

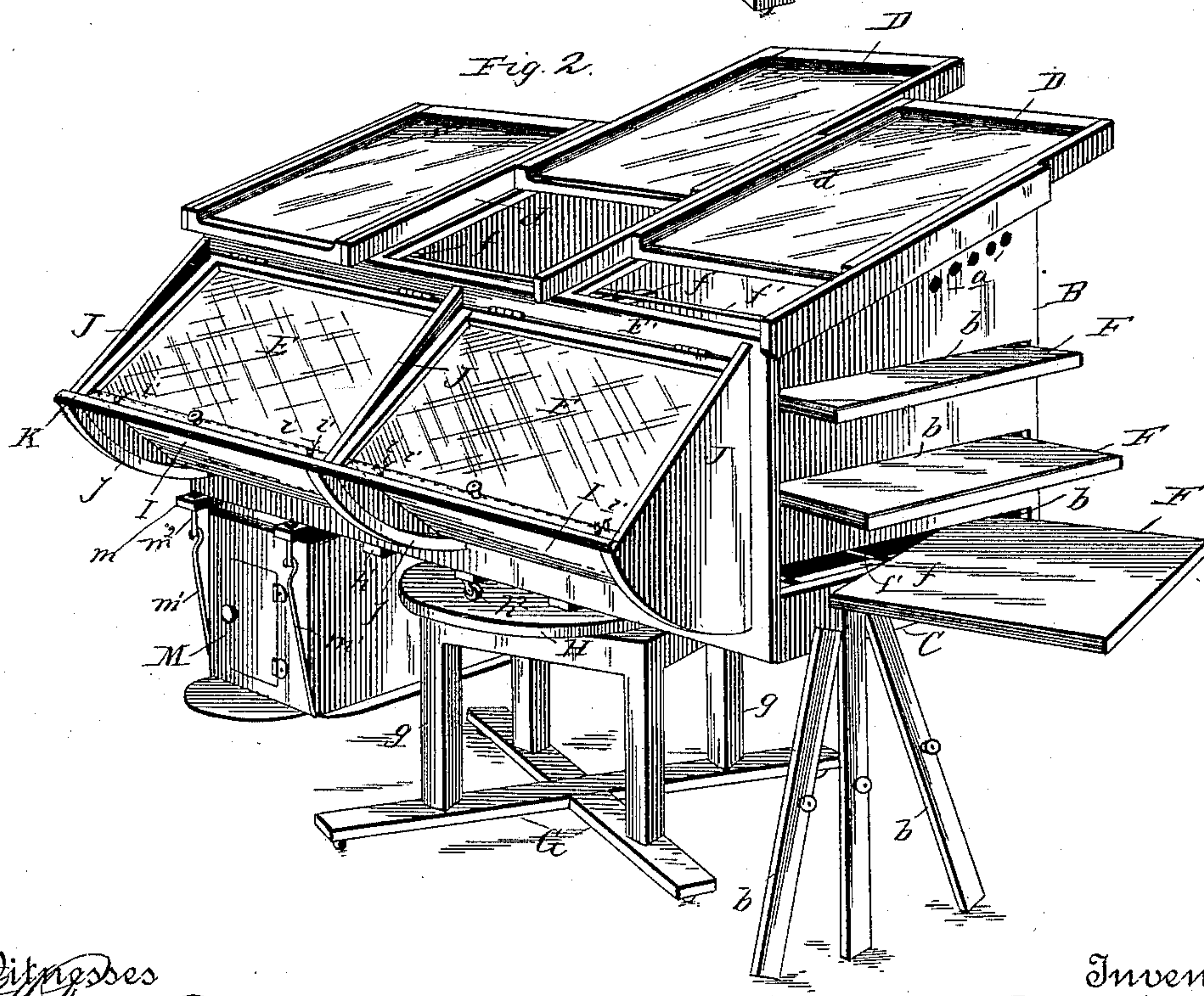
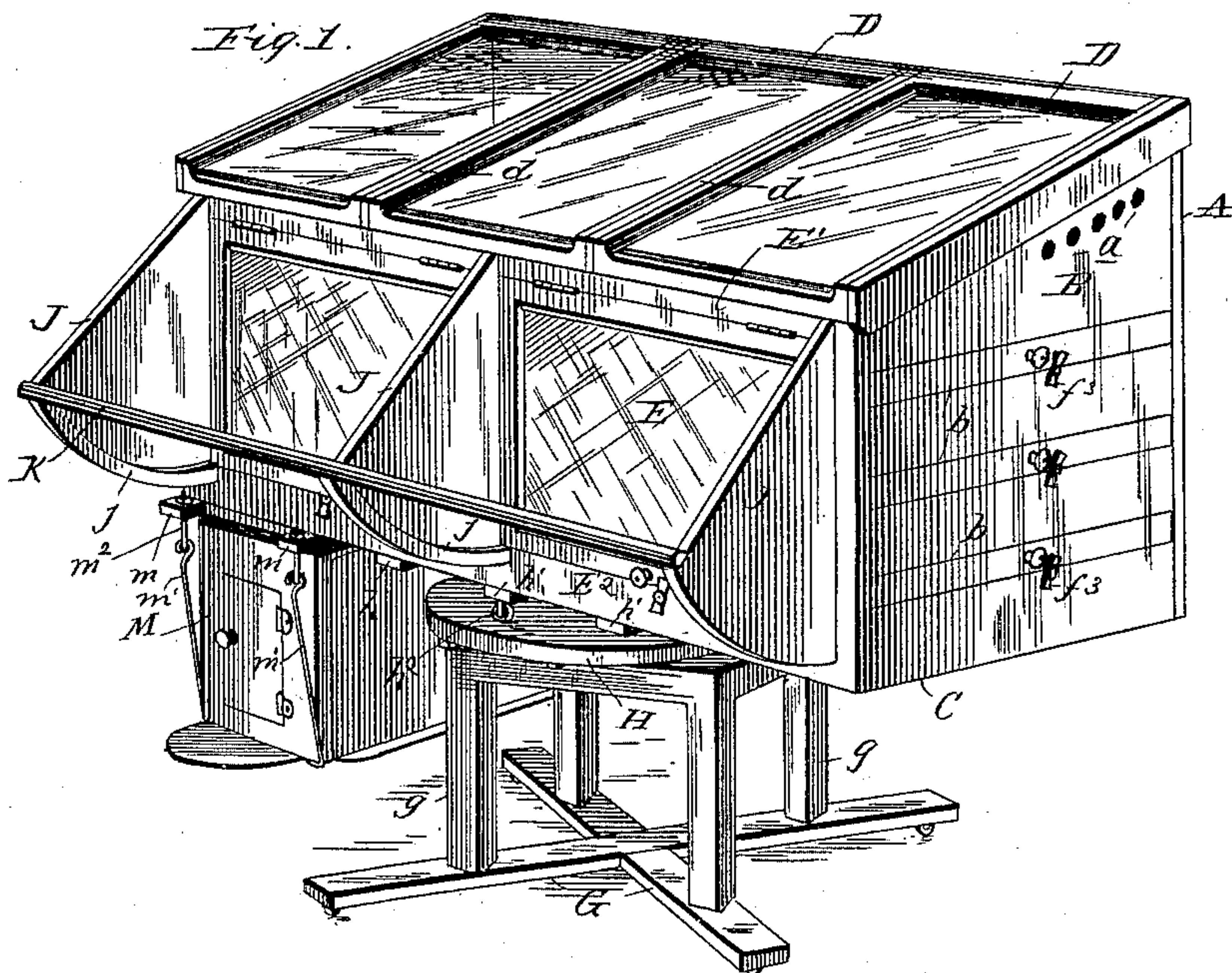
(No Model.)

2 Sheets—Sheet 1.

J. B. JOHNSON.
DRIER.

No. 409,359.

Patented Aug. 20, 1889.



Witnesses
C. A. H. A. H.
Van Buren Killyard.

Inventor
John B. Johnson

By

Attorney

R. H. Lacey

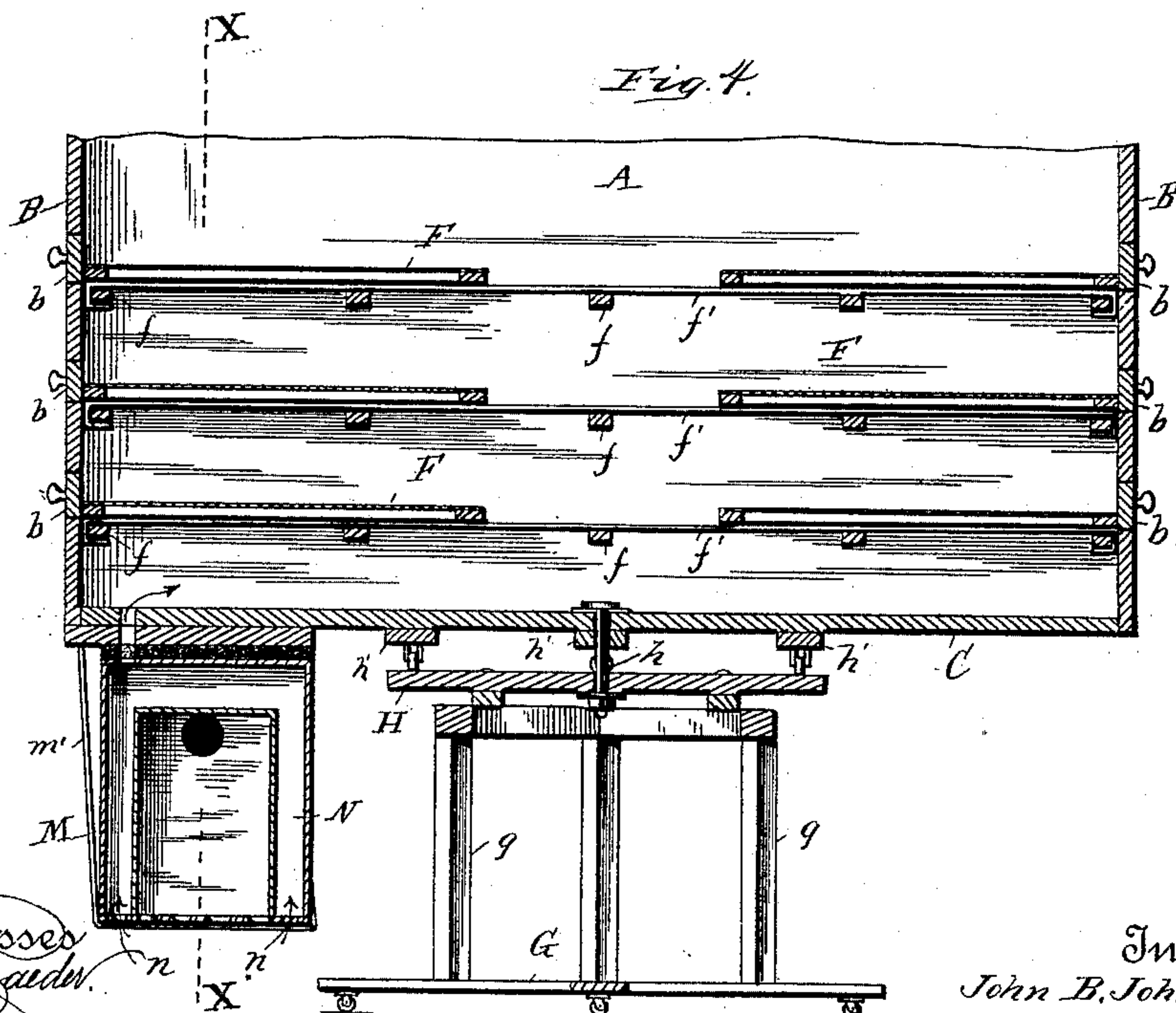
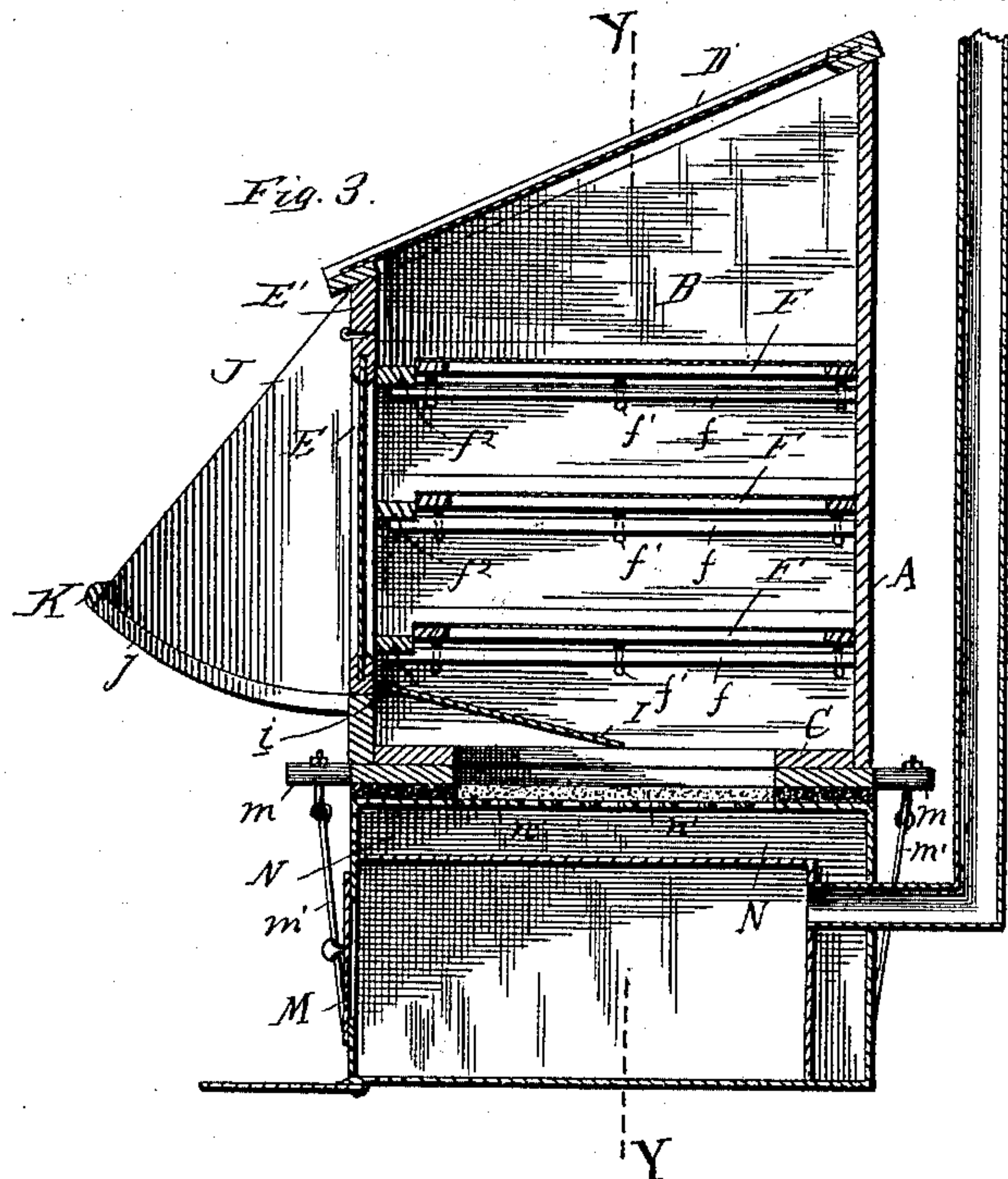
(No Model.)

2 Sheets—Sheet 2.

J. B. JOHNSON.
DRIER.

No. 409,359.

Patented Aug. 20, 1889.



Witnesses
Van Dusen Hillyard.

Inventor
John B. Johnson.

By his Attorneys
R. W. Lacey

UNITED STATES PATENT OFFICE.

JOHN B. JOHNSON, OF NEWTON, ILLINOIS.

DRIER.

SPECIFICATION forming part of Letters Patent No. 409,359, dated August 20, 1889.

Application filed February 20, 1889. Serial No. 300,535. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. JOHNSON, a citizen of the United States, residing at Newton, in the county of Jasper and State of Illinois, have invented certain new and useful Improvements in Driers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to driers for evaporating the moisture of fruits, and has for its object to provide a simple device that will utilize the heat of the sun to the best possible advantage, and which will have combined therewith a furnace to supplement the action of the sun or to perform the work entirely in the absence of the sun.

The improvement consists in the novel features and peculiar construction and combination of the parts, which will be hereinafter more fully described and claimed, and which are shown in the annexed drawings, in which—

Figure 1 is a perspective view of a drier embodying my invention; Fig. 2, a perspective view showing the front sash open, some of the top sash slid back, the doors removed from one end, and the trays projecting from the openings in the end of the drier proper; Fig. 3, a cross-section on the line XX of Fig. 4; Fig. 4, a longitudinal section, on the line Y Y of Fig. 3, of the lower portion of the drier.

The body of the drier is composed of the back A, the ends B, the bottom C, the top sash D, which are supported on the rails d , and the front sash E, which are hinged at their top edge to the top rail E', and close at their lower edge against the bottom rail E². The top sash D slide on the rails d and slant from the back A to the front of the drier. The trays F slide through openings b in the ends of the drier on suitable tracks provided just below the said openings and composed of a series of cross-slats f and longitudinal wires f' , the cross-slats being secured at their rear ends to the back A, and at their front ends to the longitudinal rails f^2 . The open-

ings a are closed by the doors b , one being provided for each opening, which are fastened by the turn-buttons f^3 . The vapors escape through the openings a , near the top of the ends B.

The stand on which the drier is mounted is composed of the uprights g , the lower cross G, and the table H. The drier is placed on the table H and is secured thereto by the bolt h , which passes through the center of the table and forms the pivot for the drier to turn around. The cleats h' strengthen the bottom C, and have the casters h^2 applied thereto, which run on the table and relieve the friction between the drier and the said table. The arms of the cross G have casters to facilitate moving the drier. The reflectors I, preferably sheets of tin, rest on the bottom of the drier and have their front ends loosely connected with the lower free ends of the sash E, preferably by the hooks i , secured in the sash-rail, and which pass through eyes i' in the reflectors. When the sash E is opened, obviously the reflector connected therewith will be drawn out, and will at the same time have its outer end elevated, thereby changing the angle of the reflector to suit the inclination of the sun's rays, so as to throw the latter into the drier. The segmental sections J, arranged at the ends of the sash E, serve to close the space at the ends of the sash which would otherwise be left exposed when the said sash E would be opened. The curved cleats j , at the lower ends of the sections J, strengthen the same and form ways for the lower ends of the sash to run upon. The sash E fit snugly between the sections J and the cleats j , and are held open at any position by frictional contact with the said sections and cleats. The cross-bar K, secured to the outer ends of the sections J, holds them in a fixed relative position. The furnace M has a double wall and is suspended from the cleats m at one end of the drier by the stirrups m' , one at each end of the furnace, the stirrups being connected with the cleats m by the eyebolts m^2 . The hot-air space N between the walls of the furnace communicates with the external air through a series of openings n in the bottom of the furnace, and with the drier through the series of openings n' in the top of the

furnace and the bottom of the drier. A layer of mineral wool—as asbestos—is interposed between the top of the furnace and the bottom of the drier to prevent the latter burning.

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

10 1. The combination, in a drier, of the hinged sash E and the reflector connected with the said sash and movable therewith, substantially as and for the purpose described.

15 2. The combination, in a drier, of the hinged sash E and the reflectors loosely connected with the said sash and movable therewith, substantially as described, for the purpose specified.

20 3. The combination, in a drier, of the hinged sash E, the reflector connected to and movable with the said sash, and the sections J, substantially as and for the purpose set forth.

4. The herein shown and described drier, having its top closed by sliding sashes and

having its front closed by sashes that are hinged at their upper edges, and having 25 openings in its ends, the openings in one end corresponding and coinciding with the openings in the other end, the rails extending from one end of the drier to the other end, the trays having perforated bottoms and 30 adapted to be inserted through the said openings, the doors for closing the openings, the reflectors loosely connected to the lower ends of the said hinged sashes, the sections J, the stand having the body of the drier mounted 35 thereon and connected therewith by a bolt, and the double-walled furnace suspended from one end of the drier, substantially as described, for the purpose specified.

In testimony whereof I affix my signature in 40 presence of two witnesses.

JOHN B. JOHNSON.

Witnesses:

JAMES W. GIBSON,
JOHN H. SHUP.