Jan. 12, 1937. J. A. DEPEW 2,067,830

HYDRATOR

Filed Dec. 2, 1935

Fig. 1.

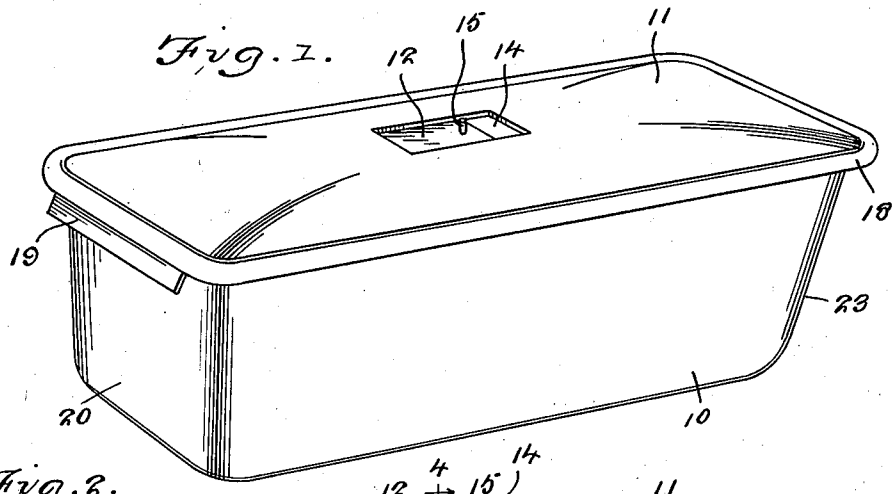


Fig. 2.

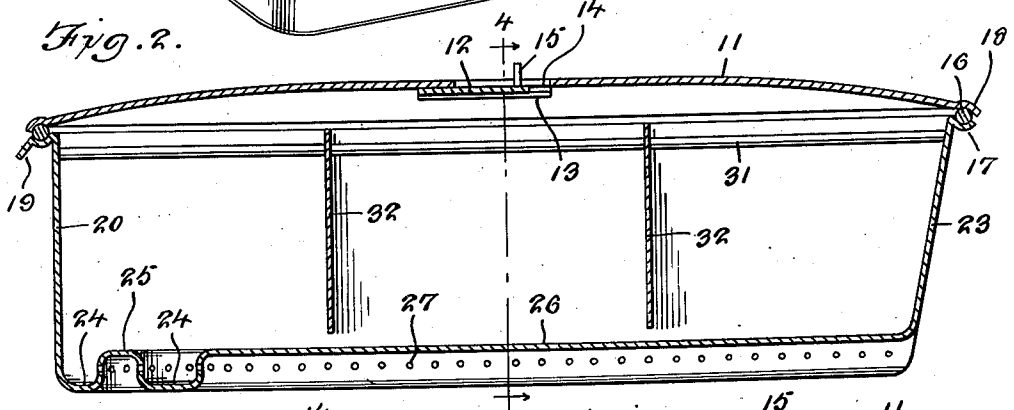


Fig. 4.

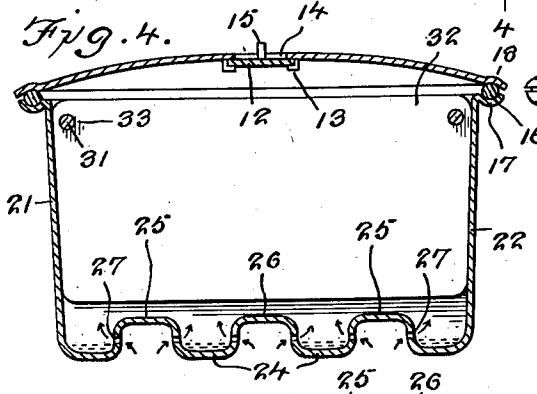


Fig. 3.

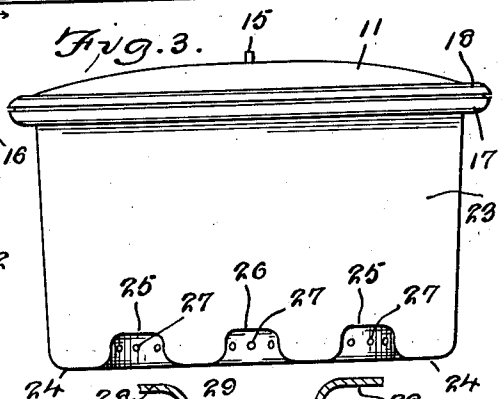


Fig. 5.

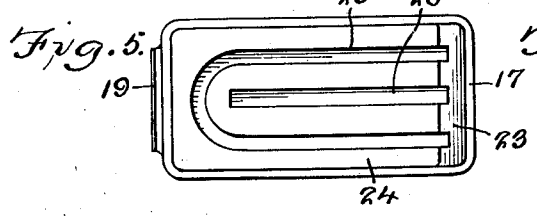
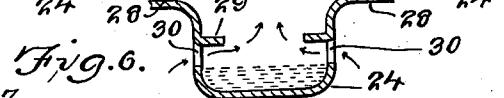


Fig. 6.



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HYDRATOR

James A. Depew, Miami, Fla.

Application December 2, 1935, Serial No. 52,589

5 Claims. (Cl. 62—1)

This invention relates to hydrators for use in mechanical refrigerators.

A hydrator is a receptacle in which fresh vegetables such as lettuce, celery and the like are deposited so as to be protected, in a mechanical refrigerator, from dehydrating or becoming wilted. In order to preserve such vegetables in the refrigerator, it is necessary to retard evaporation, and at the same time afford circulation of cold air through the vegetables.

To attain the above ends, an object of this invention is to provide upstruck channels in the bottom of the receptacle having openings in the sides through which cold air may enter the receptacle and provide a draft upward through the vegetables.

A further object of the invention is to provide a sump in the bottom of the receptacle below the openings in the channel for collecting condensed vapors which gravitate down the walls of the receptacle, the draft through the openings evaporating the water in the sump and humidifying the atmosphere in the receptacle to prevent dehydrating of the vegetables.

A further object of the invention is to provide transverse plates adjustable longitudinally in the receptacle to form separate compartments for different foods, these plates being arranged above the channel and preventing intermingling of different food odors in the draft from the openings in the channel to the damper controlled exit opening.

With the above and other objects in view, the invention consists of certain novel details of construction and combinations of parts hereinafter fully described and claimed, it being understood that various modifications may be resorted to within the scope of the appended claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawing forming part of the specification,

Figure 1 is a perspective view of a hydrator constructed in accordance with the invention.

Figure 2 is a longitudinal sectional view through the hydrator.

Figure 3 is a rear end elevation of the hydrator showing the open rear ends of a plurality of channels in the bottom of the hydrator.

Figure 4 is a cross sectional view taken on the line 4—4 of Figure 2 showing the openings in the channels and the sumps in the bottom of the hydrator below the openings of the channels.

Figure 5 is a reduced bottom plan view of the hydrator shown in Figure 1.

Figure 6 is a detail sectional view showing a modified form of channel in which baffles are disposed above the openings.

Referring now to the drawing in which like characters of reference designate similar parts in the various views the hydrator is shown to comprise a receptacle 10 which is closed by a dome shaped cover 11 having a damper 12 slidably fitted on guides 13 and controlling an exit opening 14. A grip 15 is provided on the damper to adjust the damper.

A rubber gasket 16 is seated in a concave marginal flange 17 which extends around the top of the receptacle walls and the cover is provided with a convex marginal flange 18 which fits down upon the gasket and clamps it tightly into the flange of the receptacle. At the front end wall of the flange 17 of the receptacle, a downwardly extending bar 19 forms a grip by means of which the hydrator may be removed from and replaced in the mechanical refrigerator.

The receptacle 10 is provided with a vertical front wall 20 and with vertical side walls 21 and 22. The rear wall 23 of the receptacle is, however, sloped downwardly and inwardly from the top to the bottom, as shown in Figure 2, so that when the receptacle is placed in the refrigerator there will be a triangular space existing between the rear wall of the refrigerator and the bottom of the rear wall for a purpose which will now be described.

In the present embodiment of the invention, the bottom 24 of the receptacle is provided with a plurality of upstruck channels made by deforming the bottom upwardly, one channel 25 being U-shape and the other channel 26 being rectilinear and disposed between the legs of the U-shaped channel. Both channels terminate short of the front end wall of the receptacle but the legs of the U-shaped channel and the rear end of the rectilinear channel open through the bottom of the rear wall of the receptacle as best shown in Figure 3 so that cold air may enter the channels from the rear but warm air will be prevented from entering the channels when the refrigerator door is opened.

Openings 27 are formed in the sides of the channels above the bottoms of the channels so that the cold air from the rear of the refrigerator may enter the channels and pass upwardly through the receptacle to the valve controlled exit opening 14. By virtue of these openings being disposed above the bottom of the receptacle the bottom of the receptacle between the channels and outside of the channels form sumps for

collecting condensed moisture which gravitates from the dome shaped cover down the side and end walls of the receptacle. The incoming cold air will pass over the water level in the sumps and evaporate the water, and thus humidify the draft of cold air passing from the entrance openings **27** to the exit openings **14**.

A modified form of channel **28** is shown in Figure 6 in which baffles **29** are disposed above the entrance openings **30**. In this modified form of channel the baffles prevent gravitating condensed vapors from leaking through the openings **30** to the exterior of the container. The baffles will also deflect the air streaming through the openings and upward, thus spreading the air stream out through the vegetables and preventing it from striking them in a small stream in one spot.

By now referring to Figures 2 and 4, it will be seen that a pair of rods **31** are disposed longitudinally in the container and upon these rods a pair of transversely disposed plates **32** are slidably fitted by means of openings **33** in the plates which loosely receive the rods. The plates terminate above the channels **25** and **26**. By adjusting these plates longitudinally of the rods, compartments of various sizes may be formed for separating different foods. The plates **32** prevent intermingling of the odors of the different foods in the draft rising from the intake openings **27** and passing out through the exit opening **14**.

From the above description, it is thought that the construction and operation of my invention will be fully understood without further explanation.

What is claimed is:

1. A hydrator for refrigerators comprising a receptacle having a rear wall sloping inwardly from the top to the bottom, a longitudinal upstruck channel in the bottom of the receptacle extending nearly to the front wall of the receptacle and opening at the rear end through the bottom of the rear wall of the receptacle whereby cold air may enter the channel from the rear of the receptacle, there being openings in the sides of the channel above the bottom of the receptacle to permit cold air to enter the receptacle, the bottom of the receptacle below the openings forming a sump for accumulation of condensed vapor.

2. A hydrator for refrigerators comprising a receptacle having a rear wall sloping inwardly from the top to the bottom, a longitudinal upstruck channel in the bottom of the receptacle opening at the rear end through the bottom of the rear wall of the receptacle whereby cold air may enter the channel from the rear of the receptacle, there being openings in the sides of the channel above the bottom of the receptacle to permit cold air to enter the receptacle, the bottom of the receptacle below the openings forming a sump for accumulation of condensed vapor, and a damper controlled exit in the receptacle for regulating draft of cold air from the openings through the receptacle.

3. A hydrator for refrigerators comprising a receptacle having a rear wall sloping inwardly from the top to the bottom, a longitudinal upstruck channel in the bottom of the receptacle extending nearly to the front wall of the receptacle and opening at the rear end through the bottom of the rear wall of the receptacle whereby cold air may enter the channel from the rear of the receptacle, there being openings in the sides of the channel above the bottom of the receptacle to permit cold air to enter the receptacle, the bottom of the receptacle below the openings forming a sump for accumulation of condensed vapor, and a dome shaped cover for the receptacle from which condensation may gravitate down the walls of the receptacle to the sump for humidifying the draft of cold air entering through the openings.

4. A hydrator for refrigerators comprising a receptacle having a rear wall sloping inwardly from the top to the bottom, a longitudinal upstruck channel in the bottom of the receptacle extending nearly to the front wall of the receptacle and opening at the rear end through the bottom of the rear wall of the receptacle whereby cold air may enter the channel from the rear of the receptacle, there being openings in the sides of the channel above the bottom of the receptacle to permit cold air to enter the receptacle, the bottom of the receptacle below the openings forming a sump for accumulation of condensed vapor, and baffles on the sides of the channel above said openings preventing leakage of condensation to the exterior of the receptacle.

5. A hydrator for refrigerators comprising a receptacle having a rear wall sloping inwardly from the top to the bottom, a longitudinal upstruck channel in the bottom of the receptacle extending nearly to the front wall of the receptacle and opening at the rear end through the bottom of the rear wall of the receptacle whereby cold air may enter the channel from the rear of the receptacle, there being openings in the sides of the channel above the bottom of the receptacle to permit cold air to enter the receptacle, the bottom of the receptacle below the openings forming a sump for accumulation of condensed vapor, and transverse plates adjustably mounted in the receptacle to be moved longitudinally above the channel to form compartments for different foods and prevent intermingling of food odors in the draft from said openings.

JAMES A. DEPEW.