

J. W. FAULKNER.
Portable Fruit-Drier

No. 166,086.

Patented July 27, 1875.

Fig. 1.

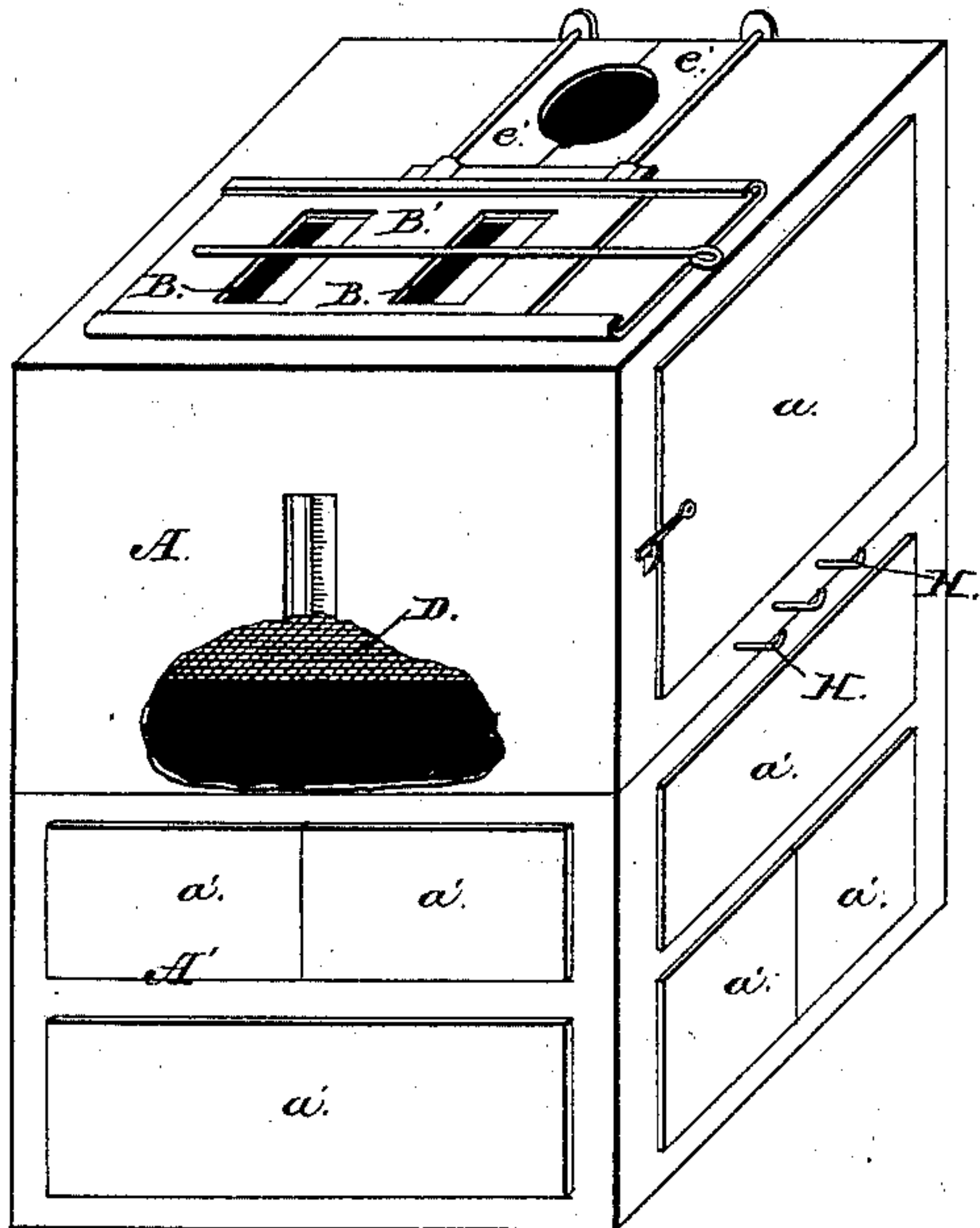


Fig. 2.

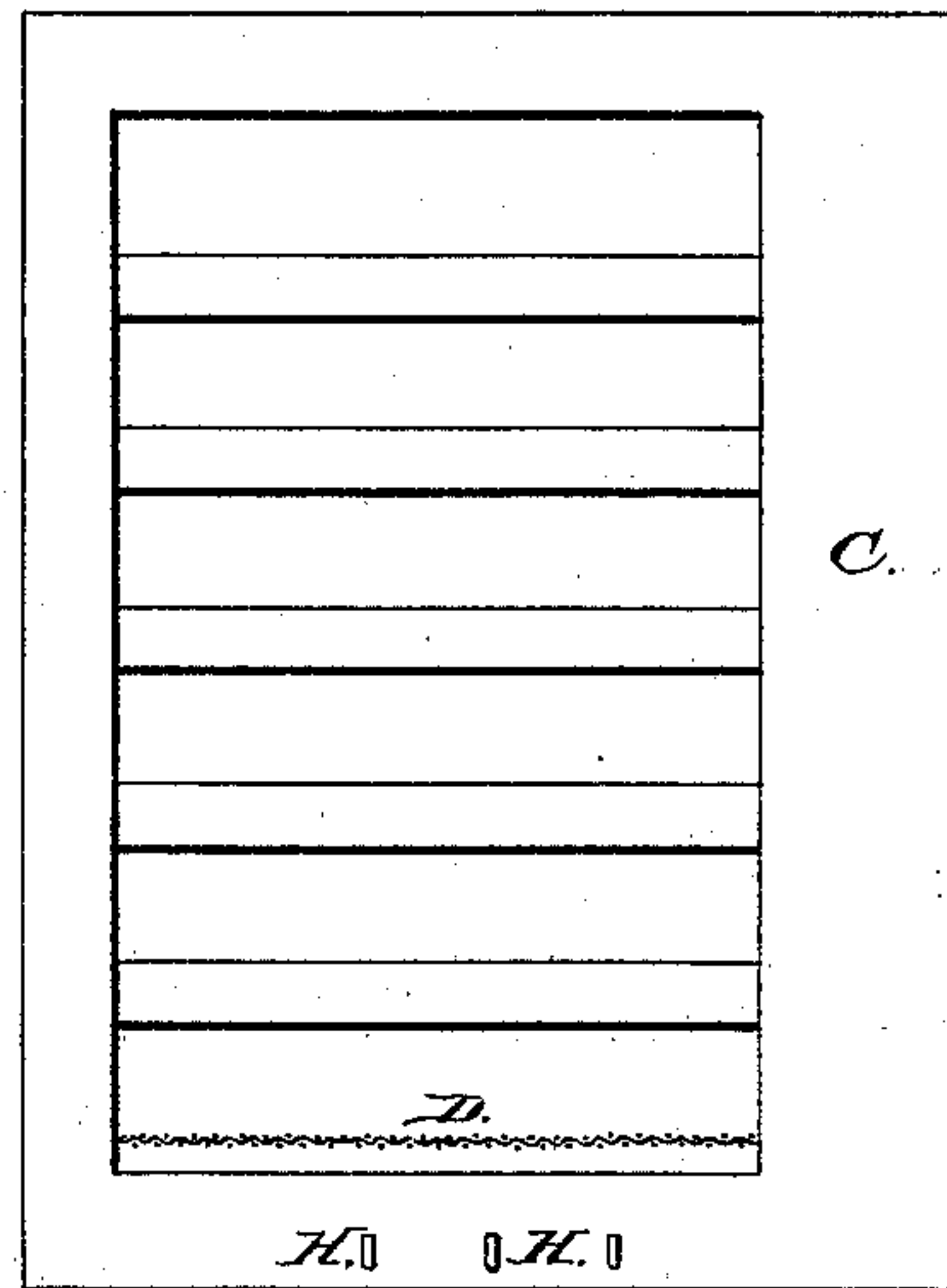


Fig. 4.

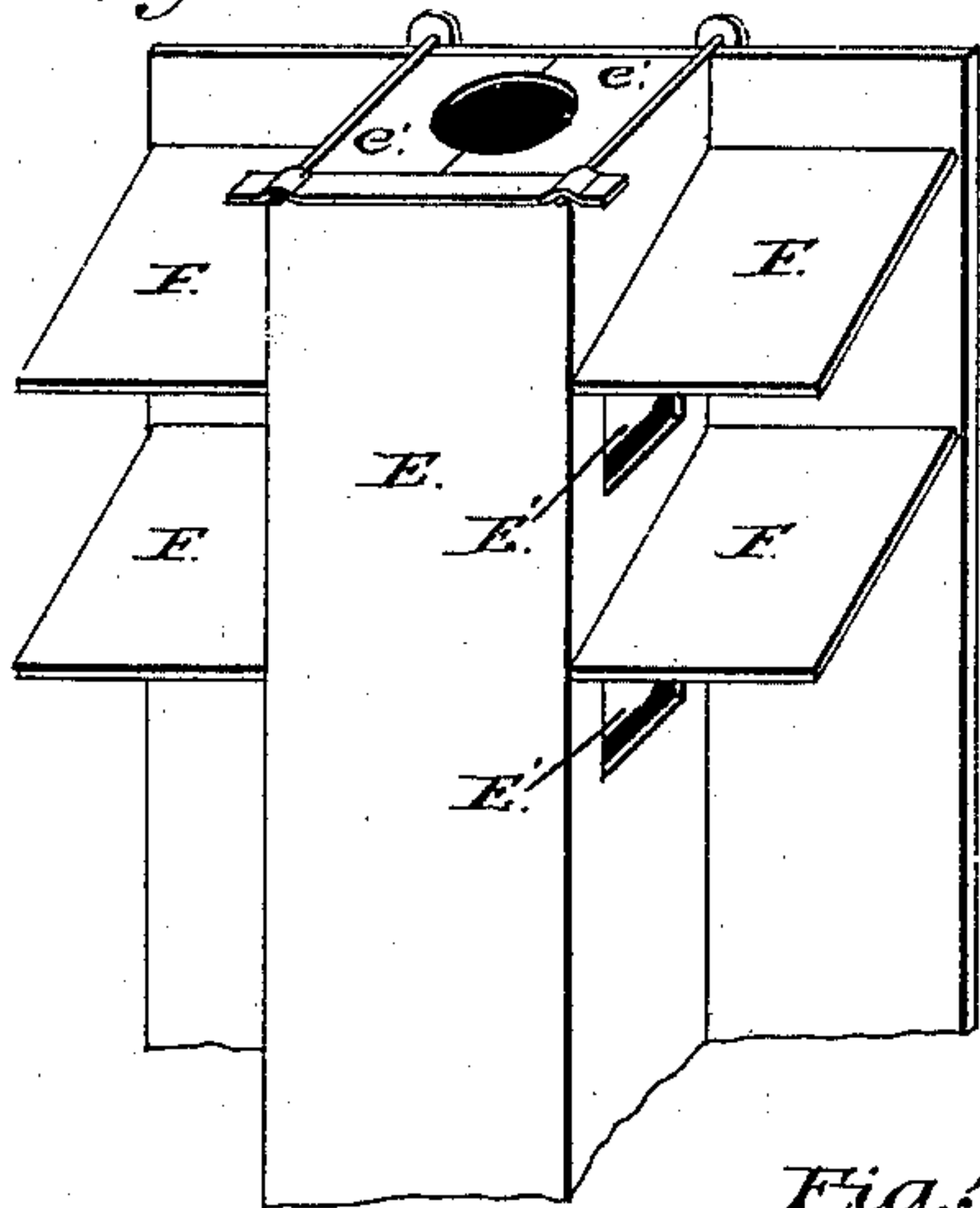


Fig. 3.

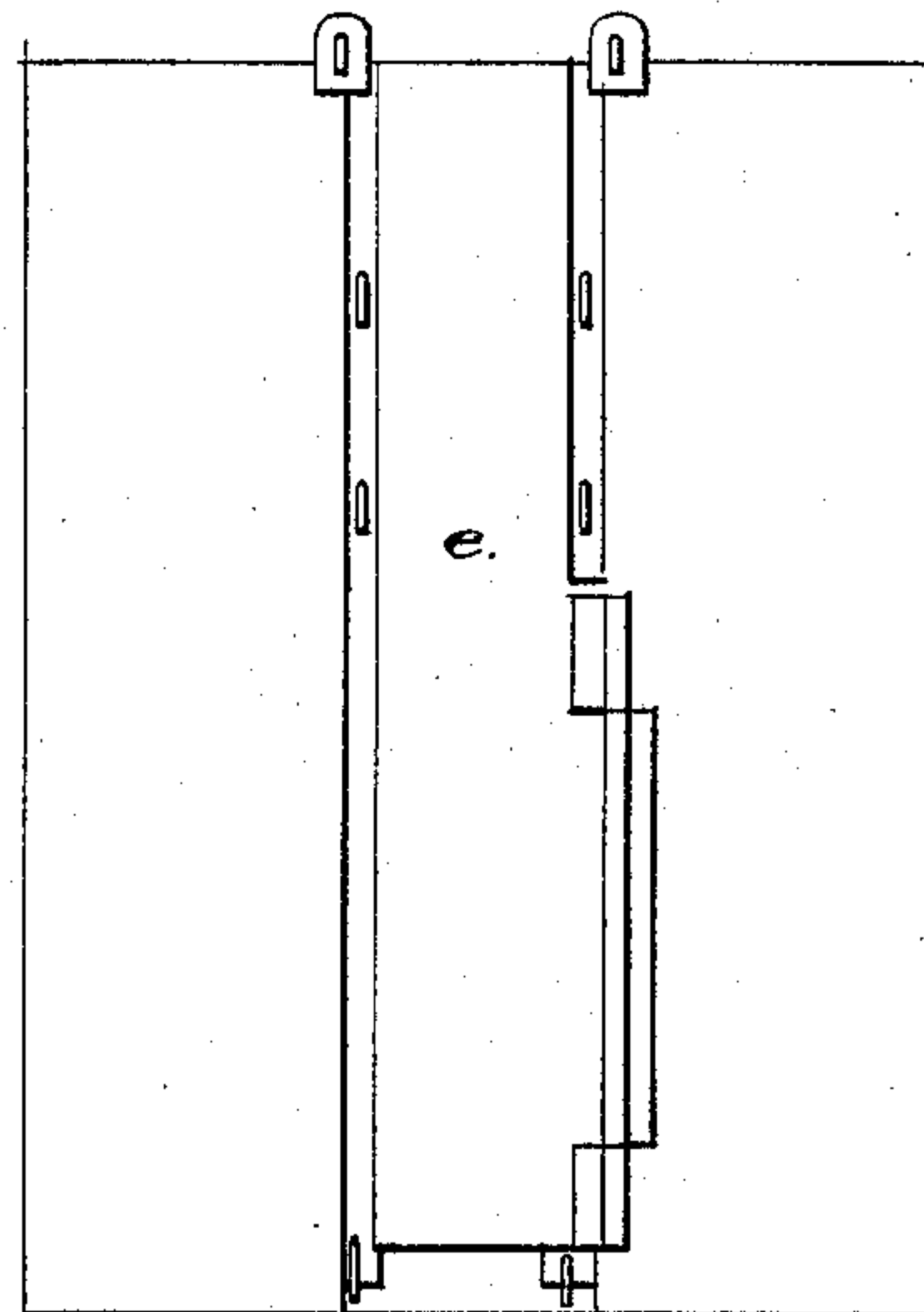
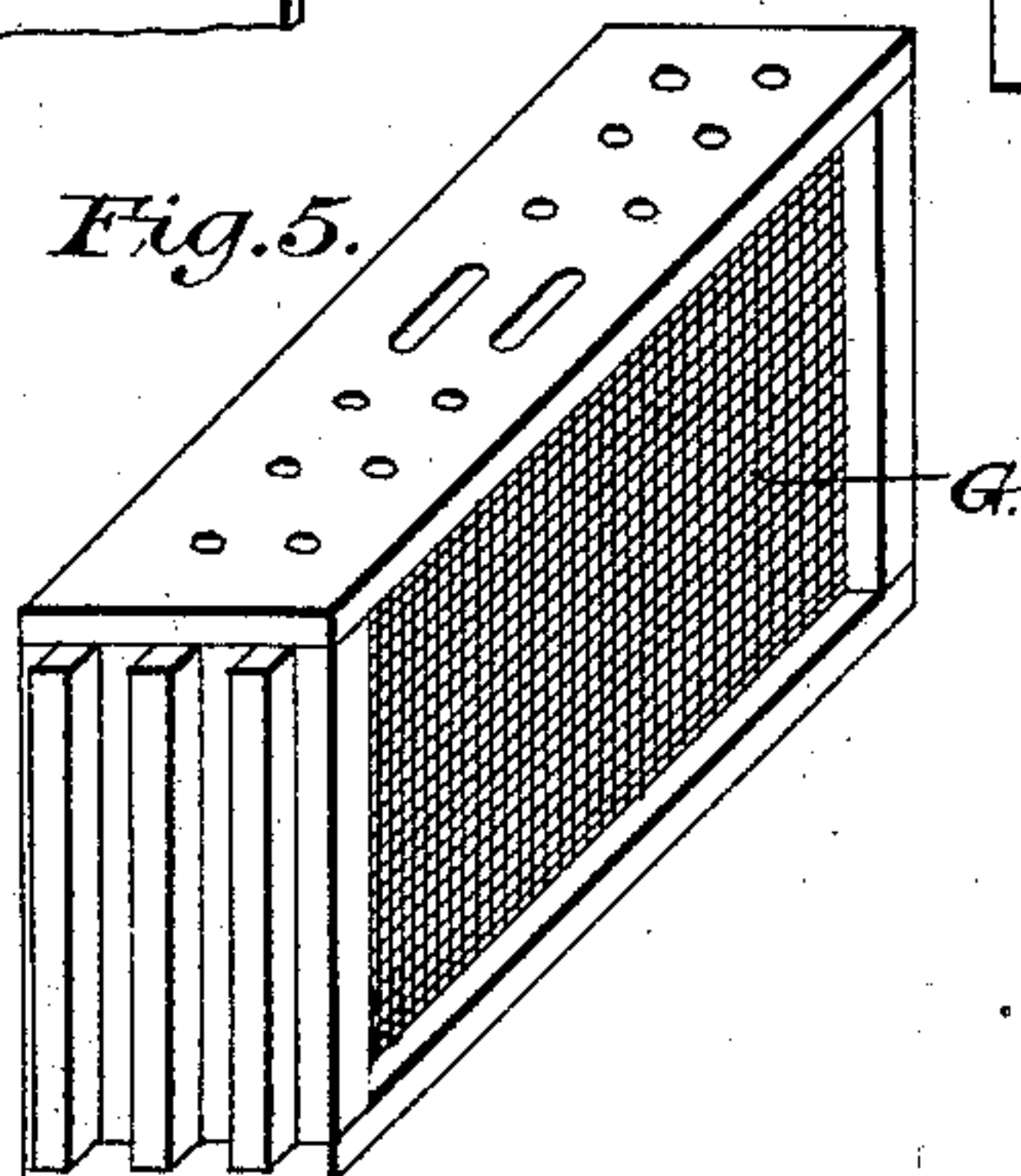


Fig. 5.



Attest:

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN PORTABLE FRUIT-DRIERS.

Specification forming part of Letters Patent No. **166,086**, dated July 27, 1875; application filed April 13, 1875.

To all whom it may concern :

Be it known that I, JAMES W. FAULKNER, of Auburn, in the county of Placer and State of California, have invented certain new and useful Improvements in Fruit-Driers; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Figure 1 is a perspective view of the device entire in position for use. Fig. 2 is a vertical sectional view from front to rear, showing the drying-shelves in position and the wire-gauze screen below. Fig. 3 is a rear elevation of the drying-chamber, showing the door covering the hot-air chamber around the stove-pipe. Fig. 4 is an interior view of the drying-chamber, showing the rear of the chamber about the smoke-pipe, and the damper at the top and sides of same. Fig. 5 is a perspective of the drying-trays, with a detail showing in section the front bar and bottom of one of the trays.

The design of the present invention is to afford a cheap, secure, and perfect fruit-drying apparatus for domestic use, in connection with the ordinary cook or heating stove in any house; and it consists, more particularly, first, in providing a frame of metal or wood, or both combined, with suitable plates, to envelop or incase any ordinary cook or heating stove, to form a heating-chamber, and in combining therewith a drying-chamber adapted to be set above the stove or heater, and attached to and upon the stove-pipe, as will be explained; second, in combining, with and above a suitable casing or jacket placed about a heater, a drying-chamber provided with convenient doors, and with drying-trays and means for regulating the flow of the heated current of air in and through the said chamber; third, in adapting and connecting said chamber to and upon the smoke-pipe, so that there shall be afforded a hot-air chamber, from or into which the draft from said drying-chamber may be directed, as occasion calls in the process of drying and heating the fruit; fourth; in the peculiar construction of the front bar or rail of the drying-tray, whereby

the shelf can be adapted to set close and tight in the case, or so adjusted that a ventilating-aperture is left in front; fifth, in combining, with the folding and adjustable jacket or case and the drying-chamber above the same, a perforated gauze diaphragm and suitable valves, whereby the process of drying can be easily and safely regulated; sixth, in the general combination of the several parts, and in their detail of construction, all as will now be more fully and in detail described and explained.

In the accompanying drawings, A denotes the drying-chamber proper, and A' the jacket or case below, which is adapted and designed to be set about any ordinary domestic heater, whether this is a cooking-stove or a heating-stove. While in present illustration I have shown these parts rectangular in horizontal section, in a manner more especially adapted for use on a cook-stove of the usual box form, I propose to make the drier in any convenient form. I would also say that the mere form is not an absolutely essential feature, because the incasing jacket need not fit exactly in close relation to the heater, so long as it envelops it sufficiently well to insure the effect of its heat upon the drying-shelves, and in the various portions of the drier. The main and important part or portion of this branch of my invention will be sufficiently well accomplished. These said parts A and A' are provided with any number of suitable doors, *a* and *a'*, hinged or otherwise attached. In the upper or drying chamber but one is now shown. I may have one on each of the two sides and in front, if so found desirable. The said parts A and A' can be made separately from each other, and fastened one upon the other by hasps or buttons, or in any convenient way, or may simply be set one on the other, in rabbets or otherwise. The several sides of A and A', excepting the rear of A, can be hinged to the corner posts, or to each other at their edges, or be so made in any manner as to be readily detached from the heater or set about and around it. It will be seen from the foregoing that A' is merely a jacket or casing to surround the sides of the heater. The part A can be closed on all sides except the bottom where it rests on A'.

In the top of A are ventilating-apertures B, opened or closed by the movement of valve B'. Within the part A are any suitable arrangement of cleats or bars C for the support of the drying-shelves, and on which the said trays can be moved back or forth. In arranging the trays or shelves in the drying-chamber it is my intention to have sufficient space about each to allow free circulation of air, heat, &c. Below the trays or shelves there may be placed a fixed or removable wire-gauze, D. I have found this a very efficient device for equalizing the dissemination of heat as it rises from the heater, and at the same time an admirable protection against the danger of burning the fruit or substance which is being dried.

In the bottom part of chamber C are placed any convenient number of hinged or sliding valves, operated by handles H, by means of which the said bottom may be entirely closed or opened. The said valves are adapted for operation singly or together. The chamber A has in its rear side a vertical chamber, E, which usually extends into the said chamber A. This chamber E is of such size as to be readily adapted to any ordinary stove-pipe. By placing the stove-pipe in this chamber and closing the door *e* and fastening it, the chamber A is locked or fastened upon the stove-pipe, while by closing the small doors *e' e'* on the top of this chamber E there is formed a hot-air chamber. At the sides of this chamber, inside of A, are any suitable number of apertures, E, which may have valves over them; above such openings are deflectors F. The use of these openings is to regulate the process of drying. I may at will admit the heated air from said chamber E, or, by regulating the valves *e* and opening E', may cause a flow of heated steam from the drying-chamber in that direction outwardly, because it may be well at times to have a less strong draft outward from the chamber A than is allowed by the valves and openings B B'.

The shelves or trays G may be made of a wooden frame and wire-gauze bottom, or with a frame having wire-gauze top and bottom, between which the substance to be dried may be placed. They are, in either instance, adapted to be readily pushed in and out of the chamber A on the cleats or supports. The said trays may also be arranged or fixed in a case having perforated sides suitably protected by wire-gauze, and adapted to fit bodily into the said drying-chamber. This can also be used for sun-drying the fruit when deemed desirable. Constructed and applied in either way, as constant changes as are necessary may be made in the position of the fruit in the drier by reversing or transposing the shelves, or reversing the case itself.

In some instances it is of advantage to make the front rail or lip *g* on the slides for the trays equal to the width of the openings for the several trays. Thus, when the one tray or shelf is pushed in a drying position, the

front rail will close the opening; but on reversing the tray or shelf, the distance between the trays in this instance being wider than is now shown in the drawing, there is a ventilating-space all along the front edge of the tray or shelf.

To afford the best facilities for observing the heat in the drier I may provide a thermometer in one of the walls to indicate exactly the condition of the internal atmosphere. This device is made very cheaply, and can be readily attached to or upon any ordinary heater, or removed and packed for transporting or storing. It is designed for use on the Pacific slope, more particularly, where the fruit crops are very abundant every season, and where some such domestic device is needed for almost every household in curing and preparing the great fruit crops for family use or for sale. There is nothing bulky or cumbersome about it, and by its method of construction and operation it is possible to make available for the purposes set forth every particle of the heat radiated from the stove. The use or manipulation of this device is as simple as can be possibly desired, and even a child can be readily taught how to attend to it and carry on the drying operation with perfect success.

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

1. The combination of the drying-chamber A, having in its rear the chamber E, with door *e*, and in its lower part the valves H, with the adjustable and removable jacket A', adapted for any ordinary domestic heater or cooking-stove, substantially as and for the purposes set forth.
2. The combination of case A', constructed as described, with chamber A, having ventilating-openings B and valve B', doors *a*, and removable and reversible drying-shelves, substantially as described.
3. The combination of chamber E, with its doors *e e' e'* and apertures E', with the chamber A' and case A, substantially in the manner set forth.
4. The wire-gauze shelf or slide G, with its front rail or lip *g*, adapted to and combined with the drying apartment or case, substantially as and for the purposes set forth.
5. The chamber A, having drying-shelves or case G, and vertical chambers E *e e'*, and valves H and wire-gauze or perforated diaphragm D, combined with the folding and adjustable jacket A, substantially as and for the purposes described.
6. The combination of the drying-chamber A, having openings B and valves B', the shelves or trays G *g*, valves or registers H, and suitable doors *a*, and chamber E E', with its doors and registers, substantially in the manner and for the purposes set forth.

Witnesses: JAS. W. FAULKNER.

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