES L. FILKINS.

In presence of—

ARTHUR D. FILKINS,
MYRON J. FILKINS.