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REFRIGERATOR CASE FOR GREEN VEGETABLES

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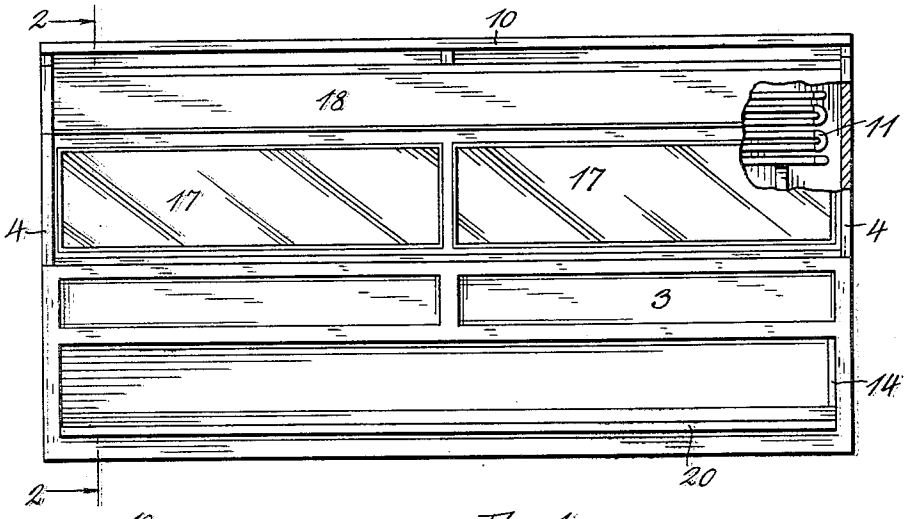


Fig. 1.

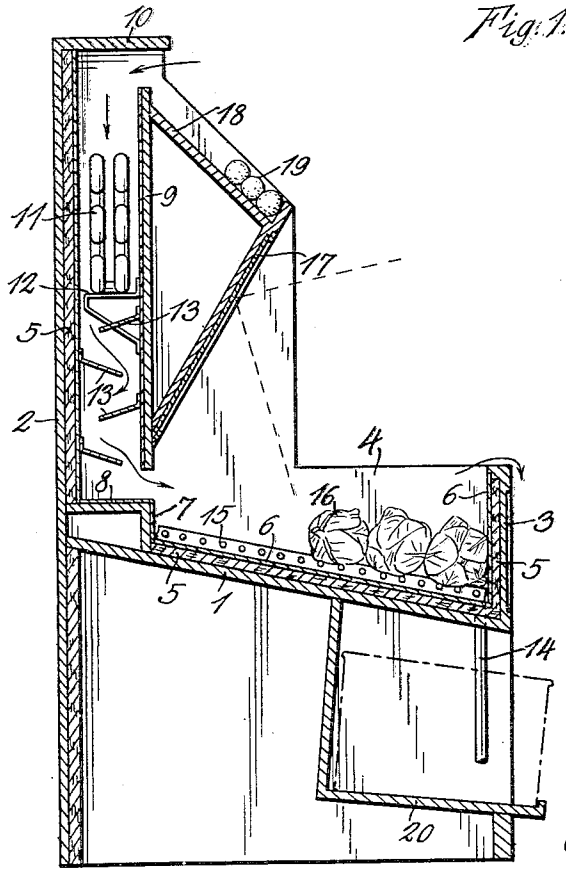


Fig. 2.

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REFRIGERATOR CASE FOR GREEN VEGETABLES

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1 Claim. (Cl. 62—89.5)

This invention relates to improvements in refrigerator display cases and has reference more particularly to a display case designed for use in the display of vegetables in stores of the type known as self-serve stores.

It is well known that green vegetables are very susceptible to heat and unless some means is taken to prevent it, they will dry out and become practically worthless if exposed to the warm air for a few hours or for a day.

In order to preserve vegetables, different schemes have been proposed and, among other means, have been provided to keep them sprinkled with cold water and they have also been kept in closed refrigerator cases.

In stores of the self-serve type, it is quite important that the articles on display shall be open so that they can readily be inspected by the prospective purchaser, and it has been found that if vegetables are kept in closed display cases, the sales are much smaller than if they are open for inspection.

It is the object of this invention to produce a refrigerator case that shall be so constructed that the vegetables will be supported in a compartment open at the top and in such a way that the exposed upper surface is covered with a blanket of moving cold moist air and which keeps the temperature below the point where rapid decay takes place.

This invention, briefly described, consists in a refrigerator casing having a vegetable storing compartment provided with an inclined bottom and vertical sides and ends. The compartment has no top. The case is provided with a vertical compartment at the rear in which is located a cooling coil such as are employed in connection with mechanical refrigeration. The vertical compartment is open at the top and is also provided with an opening at its lower end. This opening is located at the level of the upper surface of the vegetables and therefore when the cooling coil is in operation, air will enter the vertical compartment at the top, flow downwardly past the cooling coil and out through the opening at the bottom and will flow thence over the upper surface of the vegetables and out over the walls of the compartment. Since the cooling coils condense the moisture in the air, ice is always formed and there is a continuous defrosting operation taking place. The water from the defrosting of the coil drops downwardly with the air and for the purpose of separating this moisture from the air as completely as possible, the passageway beneath the cooling coil is provided with deflector plates that serve to intercept the water and this, therefore, separates from the air and flows downwardly along the bottom of the vegetable compartment and underneath the vegetables. The vegetables are supported by a tray which serves to space them from the bottom of the compartment and which provides a passageway for the water and for cool air.

Having thus briefly described the invention, the same will now be described in detail, and for this purpose reference will be had to the accompanying drawing in which the preferred embodiment of the invention has been illustrated, and in which:

Fig. 1 is a front elevation of the improved vegetable refrigerating and display case; and

Fig. 2 is a vertical section taken on line 2—2, Fig. 1.

In the drawing reference numeral 1 indicates the bottom of the vegetable compartment and 2 the vertical back of the refrigerator case. The case has been shown as provided with a base that extends down to the floor, as shown in Fig. 2, and which is of such height that the vegetable compartment is at a convenient height for the customers. The vegetable compartment is provided with a front wall 3 and ends 4. Heat insulating material 5 is provided along the inner surface of walls 1, 2, 3 and 4 and the case is also provided with a sheet metal lining 6. It will be seen that the upper surface of the lining 6 that forms the bottom of the vegetable compartment, terminates in a vertical wall 7 that forms a continuation of a horizontal shaft 8 which is located directly beneath the vertical compartment whose front wall has been indicated by reference numeral 9. The top of the vertical compartment is closed by a horizontal wall 10. Located in the vertical compartment is a cooling coil 11 that is supported by suitable brackets 12. The coil is connected with a refrigerating apparatus of the ordinary type which has not been shown. Located beneath the coil are inclined baffle plates 13 that overlap each other in the manner shown so that the air that flows downwardly through the compartment must follow a zigzag course. Any water that results from the defrosting of the coil will be separated from the air by the baffles and will finally drop on the horizontal shelf 8, from which it will flow downwardly along the vertical wall 7 and along the upper surface of the inclined bottom and out through a drain pipe 14. Located on and supported by the upper inclined surface of the bottom is a grate 15 that supports the vegetables 16.

When the coil is in operation air will enter the vertical compartment at the top, pass downwardly over the cooling coil and thence through the passage between the baffle plates where the water will be separated. The air will be substantially saturated for the particular temperature and as the cool air leaves the vertical compartment at the bottom, it will flow outwardly over the vegetables and then over the outer walls of the compartment in the manner indicated by the arrows in Fig. 2. The water will flow under the vegetables and out through the pipe 14. Some of the cool air will also pass downwardly underneath the vegetables so that the latter will be entirely enclosed in a blanket of cool saturated air that will retard evaporation and limit it to that which results from the raising of the dew point when the air is warmed by contact with the relatively warm food. Any prospective purchaser can easily inspect the vegetables, as the blanket of cool air offers no obstruction.

In order to improve the appearance of the case and to also increase its serviceability, the side walls 4 extend a short distance in front of the wall 9 and a mirror 17 is attached to the wall 9 at its bottom and is upwardly and outwardly inclined and the angle of this mirror is so chosen that the average customer, by looking into the mirror, can see the vegetables reflected which improves the appearance. Extending from the upper end of the mirror to the upper end of wall 9, is a shelf 18 that serves to support fruit 19, such as oranges or lemons that do not need the special protection required by the other vegetables. The supporting base is provided with compartments 20 for storing baskets and the like, as indicated in Fig. 2.

The construction shown and described is merely illustrative as it is apparent that the specific construction of the case can be varied within wide limits and the desirable features still retained.

Attention is called to the fact that in this type of casing the cooling coil is placed above the upper surface of the vegetables and enclosed in a vertical compartment that is open, both at its top and bottom. At the bottom, means is provided for separating the water and the cool air so that the water will flow underneath the vegetables and out of contact with them, while the cool air will flow over the top and in this way, as above pointed out, the vegetables are entirely surrounded by cool, moist air that is substantially saturated and which therefore limits evaporation. The temperature can be maintained at any reasonable degree and the parts are so adjusted that the temperature is so low that decay will not take place.

Attention is also called to the fact that the vegetables are protected against actual contact with water as it has been found that even where the temperature is low and where the air is substantially saturated, the contact of water with the vegetables will injure them and so make them unsuited for food.

What is claimed is:

A refrigerating display case for raw vegetables comprising, a casing having a display compartment open at the top and provided with an imperforate bottom, an inclined foraminated supporting surface for the vegetables, the display case being also provided with a narrow chamber that extends vertically along the rear wall and in which is located a refrigerating element, the chamber having an opening at its bottom, the vertical chamber serving as means to direct a current of air over the refrigerating element and for discharging the air onto the vegetables whereby the vegetables will be covered by a moving layer of cold air that is substantially saturated, and a plurality of baffle plates located in the vertical chamber between the refrigerating element and the discharge opening at the bottom whereby water will be separated from the air.

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