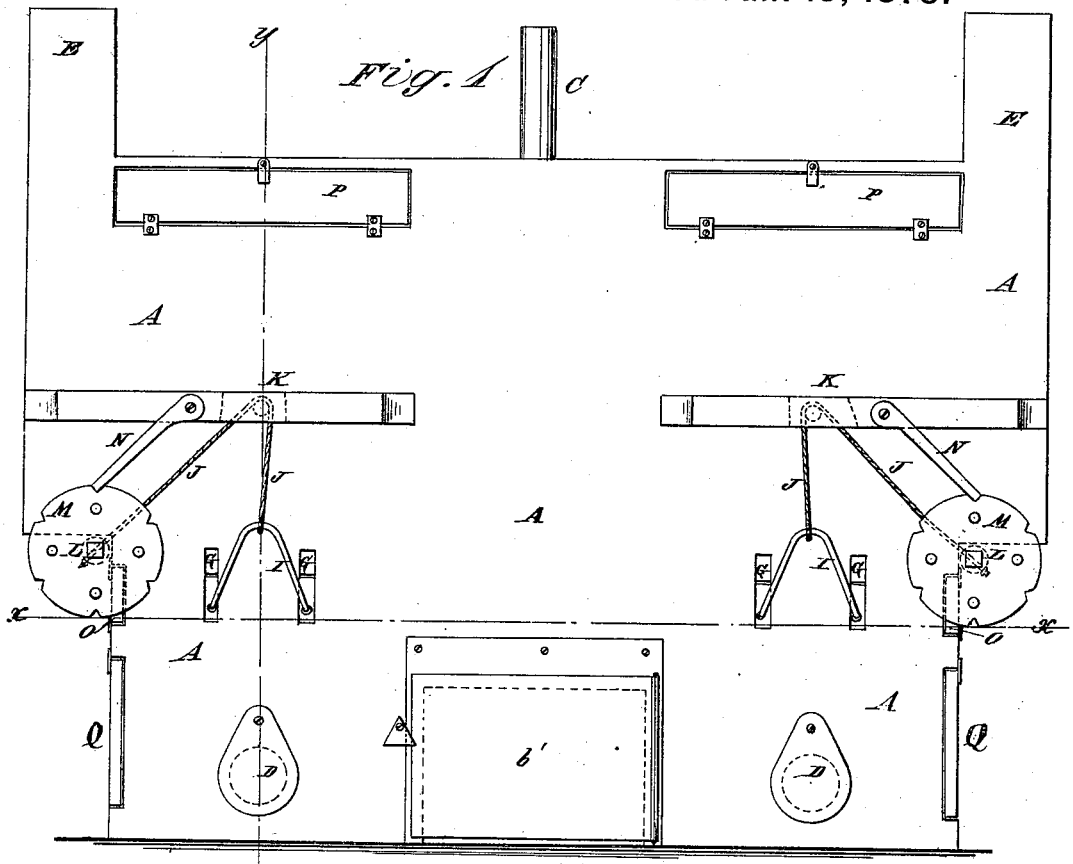
3 Sheets—Sheet 1.

J. C. SLAUGHTER.

Fruit-Drier.

No. 199,232. Patented Jan. 15, 1878.

Fig. 1



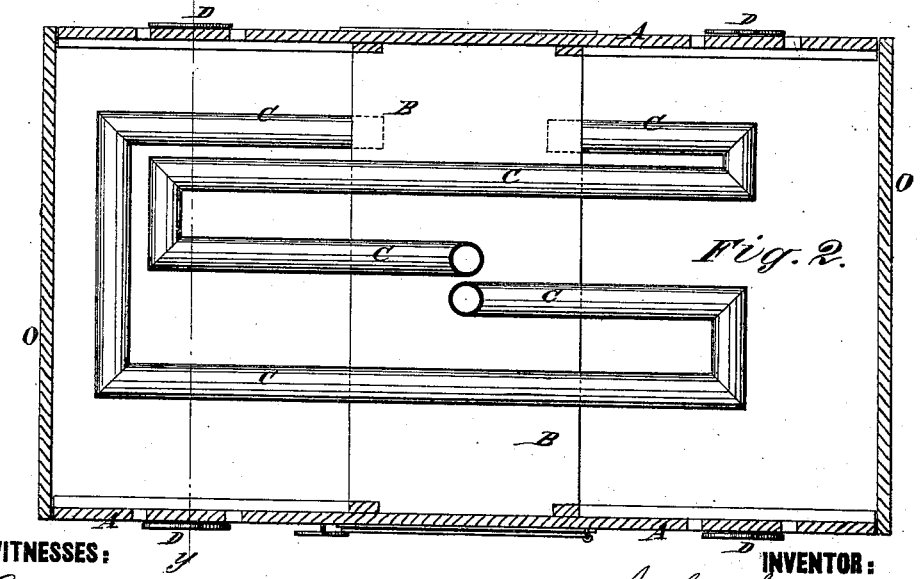


Fig. 2.

WITNESSES:

H. Rydquist

J. H. Scarborough.

INVENTOR:

J. C. Slaughter.

BY

ATTORNEYS.

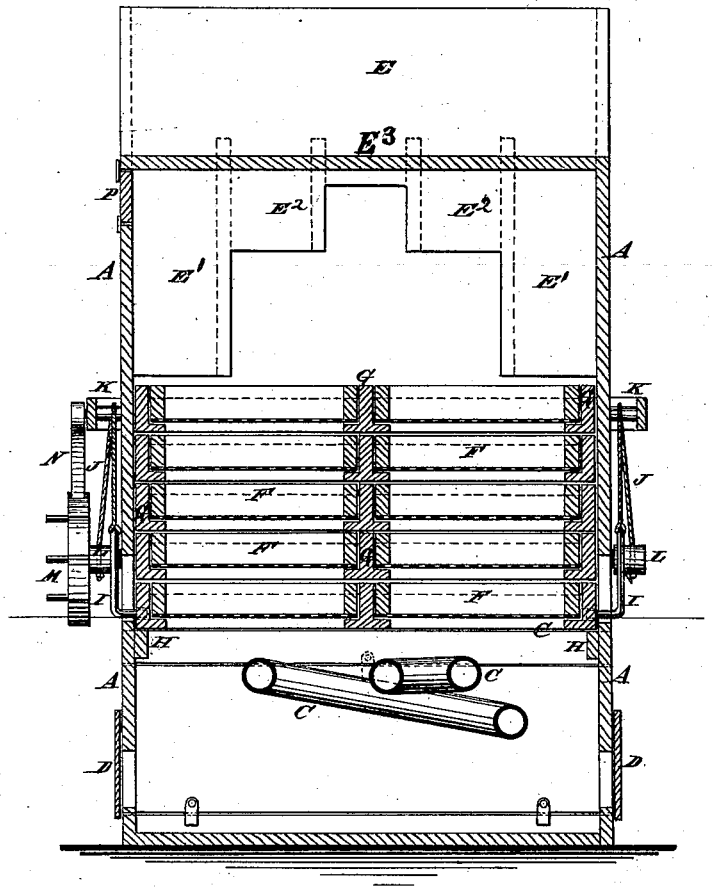
3 Sheets—Sheet 2.

J. C. SLAUGHTER.

Fruit-Drier.

No. 199,232. Patented Jan. 15, 1878.

Fig. 3.



WITNESSES:

H. Rydquist

J. H. Scarborough.

INVENTOR:

J. C. Slaughter.

BY

ATTORNEYS.

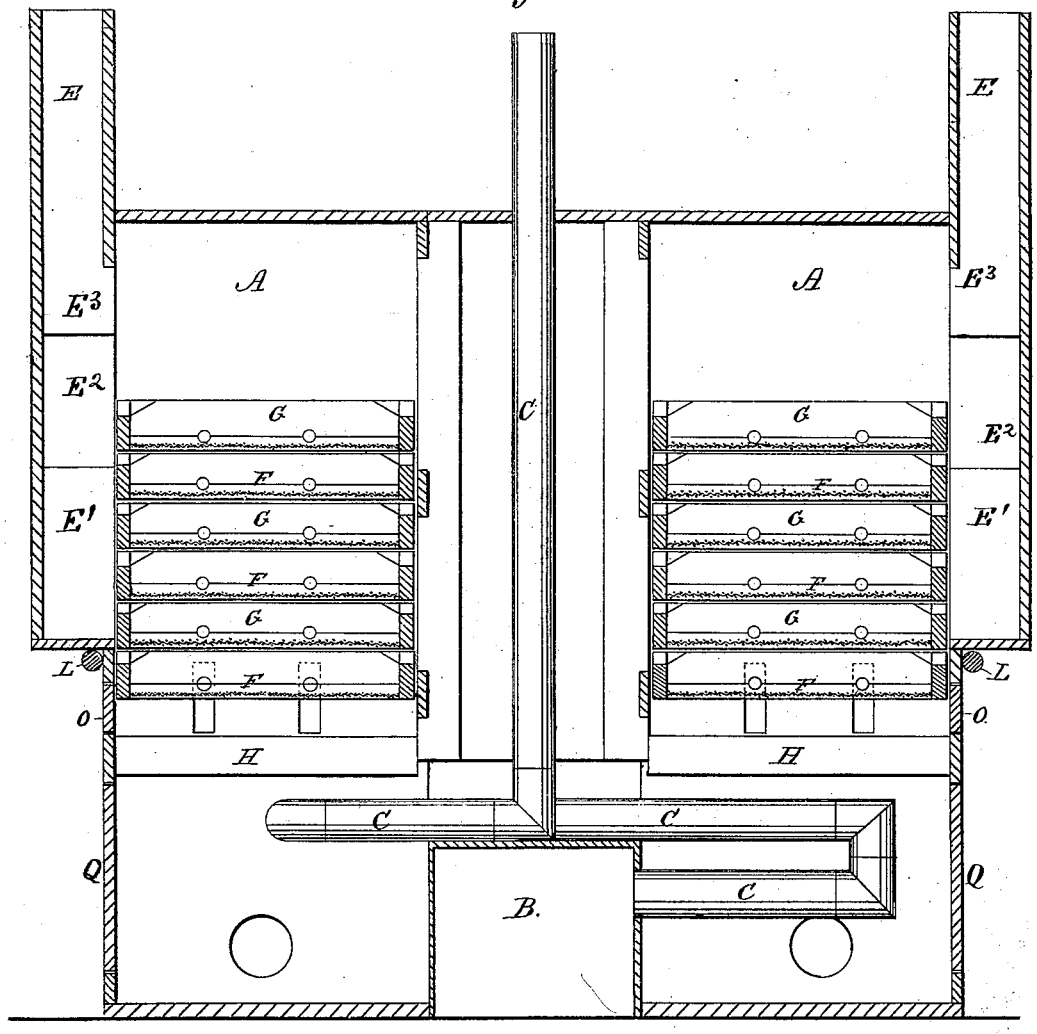
3 Sheets—Sheet 3.

J. C. SLAUGHTER.

Fruit-Drier.

No. 199,232. Patented Jan. 15, 1878.

Fig. 4.



WITNESSES:

A. M. Tanner

L. A. Pettit

INVENTOR:

J. C. Slaughter

BY

Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOEL C. SLAUGHTER, OF CRUMPTON, MARYLAND.

IMPROVEMENT IN FRUIT-DRIERS.

Specification forming part of Letters Patent No. **199,232**, dated January 15, 1878; application filed May 5, 1877.

To all whom it may concern:

Be it known that I, JOEL C. SLAUGHTER, of Crumpton, in the county of Queen Anne and State of Maryland, have invented a new and useful Improvement in Fruit-Drier, of which the following is a specification:

Figure 1, Sheet 1, is a front view of my improved fruit-drier. Fig. 2, Sheet 1, is a horizontal section of the same, taken through the line *x x*, Fig. 1. Fig. 3, Sheet 2, is a vertical cross-section of the same, taken through the line *y y*, Figs. 1 and 2. Fig. 4, Sheet 3, is a longitudinal vertical section of a fruit-drier constructed according to my invention.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved apparatus for drying fruit, which shall be so constructed that the heated air may pass across the fruit-trays, so as to carry off the moisture, and which shall be simple in construction, convenient in use, and effective in operation.

The invention will first be described in connection with the drawing, and then pointed out in the claims.

A represents the casing of the drier, in the middle of the lower part of which is placed the furnace B. The furnace I prefer to make with brick walls and an iron top.

C are the smoke and heat pipes, which pass back and forth through the lower part of the drier, and pass up through its middle part, and out through its top. *b'* is the furnace-door, which is in the front of the drier.

In the lower end parts of the drier are formed openings, which are closed, wholly or partly, by pivoted covers D, so that cold air may be admitted as required.

In the upper end parts of the case A are formed flues E, for the air to pass off, and to cause a draft to carry off the air as it becomes moist. These flues E are not of the same width throughout, but are divided by partitions, as shown in Figs. 3 and 4, so as to form a series of smaller flues, E^1 E^2 E^3, which carry off the waste or damp air from separate portions of the trays, so that the draft over the fruit in the lower trays is greater than if one single flue were employed, and the distribution of the hot air throughout the system of trays more uniform.

The fruit to be dried is placed upon trays F, which are made with wire-gauze or other open-work bottoms, so that the air can pass through freely.

The trays F are placed in frames G, two or more trays upon each frame. The frames G are placed in the end parts of the case A, one upon another, and are so formed that their end and central bars may rest upon each other, and that there may be a space between their side bars to allow the air to pass through to the flues E. The lowest frame G rests upon cleats H attached to the casing A.

In the front and rear walls of the drier A, just above the cleats H, are made slots for hooks formed upon the ends of the loops I, to pass through and enter holes in the end bars of the frames G. The loops I are attached to the ends of ropes J, which pass over guide pins or pulleys K attached to the casing A, or to cleats attached to said casing. The other ends of the ropes J are attached to shafts L, pivoted to the ends of the casing A, and to the forward ends of which are attached hand or crank wheels M.

With this construction, when a new frame, G, with its trays of fruit, is to be put in, the hooks I are inserted in the ends of the lowest frame, G, and the wheels M are turned. This raises the lowest frame G, and all the frames G above it, so that another frame G and its trays can be inserted upon the cleats H. The frames G are held up while putting in a fresh one by the pawls N, pivoted to the casing A, or to cleats attached to said casing, and which engage with ratchet-teeth formed in the rims of the wheels M. When the fresh frame has been put in, the pawls N are turned back and the other frames are lowered upon it.

The frames G are inserted through small doors O, formed in the ends of the case A, just above the cleats H, attached to said casing, and are taken out when the fruit is dried through small doors P in the upper part of the front of the casing A.

Doors Q in the end walls of the drier permit access to the interior.

Having thus described my invention, I claim

as new and desire to secure by Letters Patent—

1. In a fruit-drier, the combination of the case A, side or end draft-flues E, divided by partitions into a series of smaller flues, E^1, E^2, and E^3, as described, central furnace B, smoke and heat pipe C, trays F, and frames G, as and for the purpose set forth.

2. The casing A, having doors O P, vertical slots, cleats H, hooks I, cords J, wheels M, and pawls N, in combination with the frames G and trays F, as and for the purpose set forth.

JOEL C. SLAUGHTER.

Witnesses:

J. B. SHEPPARD,

W. E. TARBUTTON.