

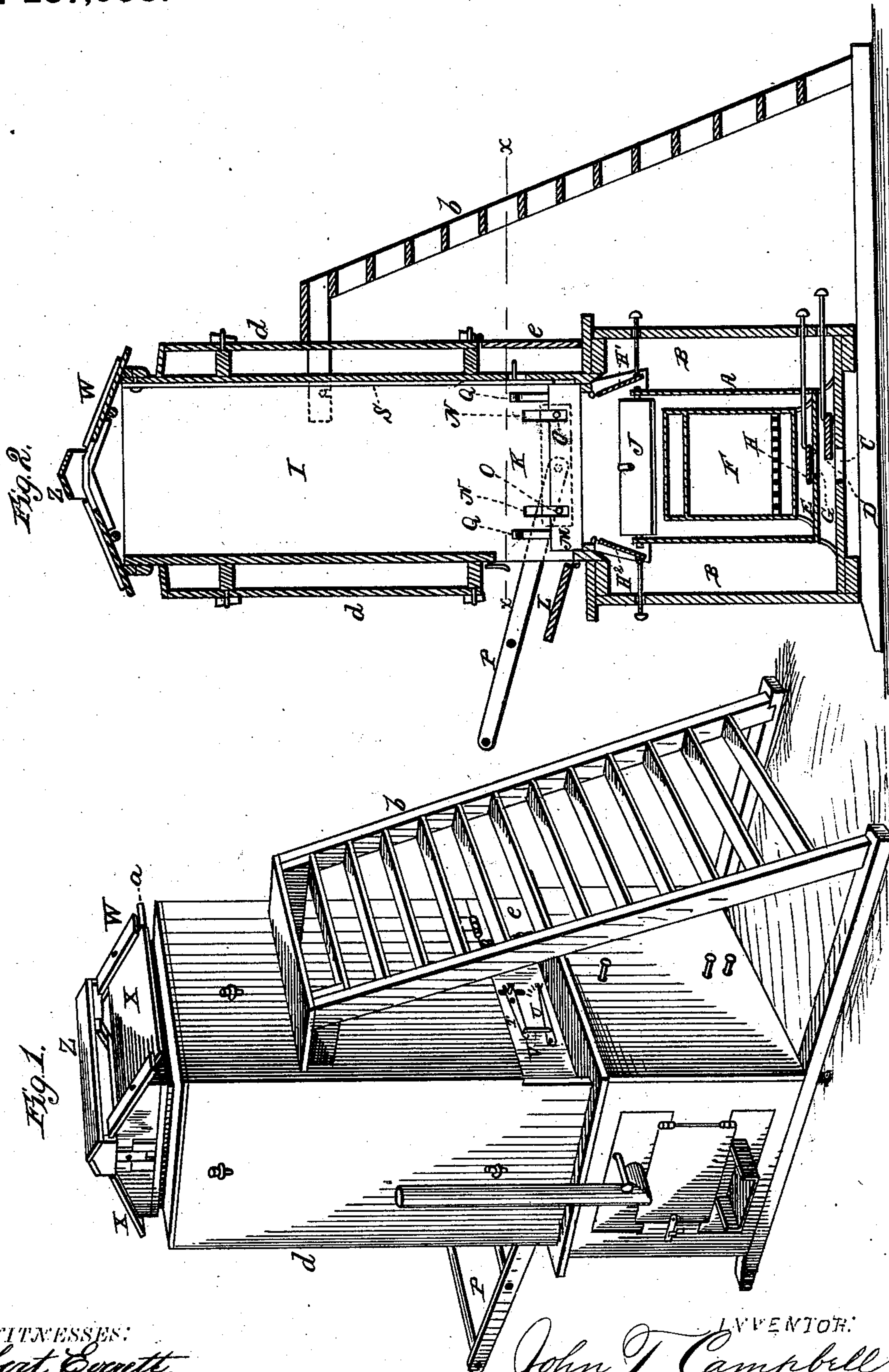
(No Model.)

2 Sheets—Sheet 1.

J. T. CAMPBELL.
Fruit Drier.

No. 237,958.

Patented Feb. 22, 1881.



WITNESSES:

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By his Attorney

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John T. Campbell,
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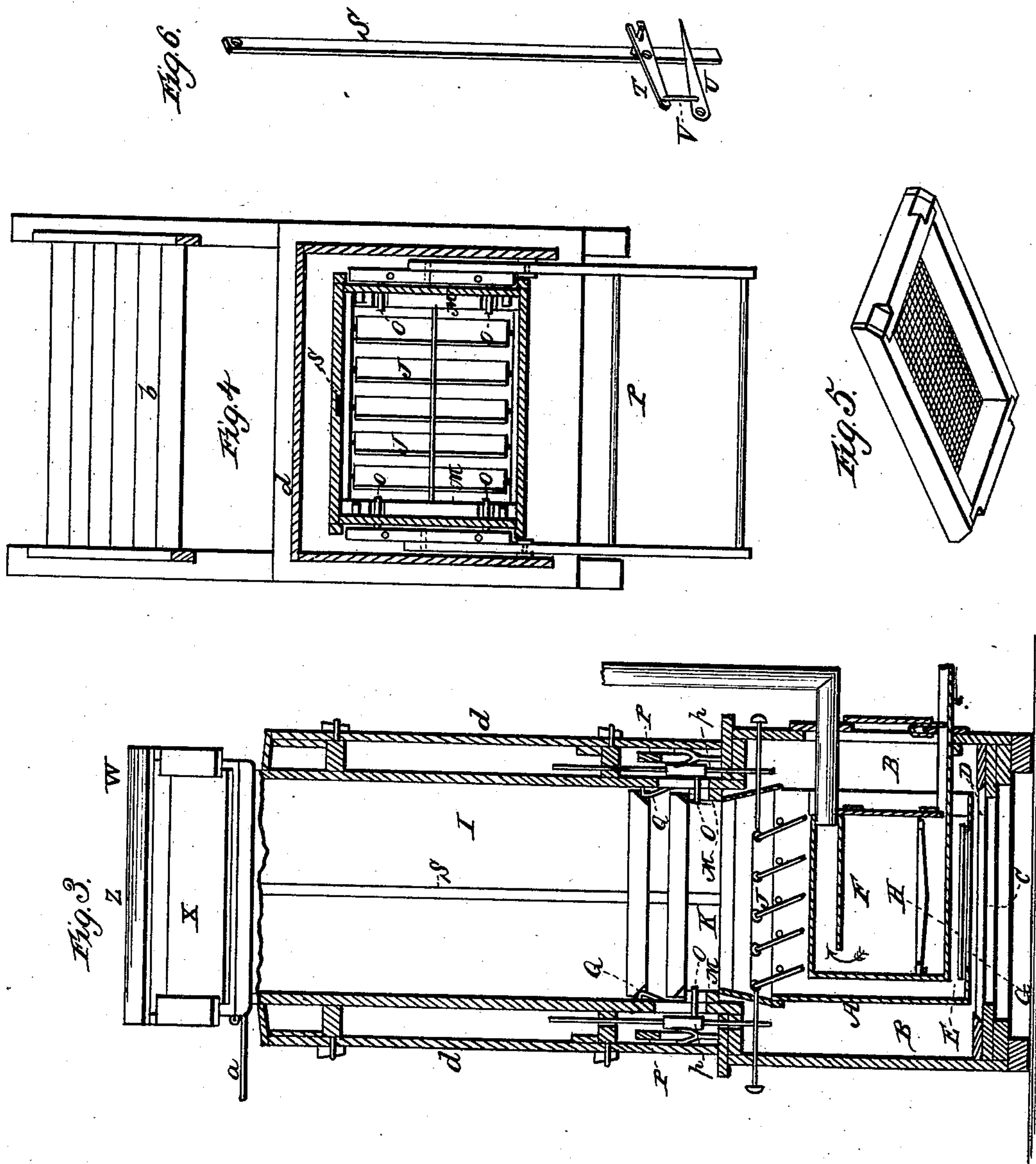
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2 Sheets—Sheet 2.

J. T. CAMPBELL.
Fruit Drier.

No. 237,958.

Patented Feb. 22, 1881.



WITNESSES:
Robert Everett
J. L. Little

By *his* Attorneys

INVENTOR:
John T. Campbell,
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UNITED STATES PATENT OFFICE.

JOHN T. CAMPBELL, OF EDGEWOOD, ILLINOIS.

FRUIT-DRIER.

SPECIFICATION forming part of Letters Patent No. 237,958, dated February 22, 1881.

Application filed October 11, 1880. (No model.)

To all whom it may concern:

Be it known that I, JOHN T. CAMPBELL, of Edgewood, in the county of Effingham and State of Illinois, have invented certain new and
5 useful Improvements in Fruit-Driers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to
10 which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

Figure 1 is a view, in perspective, of a fruit-drier embodying my improvements. Fig. 2 is
15 a vertical longitudinal sectional view. Fig. 3 is a vertical lateral sectional view. Fig. 4 is a horizontal sectional view through the line *xx* in Fig. 2. Fig. 5 is a detail perspective view of one of the notched trays, and Fig. 6 is
20 a detail view of the double indicator and bar.

The invention has relation to fruit-driers; and it consists in the improvements in the construction of the same hereinafter fully described, and particularly pointed out in the
25 claims.

Referring by letter to the accompanying drawings, A indicates a double-walled furnace, located within a chamber, B. The flue for the escape of the products of combustion leads
30 from the front of the furnace through the wall of the chamber B. The bottom of the chamber B is provided with a transverse central opening, C, above which is located a damper, D, which may be used to admit cold air to the
35 chamber, either in front of the middle or in rear of the middle of said chamber, accordingly as the damper D is pushed forward over the opening or rearward over the same. The damper D may also be used to close the open-
40 ing C to exclude cold air entirely. The furnace A being double-walled presents a chamber, E, below the fire-box F. The lower wall of this portion of the furnace has an opening or longitudinal slot, G, which registers with
45 the opening C. A damper, H, is interposed between walls of the chamber E, to deflect the hot air either to the front or rear of the middle, or to entirely close the opening G. The cold air, when admitted to the chamber B,
50 passes upward around the furnace, and hinged dampers or valves H' H², provided with manipulating rods, are located immediately at the

sides of the furnace, so as to open or close communication between the chamber B and the drying-flue I.

Directly above the furnace A is a slat damper or deflector, J, which may be operated from either end of the drier to open or close it, or to cause the heat to be deflected to either side,
55 as may be desired.

Immediately above the chamber B is the chamber K, into which the trays containing the fruit are to be introduced through a door, L. Cleats M are secured to the sides of the internal flue, I, upon which the trays are to be
60 rested and pushed in. The tray-chamber K has vertical slots N in its end walls, and through these slots N arms O project inwardly from the arms or vertical guide-rods *p* of a lever, P, fulcrumed outside of the walls of the cham-
65 ber K.

Near the front and rear of the end walls of the chamber K, and let into the same, are shouldered springs Q, the object of which is to support the trays R after the latter have
70 been introduced into the chamber K, and afterward elevated by the lever P and arms O.

Let into the rear wall of the flue I, so as not to interfere with the elevation of the fruit-trays, is a metal bar, S, extending
75 the entire vertical length of said flue.

Opposite the door L, and upon the exterior of the rear wall of the flue I, is a two-armed indicator consisting of the pivoted arms T and U, connected by a rod or wire, V, the arm T
80 being pivoted to the lower end of the metal bar S. This indicator is to be operated by the contraction and expansion of the metal bar S, to indicate the state of the interior of the flue I.

Upon the top of the flue I is hinged a cap, W, having sliding sides X and a vertically-sliding central cap-piece, Z, working in grooves. The object of thus constructing the cap W is to adjust the cap by moving the sliding sides X and the cap-piece Z to give the flue I either a
85 side or a central escape, or to give it both a side and a central escape for the heated air. The object of hinging the top or cap W is to permit it to be turned back upon the arms *a a*, to enable the operator to remove the trays R
90 when the fruit has been cured. A ladder, *b*, is provided to enable the operator to reach the top of the flue I for this purpose.

The trays R may be of any ordinary con-

struction, except that the corners should be notched on the under side in the direction of the springs Q, in order that when a tray has been elevated by the lever and arms in the flue I the weight of the tray will be removed from the springs to permit the latter to return to a normal position to support the elevated tray until the next tray can be inserted into the chamber K and elevated to the place occupied by the first tray.

It will be readily observed that the operation of inserting the trays containing freshly-prepared fruit may be continued as rapidly as the fruit already introduced has been subjected to a requisite amount of heat, and that the trays will be elevated at each introduction of a new tray, and as they reach the top of the flue I they should be removed by the attendant.

In order to prevent too rapid cooling of the flue I, an outer wall, *d*, is made around the flue I, and is secured by staples and keys, or in any other suitable manner that will permit its removal, if desired. When this auxiliary wall is employed a door, *e*, is arranged to permit the inspection of the indicator.

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

1. The herein-described tray for fruit-driers, having the corners notched to relieve the springs from the weight of the trays, in com-

bination with the elevating-lever P O, chamber K, and flue I, as set forth.

2. In a fruit-drier, the hinged cap W, having sliding sides X and vertically-sliding central cap, Z, in combination with the flue I, substantially as and for the purposes set forth.

3. In a fruit-drier, the double-walled furnace A, located within the chamber B, in combination with the dampers D and H, operating to govern the openings C and G, substantially as and for the purposes set forth.

4. In a fruit-drier, the combination, with the double-walled furnace A, chambers B K, and flue I, of the slatted damper or deflector J, located above the furnace, and the dampers H' H², hinged at the sides, beneath the chamber K, all substantially as shown and described.

5. In a fruit-drier, the flue I, having the chamber K, provided with vertical slats N and springs Q, in combination with the levers P, having vertical guide-rods *p*, carrying arm O, for the purpose of elevating the trays, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOHN THOMAS CAMPBELL.

Witnesses:

C. H. C. ANDERSON,
JAS. H. FURBER.