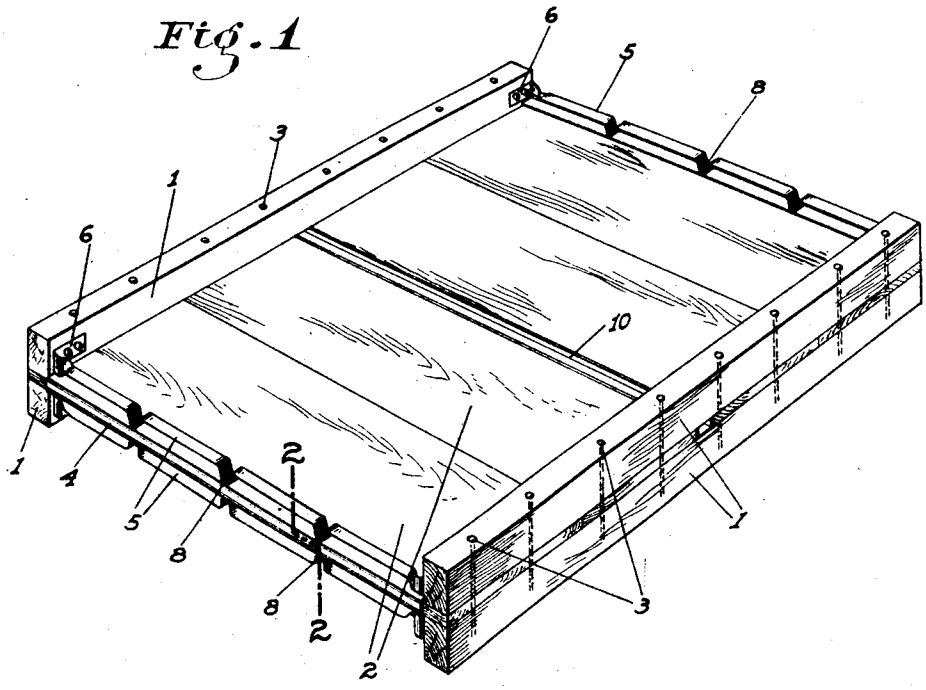
Jan. 6, 1925. 1,521,752

F. C. CHAPMAN

DRIER TRAY

Filed Feb. 20, 1923

Fig. 1



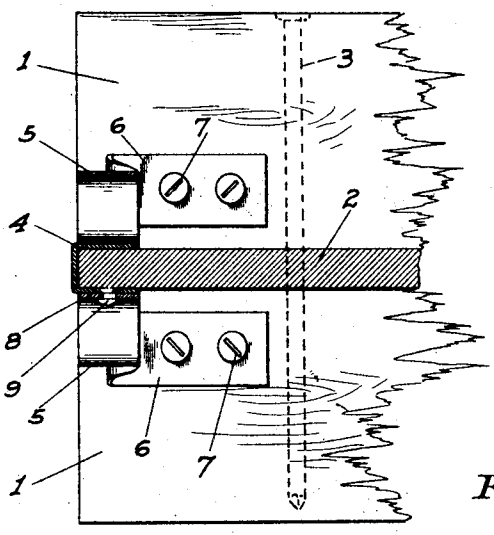




Fig. 2

INVENTOR.

Frank C. Chapman

BY Penny Fewebster

ATTORNEY

Patented Jan. 6, 1925. 1,521,752

# UNITED STATES PATENT OFFICE.

FRANK C. CHAPMAN, OF MODESTO, CALIFORNIA.

## DRIER TRAY.

Application filed February 20, 1923. Serial No. 620,178.

*To all whom it may concern:*

Be it known that I, FRANK C. CHAPMAN, a citizen of the United States, residing at Modesto, county of Stanislaus, State of California, have invented certain new and useful Improvements in Drier Trays; and I do declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings and to the characters of reference marked thereon, which form a part of this application.

This invention relates to improvements in trays such as are used for the drying of fruits and other produce, either in the field or in dehydrators.

A main object of my invention is to construct a tray of this character so that it is reversible, allowing either side of the flooring to be used as the fruit supporting means, while insuring that equally good drying conditions obtain irrespective of which side of the tray is being used.

The advantages of such a form of construction are self evident, since it permits of the continued use of a tray even after one side of the bottom has become dirty or gummy, and provides what may be termed an automatically operating means for removing or counteracting any warp or sag of the bottom or flooring such as will sooner or later occur with the continued dampening of only one side thereof.

With my improved tray, when the same is set on the ground, the bottom is held off the ground a much greater distance than is had with the present type of tray used insuring that the bottom will not touch the ground, and hence will not gather dampness, dirt or other foreign matter, which when the trays are stacked, drops off onto the tray beneath.

Further, a good circulation of air under the bottom is permitted, so that the latter is maintained in a substantially dry condition at all times.

My improved trays can also be stacked or crated for shipping or winter storage in one half the space necessary for the old style.

My tray is also constructed so that while holding to the dimensions of the present form of tray as far as the total height thereof is concerned, the sides on each side of the bottom are only half the height of these others, so that the warping or turning over and breakage of the sides, a common occurrence with old style trays, is eliminated.

Another object of my invention is to construct the tray in such a manner that in the event of breakage or deterioration of a section of the bottom or floor, which is customarily and preferably quite thin, this section may be easily removed and replaced without disturbing any other part of the tray. At the same time, no bottom section can ever drop off accidentally, since no weight is sustained by the bottom fastening means.

A further object of my invention is to provide a tray of the above described reversible character with end means which will serve to efficiently hold the fruit on the tray, will brace the sides and bottom of the tray, and will allow of a practically unobstructed flow of air between any two trays stacked as they are in dehydrator usage, and which cannot be had if the usual solid end-cleats are used.

A further object of the invention is to produce a simple and inexpensive device and yet one which will be exceedingly effective for the purposes for which it is designed.

These objects I accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings similar characters of reference indicate corresponding parts in the several views.

Fig. 1 is a perspective elevation of my improved tray.

Fig. 2 is an enlarged fragmentary section at one end of the tray, taken on the line 2—2 of Fig. 1.

Referring now more particularly to the characters of reference on the drawings, the numeral 1 denotes the side members of the tray, of suitable length. These side members are arranged in transversely spaced pairs, the two of each pair being superimposed on each other and all said members being the same height.

Extending between the two pairs of side members and also between the members themselves, is the floor or bottom of the tray, preferably consisting of a plurality of sections 2, each of which is secured to the side members and the latter to each other,

by nails 3 driven vertically through both side members and the bottom therebetween. It will therefore be evident that upon the removal only of those nails which hold any section in place, the latter may be driven out transversely of the tray and replaced by another, without displacing the sides or disturbing any other bottom sections.

It will also be noted that since the sides are of equal height and the bottom boards are between the same, it is immaterial which side of the bottom is used uppermost, and the tray is truly reversible, the bottom being the same distance from the ground or from a tray below or above any case.

For dehydrator use I employ a special form of end members for the tray, which must of course be placed on both sides of the bottom, since the tray is reversible; the fact that it is reversible necessitating the use of such special members.

The construction employed preferably consists of a rigid channel 4 adapted to fit closely over the outer end of the floor or bottom, and to extend the full width between the sides.

In vertical alinement with the channel and a suitable distance from both sides thereof are substantially rigid metal strips 5, set in a horizontal plane or with their side edges in vertical planes.

These strips extend the full width of the tray and their ends are then bent to form vertically disposed yet horizontally extending portions 6 which lie along the sides 1 on the inside thereof and are secured thereto by screws 7 or otherwise.

At a desired number of points the strips 5 are formed with corrugations or ribs 8 which extend to and rest on the channel, and are suitably secured thereto, as by rivets 9.

It will therefore be seen that the bottom is braced at its ends, the sides are braced with the bottom and those of each pair prevented from any tendency to separate from each other, and what may be termed a rail, prevented from sagging, is provided for holding the fruit on the tray while allowing a free circulation of air.

It will also be evident that this structure may be assembled as a unit and then applied to the tray, and may be removed and used on another tray when the original one is broken or worn out.

In dehydrators, the trays are stacked one on the other and free air circulation is especially desired, under the bottom of one tray, which is of course over the top of the fruit on the tray below. If this tray were not reversible, it would of course be unnecessary to employ any end members on the under side of the bottom, and the end above said bottom could be a solid piece. Being reversible however, if a solid end were thus employed on top, the reversal of position of the tray would place this solid end underneath, where it would act as a baffle or choke for the air, preventing the desired amount from passing between any two trays.

While the end structure employed is preferably as above described, any foraminous structure giving the same results could of course be substituted therefor.

To further stiffen the tray intermediate its ends, I preferably mount a metal channel 10 between two of the centrally located floor sections.

For field use, ordinary end-cleats may be used in place of the special type above described, since the latter is unnecessary in such cases.

From the foregoing description it will be readily seen that I have produced such a device as substantially fulfills the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

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

1. A drier tray comprising side members in vertically alined and transversely spaced pairs, all such members being substantially the same height, a flooring in sections extending between the opposed sides and between the members of each pair, means connecting the sides and flooring together in a manner to permit removal of any floor section without disturbing the sides or the remaining floor sections.

2. A drier tray including side members, a flooring mounted therewith, and foraminous end members extending between the sides.

3. A drier tray including side members, a flooring mounted with the side members intermediate the top and bottom edges thereof, and foraminous end members extending between the sides on both sides of the flooring.

4. A drier tray including side members, a flooring mounted therewith, and foraminous end members extending between the sides, each such member including a metal strip laid horizontally and spaced from the flooring, said strip being bent at intervals transversely of its length to reach to the flooring.

5. A drier tray including side members, a flooring mounted therewith, and foraminous end members extending between the sides, each such member including a metal strip laid horizontally and spaced from the flooring, said strip being bent at intervals transversely of its length to reach to the flooring, and the ends thereof being bent

to form portions extending lengthwise of the tray and lying in vertical planes and secured to the sides.

6. A drier tray including side members, a flooring mounted with the side members intermediate the top and bottom edges thereof, and end members for the tray, each member comprising a channel adapted to fit over an end-edge of the flooring, metal strips set horizontally extending between the sides on both sides of the channel and spaced therefrom, and means for securing said strips and channel together to form a rigid unit.

7. A drier tray including side members, a flooring mounted with the side members intermediate the top and bottom edges thereof, and end members for the tray, each member comprising a channel adapted to fit over an end-edge of the flooring, metal strips set horizontally extending between the sides on both sides of the channel and spaced therefrom, means for securing the strips and channel together to form a rigid unit, and means for removably attaching the strips to the sides.

8. A drier tray including side members, a flooring mounted with the side members intermediate the top and bottom edges thereof, and end members for the tray, each member comprising a channel adapted to fit over an end-edge of the flooring, metal strips set horizontally extending between the sides on both sides of the channel and spaced therefrom, said strips being bent at intervals transversely of the length thereof to form corrugations seating on the channel, and securing means between the corrugated portions and the adjacent face of the channel.

9. A drier tray comprising spaced side members, a flooring mounted therewith and therebetween, and a transverse reinforcing strip incorporated as part of the flooring intermediate the ends thereof.

10. A drier tray comprising spaced side members, a flooring mounted therewith and therebetween, said flooring being relatively weak, and a transverse strip of metal set into the flooring intermediate the ends thereof, said strip having a cross-sectional shape which enables it to serve as a stiffening member.

11. A drier tray comprising side members, a flooring extending therebetween, and rigid transverse reinforcing means fitted with the flooring at the ends thereof.

12. A drier tray comprising side members, a flooring extending therebetween, and rigid channel members extending transversely between the sides at the ends of the flooring and into which said ends fit.

In testimony whereof I affix my signature.

FRANK C. CHAPMAN.