

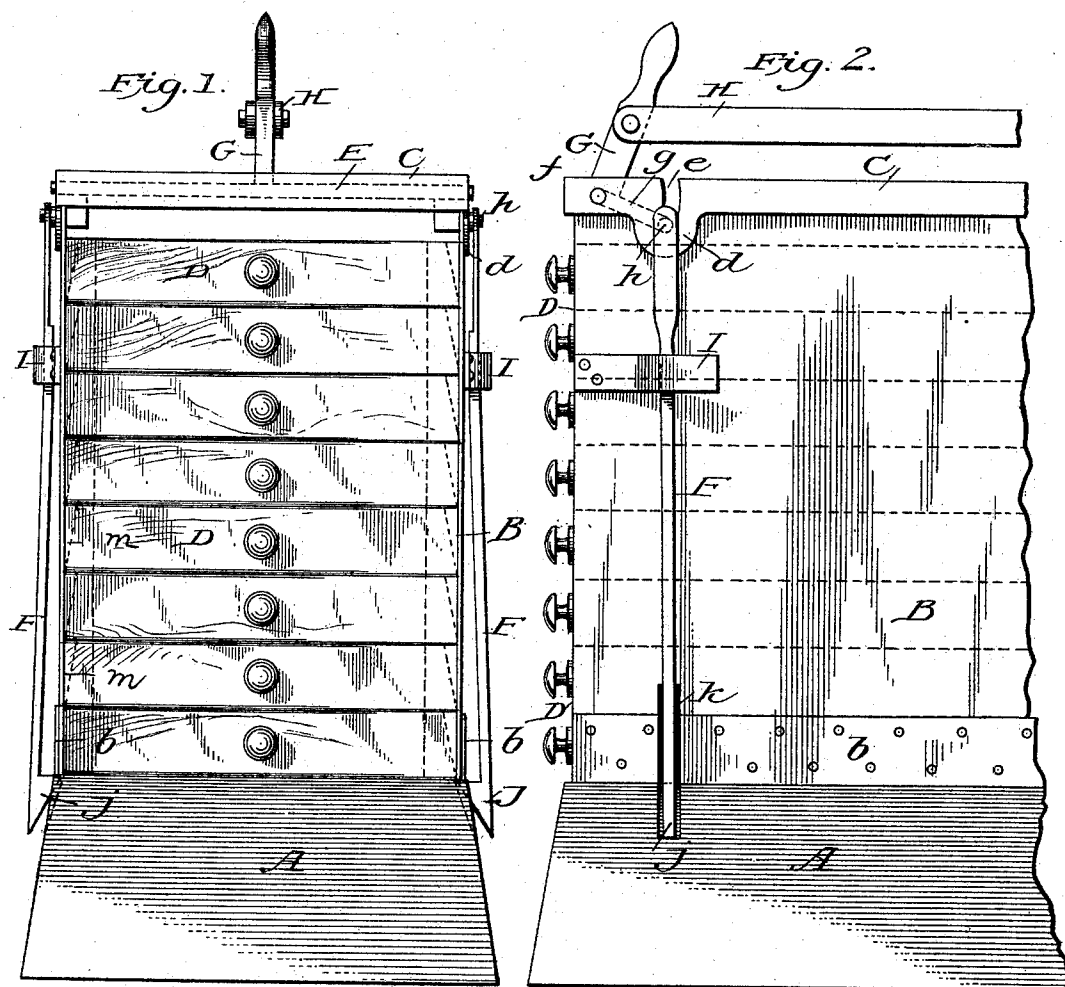
(No Model.)

2 Sheets—Sheet 1.

H. N. SCHULTZ.
FRUIT OR VEGETABLE DRIER.

No. 505,610.

Patented Sept. 26, 1893.



Witnesses.

Alex. Leed

John W. Graham

Inventor

H. N. Schultz.

by W. L. Ward, atty.

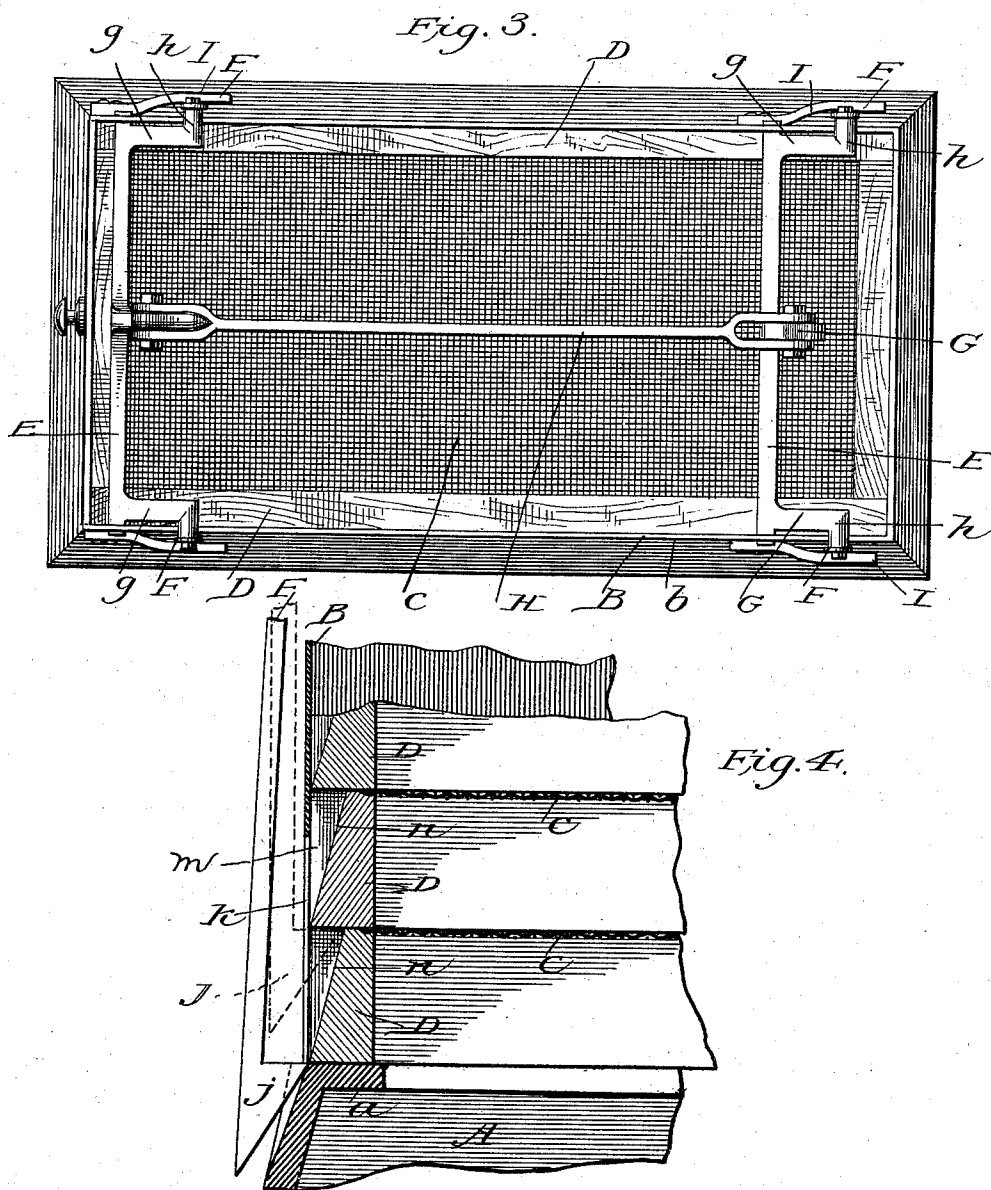
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FRUIT OR VEGETABLE DRIER.

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Witnesses.

Alex. Scott
Jas. W. Graham.

Inventor.

Horatio N. Schultz,
by W. J. Mair,
att'y.

UNITED STATES PATENT OFFICE.

HORATIO N. SCHULTZ, OF UNION BRIDGE, ASSIGNOR OF ONE-HALF TO
ALBERT JONES, OF BALTIMORE, MARYLAND.

FRUIT OR VEGETABLE DRIER.

SPECIFICATION forming part of Letters Patent No. 505,610, dated September 26, 1893.

Application filed August 29, 1892. Serial No. 444,382. (No model.)

To all whom it may concern:

Be it known that I, HORATIO N. SCHULTZ, of Union Bridge, in the county of Carroll and State of Maryland, have invented certain Improvements in Fruit or Vegetable Driers, of which the following is a specification.

This invention relates to certain improvements in that class of driers in which the apparatus is adapted to be placed on a stove or range and the hot ascending dry air from the stove or range allowed to pass through trays with perforated bottoms, containing the materials to be dried, and to escape with the moisture collected in its passage, at the top of the apparatus.

In the further description of the apparatus which follows reference is made to the accompanying drawings forming a part hereof and in which—

Figure 1 is a front elevation of the apparatus, and Fig. 2 a side view of a portion of the same. Fig. 3 is a top view of Fig. 1, and Fig. 4 an enlarged detail.

Referring to the drawings, A is the base of the apparatus and it consists of a rectangular pyramidal frame, preferably made of cast iron open at the top and bottom. The upper end of the frame has an inner horizontal flange, *a*, extending entirely around the same, and a vertical flange *b* on three sides, the front being devoid of any extension beyond the top of the flange *a*. To the inner face of the flange *b* is riveted a casing B, of sheet iron, open at the top and front, and provided with a quadrangular stiffening band C at the top.

Within the casing B is a series of trays D with perforated metal or wire gauze bottoms *c*. The said trays are stacked or made to rest one upon another, and the whole stack is supported normally by the flange *a*.

The band C has on its two sides downwardly projecting lugs *d* which have curved slots *e* therein leading to the upper edge. Corresponding slots are cut in the sheet iron casing B.

E E are bars with their ends resting loosely in holes *f* in the casing, and the band C, and from these bars extend cranks *g* with pins *h* resting in the slots *e*. To these crank pins *h* are connected rods F the lower ends of which

have barbs *j*, the barbs passing through slots *k* in the vertical flange *b* and the casing B. At each side of the trays are two notches *m* with inclined faces *n*. See particularly Fig. 4.

To the center of each bar E is an upwardly extending arm G, and the forward arm has an extension which forms a handle *o*, and these arms are connected by a pivoted rod H. The length of the rods F is such that when the bars with their cranks are placed in the position shown particularly in Fig. 2, the barbs *j* are below the notches *m* in the lowest or bottom tray.

Springs I serve to yieldingly keep the barbs *j* in contact with the inclined faces *n* in the notches *m* in the trays and make them engage with the bottom of the next to the lowest tray as the rods F are raised by hand through the medium of the handles *o*. See Fig. 4.

The operation of the invention is as follows: The apparatus being placed on a stove or range, the handle *o* is moved into the position shown in Fig. 2 and the trays after being filled with the material to be dried are placed in the casing. When it is supposed that the materials in the lowest tray are sufficiently dried, the handle *o* is drawn back which has the ultimate effect of lifting all the trays except the lowest one, which lowest one is then drawn out and its contents examined. If the materials are not sufficiently dry, the tray is returned to its position in the casing below the other trays which are then lowered upon it and the drying operation is continued for a time. If however the said materials prove to be dry, the handle *o* is returned to its original position which lowers the stack of trays and brings the then lowest one in contact with the flange *a* which supports the whole stack. The withdrawn tray is then emptied of its contents and after being replenished with undried material, is placed on the top of the stack, and the drying continued.

From the foregoing description, it will be seen that the drying operation is a continuous one, the materials being always supplied to the top tray and removed from the bottom one; and that the lowest tray can be at any time withdrawn from the casing for the in-

spection of its contents without disturbing the others or interfering with the drying operation.

I claim as my invention—

- 5 1. In a drier, the combination with a casing, the sides of which are provided with curved slots, of a series of trays which are notched in their sides and placed one above another, two shafts mounted in said casing above said
10 trays, said shafts being provided with cranks which extend into said curved slots, rods connected with said cranks and provided at their lower ends with barbs, adapted to pass under the tray next above the lowest tray, springs
15 adapted to press said rods inward, and devices, substantially as described, for turning said shafts, whereby said rods may be drawn upward, substantially as and for the purposes described.

2. The combination with a casing, the sides 20 of which are provided with curved slots *e*, in their upper parts, and slots *k* in their lower parts, of a series of trays, placed one above another and provided with notches *m*, bars E, loosely mounted in said casing, above said 25 trays, and cranks extending from said bars and entering slots *e*, arms G, extending from bars E, a rod by which said arms are pivotally connected, and barbed rods F, connected with said cranks, the barbs of rods F being 30 in position to enter notches *m* in one tray and to connect with the next tray above, substantially as set forth and described.

HORATIO N. SCHULTZ.

Witnesses:

THOMAS C. FOX,
ARTHUR P. BROWN.