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J. TYLER

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VEGETABLE SPRAYING DEVICE

Filed Feb. 16, 1931

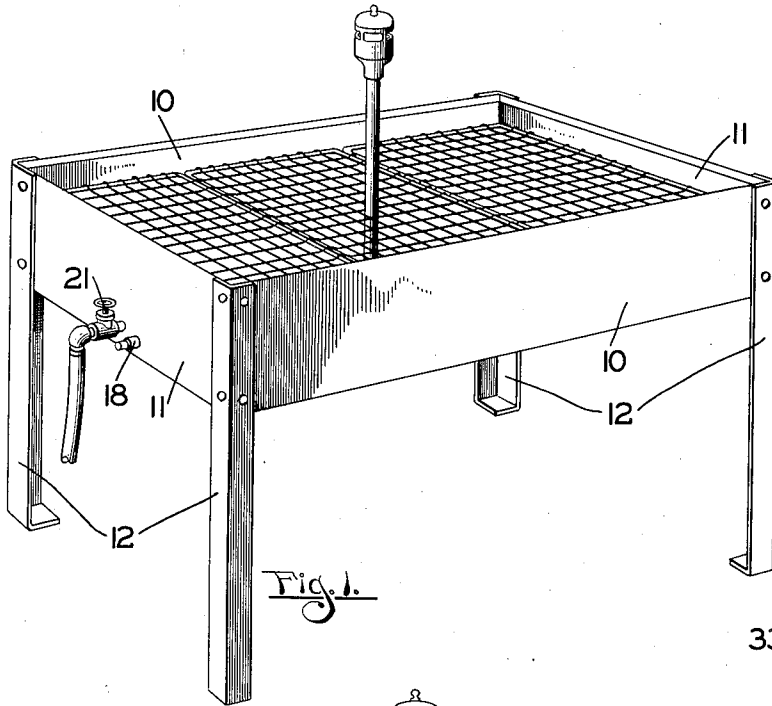


Fig. 1.

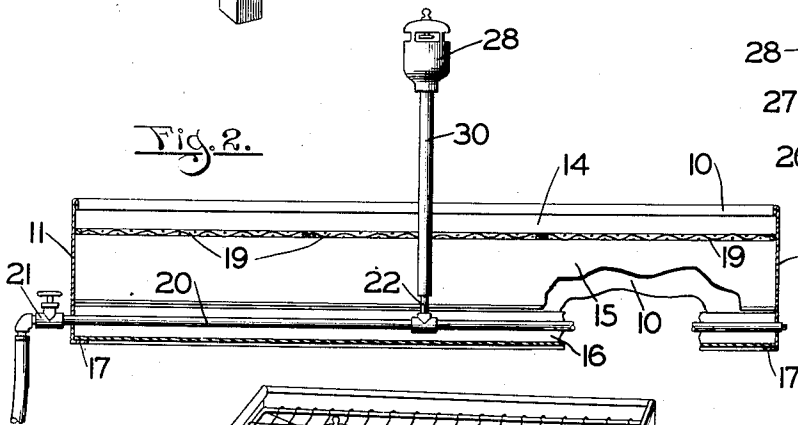


Fig. 2.

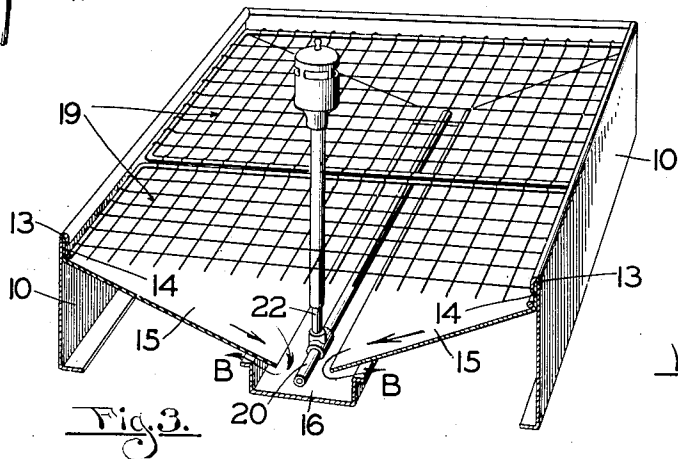


Fig. 3.

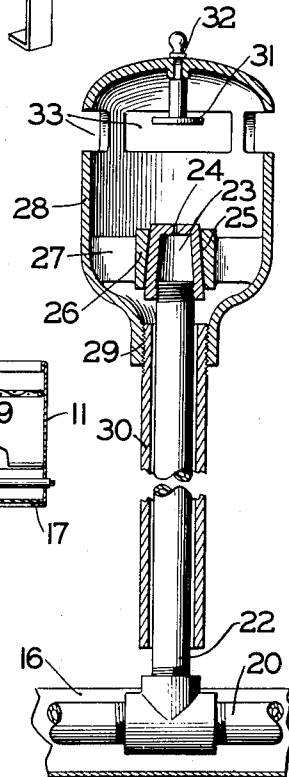


Fig. 4.

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UNITED STATES PATENT OFFICE

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VEGETABLE SPRAYING DEVICE

Application filed February 16, 1931. Serial No. 515,938.

This invention relates to a vegetable cooling table or tray wherein water is diffused through a novel spray head and in which the stale air leaves the table from underneath the same.

One defect of tables or trays of this character hitherto manufactured lies in the fact that the odors and foul gases tend to remain in proximity to the vegetables themselves or in some instances, these obnoxious fumes leave the vegetables by rising therefrom.

In my improved device I overcome the aforesaid objection by providing air circulating means below the table or tray whereby the odors from the vegetables are drawn downwardly from the table and disseminate underneath of the table. Such a feature has two advantages. In the first place the vegetables will maintain their quality for a longer period of time because the destroying odors and air are continuously drawn away from the vegetables and such are replaced by sweet and clean air. In the second place the obnoxious departing fumes or odors are drawn downwardly through the table and leave the table in proximity to the floor thus preventing any objection to the table on account of one being able to smell any odors from above the vegetables. This method of air circulation forms a separate invention and is made the subject matter of my application for a ventilated tray, filed February 1, 1932, Serial No. 590,078.

The principal feature of this invention lies in my novel nozzle or spray head which causes the water to be formed into a vapor or mist which flows outwardly from the nozzle onto the vegetables. The drops of water which are not diffused into a vapor are carried back underneath the table without coming in contact with the produce carried by the woven wire shelves of the table. Thus all of the water which comes in contact with the produce is in the form of a very fine vapor which cools the air in all directions and which settles downwardly over the vegetables and finally drains into the trough carried along the underside of the table.

In the drawing:

Fig. 1 shows a perspective view of a cooling table embodying my invention.

Fig. 2 is a longitudinal cross sectional view through Fig. 1.

Fig. 3 is a cross sectional view taken at right angles to Fig. 2.

Fig. 4 is a view through my improved spray head, parts being broken away in order to clarify the disclosure.

Similar numerals refer to similar parts throughout the several views.

Referring to the drawing, especially to Fig. 1, 10 indicates the sides of my novel table and 11 the ends, these parts being preferably formed of galvanized sheet steel and being fastened together at their ends. Suitable supporting legs 12 may be fastened to the corners of the frame structure formed by the sheet metal members just referred to.

The upper edges of the side members 10 are turned inwardly and downwardly to form a U-bend as shown at 13 and the vertical portions 14 of the baffle plates 15 extend upwardly into this groove.

The baffle plates 15 slope inwardly and downwardly toward each other but terminate some distance apart as clearly shown in Fig. 3. A trough 16 extends lengthwise of the table, being supported upon inturned flanges 17 formed on the ends 11, and is spaced downwardly from the terminating edges of the baffle plates. Thus a considerable space is had between the plates and the trough whereby the cool air may pass downwardly and outwardly therebetween as indicated by the arrows B. See Fig. 3. The trough has a drain pipe 18 leading therefrom.

Wire screens or shelves 19, preferably having a tinned finish, extend across the table and rest upon the baffle plates adjacent the vertical portion 14.

An inlet pipe 20, having a suitable control valve 21 at one end thereof, see Figs. 1 and 2, is equipped with a single riser pipe 22, as shown. A cap 23, having a needle-like orifice 24, is tapered on its outer face as indicated at 25, and is threaded onto the top of the riser pipe 22. See Fig. 4.

A collar 26 is tapered to removably fit the

cap 23 and radial vanes 27 extend therefrom to a dome or shield member 28 whereby the same is supported.

The dome or shield member 28 is interiorly threaded, as shown at 29, and a depending pipe 30, somewhat larger in diameter than the riser pipe which it encircles, engages these threads. The dome member has an impact plate or disc 31 fixed thereto, as indicated at 32, and windows or openings 33 are formed therein. These windows are in the same horizontal plane as the bottom of the impact plate.

The operation of my device is readily understood. After the vegetables and fruits are placed upon the screens 19 the valve 21 is turned on whereby the water issues with considerable velocity against the smooth face of the impact plate 31. This causes a fine mist or spray to result and the windows in the dome allow this vapor to float outwardly whereupon it gradually settles downwardly upon the produce and fruit. The larger drops of water which are not vaporized or broken up drip downwardly within the dome and drain downwardly inside of the pipe 30 into the trough 16. These drops of water form a slight waste which is not utilized.

The water vapor which settles upon the vegetables gradually permeates downwardly therethrough and soon cools the air both above and below the vegetables. The odors and gases which are inherent to the produce, and which become unpleasant as the age of the vegetables increases, are carried downwardly by the flow of water and also due to the fact that they are cooled. The cooler air flows downwardly between the trough and the baffle plates and below the table where it is disseminated in any artificial or natural manner.

Having thus revealed this invention, I claim as new and desire to secure the following combinations and elements, or equivalents thereof, by Letters Patent of the United States:

1. A vaporizing unit consisting of a vertical pipe, means for supplying water under pressure to the pipe, a cap closing the upper end of said pipe, said cap having a small hole therethrough, a dome surrounding the cap and extending upwardly thereover, means fastened to the cap and the dome whereby the dome is supported, said dome having several slots near its top, an impact plate having a surface and means extending through the dome and adapted to support the impact plate with the said surface in alignment with the axis of the hole through the cap.

2. A vaporizing unit comprising the elements in combination as recited in claim 1 but further characterized by the fact that the impact plate is supported in substantially the same horizontal plane as the said slots.

3. A vaporizing unit as set forth in claim 1 and also having outlet means leading from the dome whereby excess water is conveyed therefrom.

4. A spray head or vaporizer comprising a vertical pipe, a cap closing the upper end of the pipe, said cap having a small opening therethrough, a dome member enclosing the cap, said dome member having several windows therethrough and a plate depending from the dome, said plate being spaced from the small opening in the cap but in line therewith.

5. A spray head as set forth in claim 4 in which the plate is at right angles to the axis of the opening through the cap and located in substantially the same horizontal plane as the windows.

6. In a device of the class described, an upwardly extending pipe, means for closing the upper end of said pipe, said means having a small opening therethrough, a dome surrounding said upper end of the pipe and having lateral openings therein, an impact surface located within said dome and in alignment with the opening in the pipe closure, a second pipe of greater inner diameter than outer diameter of the first pipe and surrounding said first pipe, the upper end of said second pipe being in communication with the interior of said dome and means for supporting said dome.

7. In a device of the class described, an upwardly extending pipe, a closure for the upper end of said pipe having a small opening therethrough, a dome surrounding the upper end of said pipe and having lateral openings therein an impact surface within said dome and in alignment with said opening in the pipe closure, a second pipe joined to the lower end of said dome and communicating with the interior thereof, said second pipe surrounding said first pipe and having a larger inner diameter than the outer diameter of the first pipe and means for supporting said dome on said first pipe.

8. In an appliance for humidifying air, a pipe to receive water under pressure, means connected to said pipe, said means having a small orifice therein through which the water issues in a needle-like jet, a member having an impact surface supported in the path of said jet, and shielding means of predetermined dimensions partly enclosing said impact surface and said jet, said shielding means including a drainage pipe surrounding the pressure pipe.

In testimony whereof I affix my signature.
JERRY TYLER.