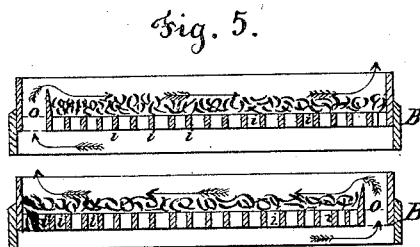
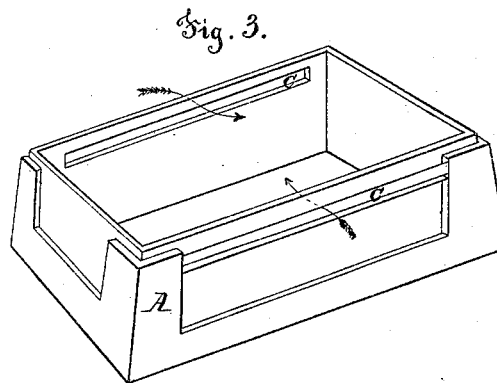
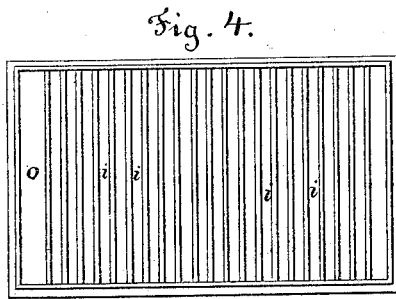
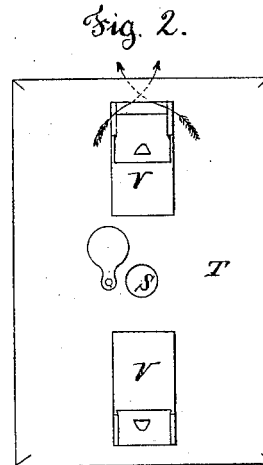
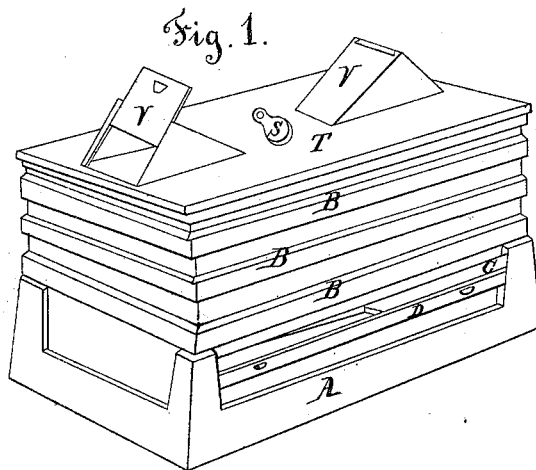


J. B. OKEY.

Fruit Dryer.

No. 108,289.

Patented Oct. 11, 1870.



Witnesses.

E. S. Russell.  
G. B. Jones.

Inventor.

Joseph B. Okey.

# United States Patent Office.

JOSEPH B. OKEY, OF INDIANAPOLIS, INDIANA, ASSIGNOR OF ONE-HALF  
HIS RIGHT TO FERDINAND A. LEHR.

Letters Patent No. 108,289, dated October 11, 1870.

## IMPROVEMENT IN FRUIT-DRIERS.

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

I, JOSEPH B. OKEY, of Indianapolis, in the county of Marion and State of Indiana, have invented certain Improvements in "Fruit-Driers," of which the following is a description.

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

This invention is constructed upon scientific principles, *i. e.*, with a base-chamber, for collecting and rarefying atmospheric air, (when the device is placed on the top of a cook-stove, or anything equivalent thereto,) and thence causing this rarefied or heated air to ascend through all the departments containing fruit that is to be dried, compelling it to pass over the entire surface of said fruit, in eccentric course, until it emerges from the top of the machine, laden with moisture obtained while in contact with the fruit.

This drier belongs to the supplemental class, and, while small and of little cost, it yet has a wonderful capacity for drying fruits of every description.

### *Description of the Accompanying Drawing.*

Figure 1 is a perspective view of my fruit-drier;  
Figure 2 is a vertical view of the cover or top of my invention, the lid being inverted in this view;  
Figure 3 is the base of the drier, isolated from the balance of the machine;  
Figure 4 is a vertical plan view of an isolated fruit-tray, or one of the sections for holding the fruit; and  
Figure 5 is a longitudinal section of two isolated fruit-trays, fig. 4.

### *General Description.*

A is the base section of my fruit-drier. It must be made of sheet metal, as shown in fig. 3, about four inches deep and twelve inches wide, by eighteen inches in length.

Its upper edge should be constructed so that it will fit snugly in the recess provided for it in the lower edge of the first fruit-tray, B, figs. 4 and 5.

It must likewise be provided with a narrow slot, C, in each of its long sides, as shown in fig. 3, with a slide-cover, D, fig. 1, for each slot.

By the use of these slide-covers the draught of air is regulated through the drier, from bottom to top.

When this base-section A is joined to the other parts of the drier, it serves as a rarefying-chamber, for heating the atmospheric air, which is thence forced upward in a zigzag direction, and in contact with all the fruit in the machine.

The sections, B are so constructed as to admit of their indefinite duplication, permitting the use of

as many in one machine as desired, though six of these sectional trays make a very practical drier.

The lower edge of each tray receives the upper edge of the one it sits upon, a recess being made for this purpose.

By reference to figs. 4 and 5, it will be seen that a large throat, O, is left in one end of every fruit-tray B, a broad slot forming one side of this throat, and the end of the tray forming the other.

The slats *i i* form the floor of these trays, for holding up the fruit.

They can be made of any suitable material—wood, for example—and should be very thin, and about three-eighths of an inch in width. They must be so close together that the trays will hold the smallest fruits that are dried.

When filling these trays B with fruit, care must be taken that the throat O is left open, and when filled, the first one is placed upon the sheet-iron base A. The next one is placed on it, the next one on that, and so on, until all the filled trays are in position, when the top T is placed upon the last one.

In placing these trays upon each other, you must be particular to alternate the throat, O, ends, placing the throat first at one end and then at the other, on up to the last one.

When in position, there should be about a half inch space between the top surface of the fruit in one of these trays B and the bottom of the slats *i* of the next tray above it, and so it should be in all the trays.

Then, with the openings O alternated, as directed above, a flue is formed for the passage of hot air from the base A, in a zigzag course, and in a broad sheet or current over the fruit in every tray, until it escapes at one of the ventilators V in the top.

Although the two sectional trays, shown in fig. 5, are separated from each other, yet they approximate their working position near enough to convey a correct idea of the current of hot air, in observing the course and direction of the arrows in every instance.

The arrow in the partially-opened exit-valve V, in fig. 1, shows the hot air as escaping from the funnel-ventilator, the sliding door or cut-off being slightly open.

Two of these ventilators V are placed at the top, though but one is really needed. They may be made of any width, the whole width of the drier being better than any narrower.

The small ventilator S is only used when a very light draught of air is needed, as when the fruit is almost sufficiently dried.

I do not claim, broadly, the passage of hot-air over and under each fruit-tray; but

I claim—

1. The formation of a ventilating throat, within the tray itself, as shown, and the multiplication of these indefinitely, at alternate ends, as and for the purposes shown.

2. The combination and arrangement of a venti-

lating base-section with the throated trays and graduated openings in the top of my fruit-drier, all as shown, and for the purposes described in my specification.

JOSEPH B. OKEY.

Witnesses:

E. T. BUSSELL,  
LATTI BUSSELL.