

Jan. 11, 1944.

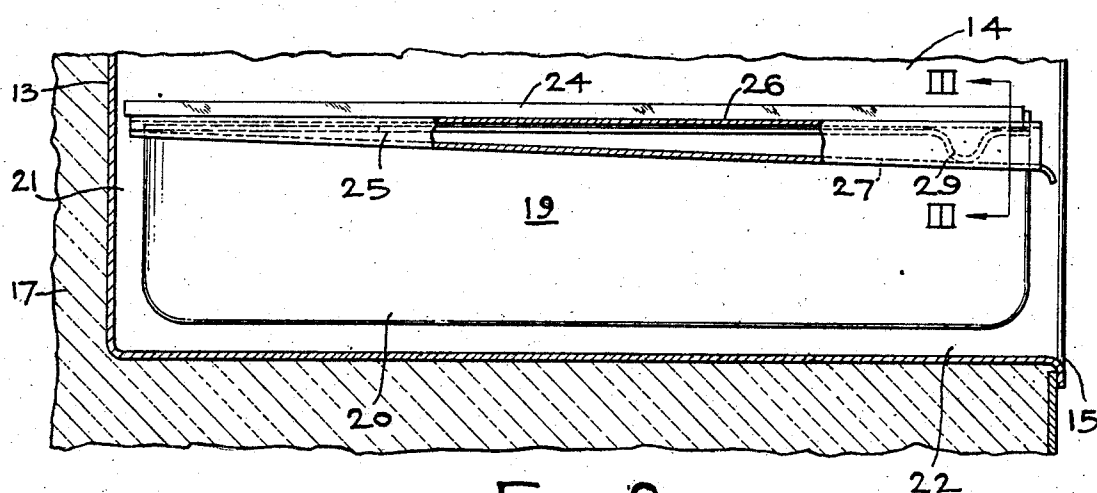
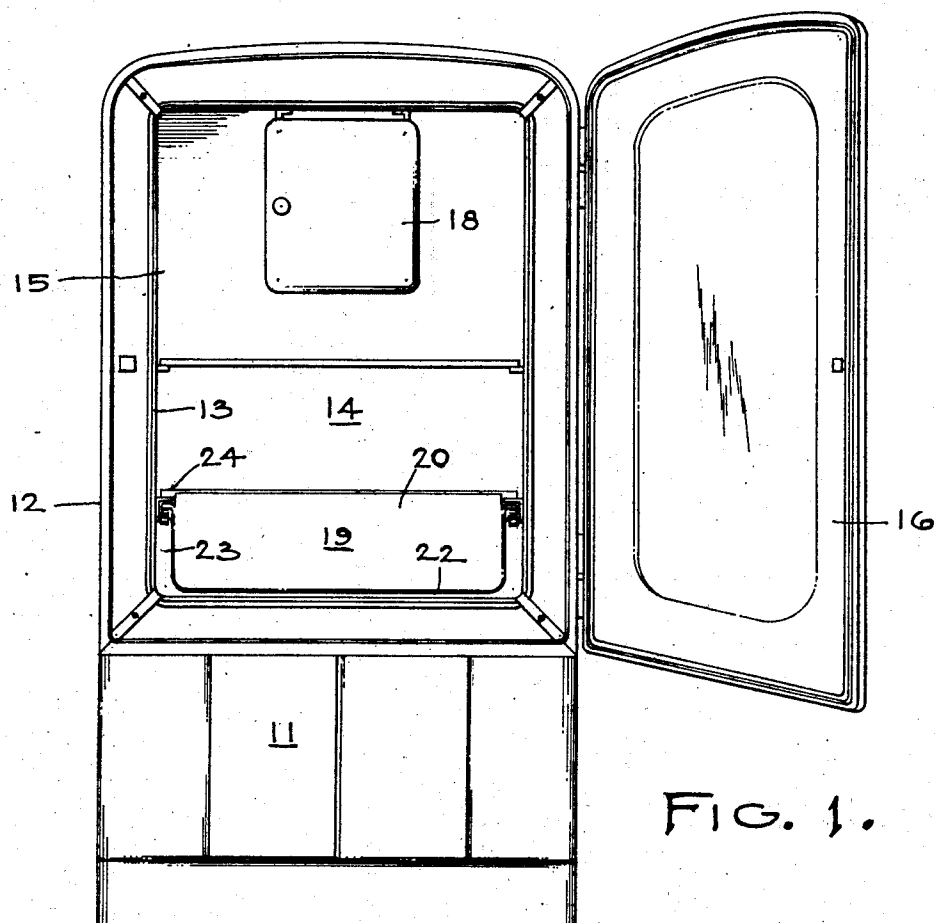
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2,338,889

REFRIGERATION, APPARATUS

Filed Sept. 11, 1942

2 Sheets-Sheet 1



WITNESSES:

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2 Sheets-Sheet 2

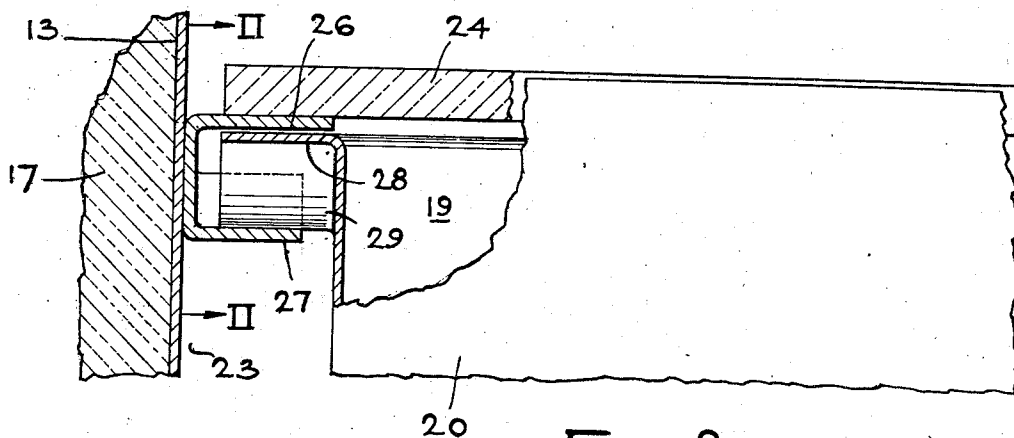


FIG. 3.

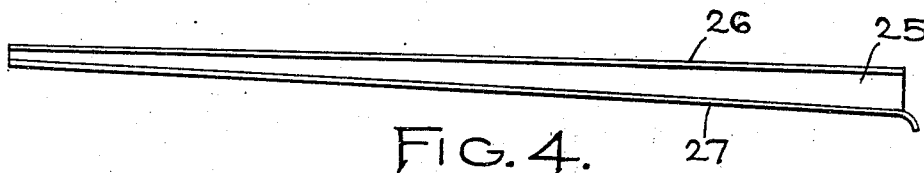


FIG. 4.

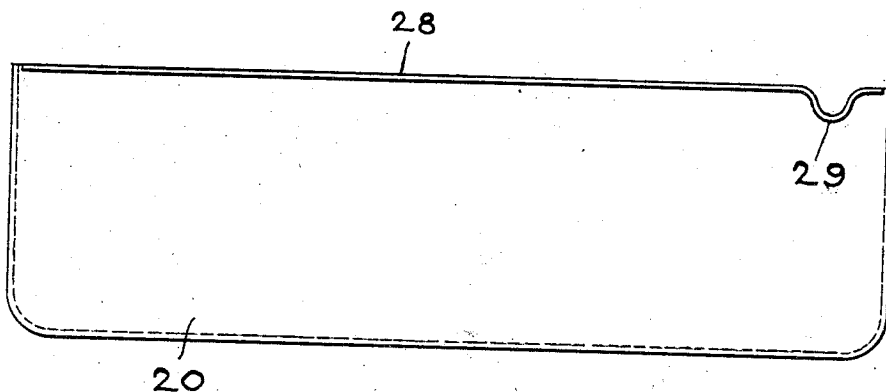


FIG. 5.

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2,338,889

REFRIGERATION APPARATUS

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Pennsylvania

Application September 11, 1942, Serial No. 458,045

10 Claims. (Cl. 62-89)

My invention relates to refrigeration apparatus and particularly to an improved hydrator assembly for disposition in the food-storage compartment of a refrigerator cabinet.

Heretofore, two general types of hydrators have been used in domestic refrigerators, both with attendant disadvantages. One type comprises a slightly ventilated container which is set in the food-storage compartment of the refrigerator. Such a hydrator maintains a high humidity in its interior but is not readily accessible. The second and preferred type of hydrator is the suspended type, wherein the hydrator receptacle slides from beneath a cover on suitable rails. The suspended type has the advantages of accessibility and is usually positioned to provide for good air circulation about its exterior and, therefore, sufficiently low temperatures in its interior. However, in order to provide for ease of sliding and to allow for variations and warpage of the hydrator receptacle, large clearances on the slides and, therefore, between the cover and the receptacle have been provided. This results in air circulation from the food-storage compartment into and out of the hydrator receptacle and a lowering of the humidity in the receptacle, so that vegetables and the like stored in the hydrator receptacle are dried out. Very slight circulation of such air is, however, desirable to prevent putrefaction and exchange of food odors within the receptacle when vegetables are stored therein.

It is, therefore, an object of my invention to provide a hydrator construction of the suspended type wherein the hydrator receptacle slides easily and wherein the cover seals the hydrator receptacle sufficiently to permit very little or no ventilation when the receptacle is in the closed position.

It is another object of my invention to provide a hydrator assembly of the suspended type wherein a high humidity is maintained.

These and other objects are effected by my invention as will be apparent from the following description and claims taken in accordance with the accompanying drawings, forming a part of this application, in which:

Fig. 1 is a front view of a refrigerator cabinet and hydrator assembly, illustrating my invention;

Fig. 2 is a partial side elevation taken on line II-II of Fig. 3;

Fig. 3 is a partial sectional view taken on line III-III of Fig. 2; and

Figs. 4 and 5 are details of the slide rails and pan member.

Referring specifically to the drawings for a detailed description of the invention, numeral 11 designates a refrigerator cabinet having an outer shell 12 and an inner shell 13 defining a food-storage compartment 14 provided with an access opening 15 and a door 16 for closing the access opening 15. Heat insulation 17 is provided between the shells 13 and 14 and an evaporator or cooling element 18 is disposed in the food-storage compartment for cooling and effecting a circulation of the air therein.

A hydrator assembly, indicated at 19, is preferably disposed in the bottom of the food-storage compartment 14. A pan member 20 is spaced from the wall of the food-storage compartment 14 at 21, 22, and 23, to provide circulation of refrigerated air around all sides of the receptacle, so that the interior is maintained at a low temperature by conduction of heat through the walls of the assembly to said circulating air. A cover 24, preferably formed of plate glass, is spaced from the back of the food compartment 14 and from the door 16 and provides a closure for the pan member 20. The pan member 20 and cover 24 form a closed container, commonly known as a "hydrator," which is suitable for storing fresh vegetables and the like out of contact with the dry air of the food-storage compartment. Vegetables stored in this container remain fresh for long periods of time.

A pair of supporting rails 25, one on each side of the food compartment 14, is provided with an upper flange 26 to support the cover 24 in such a manner that the passage of any substantial quantities of air between the flange 26 and the cover is prevented. The rails 25 are each provided with a lower flange 27 which slidably supports the pan member 20.

In accordance with my invention, the upper flange 26 is substantially horizontal and the lower flange 27 is inclined at an angle to the horizontal, approaching the upper flange 26 adjacent the rear of the food-storage compartment 14, as best shown in Figs. 2 and 4. A flange 28 is provided on each side of the pan member 20 to slide on the lower flanges 27 of rails 25. The flanges 28 on the pan member are provided with humps or protuberances 29 adjacent the front thereof. When the pan member 20 is in its closed position beneath the cover 24, the rear of the pan is substantially closed by the cover because it is lifted by the inclined flanges 27 on the rails 25, and the front of the pan is substantially closed by the cover 24 because the front is lifted by the coaction of the protuberances 29 with the

lower flanges 27 of the rails 25. Very little air circulation between the food-storage compartment 14 and the interior of the pan 20 is, therefore, permitted. However, the pan member slides easily on the rails 25 in spite of warpage of the flanges 28 on the pan member 20, because as soon as the pan member is pulled forward, the protuberances disengage the rails 25 and the clearance between the rear of the flanges 28 on the pan member and the upper flanges 26 of rails 25 progressively increases.

From the foregoing, it will be apparent that I have provided a suspended hydrator of improved design which is easily slidable to opened and closed positions, but which is sealed as tightly as desired when in the closed position. If it is desired to use the hydrator for other purposes than storing vegetables, for example, for storing bread, the clearances when the receptacle is closed may be reduced so that substantially no air from the food-storage compartment 14 enters the interior of the pan member 20.

While I have shown my invention in but one form, it will be obvious to those skilled in the art that it is not so limited, but is susceptible of various changes and modifications without departing from the spirit thereof, and I desire, therefore, that only such limitations shall be placed thereupon as are specifically set forth in the appended claims.

What I claim is:

1. A hydrator assembly for disposition in the food-storage compartment of a refrigerator cabinet, said food-storage compartment having an access opening therein, said hydrator assembly comprising a pair of spaced horizontal rails, a substantially imperforate hydrator cover, a hydrator receptacle movable on said rails to a closed position beneath said cover and to an open position from beneath said cover by withdrawing said receptacle through said access opening, and means providing clearance between said hydrator receptacle and said cover while the hydrator receptacle is being moved on said rails and for substantially reducing the clearance when the hydrator is in the closed position.

2. A hydrator assembly for disposition in the food-storage compartment of a refrigerator cabinet, said food-storage compartment having an access opening therein, said hydrator assembly comprising a pair of spaced horizontal rails, a substantially imperforate hydrator cover supported on said rails, a hydrator receptacle movable on said rails to a closed position beneath said cover and to an open position from beneath the cover by withdrawing said receptacle through said access opening, and means providing clearance between said hydrator receptacle and said cover while the hydrator receptacle is being moved on said rails and for substantially reducing the clearance when the hydrator is in the closed position.

3. A hydrator assembly for disposition in the food-storage compartment of a refrigerator cabinet, said food-storage compartment having an access opening therein, said hydrator assembly comprising a pair of spaced horizontal rails, a substantially imperforate hydrator cover supported on said rails, a hydrator receptacle movable on said rails to a closed position beneath said cover and to an open position from beneath the cover by withdrawing said receptacle through said access opening, and means providing clearance between said hydrator receptacle and said cover while the hydrator receptacle is being

5 moved on said rails and for substantially reducing the clearance when the hydrator is in the closed position, said means comprising a substantially horizontal support on each slide rail for said hydrator cover, and a hydrator receptacle-supporting track on each slide rail disposed below and inclined downwardly with respect to said hydrator cover supports, said inclination being toward the access opening.

10 4. A hydrator assembly for disposition in the food-storage compartment of a refrigerator cabinet, said food-storage compartment having an access opening therein, said hydrator assembly comprising a pair of spaced horizontal rails, a substantially imperforate hydrator cover supported on said rails, a hydrator receptacle movable on said rails to a closed position beneath said cover and to an open position from beneath the cover by withdrawing said receptacle through said access opening, and means providing substantial clearance between said hydrator receptacle and said cover while the hydrator receptacle is being moved on said rails and for substantially reducing the clearance when the hydrator is in the closed position, said means comprising a substantially horizontal support on each slide rail for said hydrator cover, and a hydrator receptacle-supporting track on each slide rail disposed below and inclined downwardly with respect to said hydrator cover supports, said inclination being toward the access opening, and means for raising the front end of the hydrator receptacle when moved substantially to its closed position.

5 5. A hydrator assembly for disposition in the food-storage compartment of a refrigerator cabinet, said food-storage compartment having an access opening therein, said hydrator assembly comprising a pair of spaced horizontal rails, a substantially imperforate hydrator cover supported on said rails, a hydrator receptacle movable on said rails to a closed position beneath said cover and to an open position from beneath the cover by withdrawing said receptacle through said access opening, said hydrator receptacle having an opening in its top, and means providing substantial clearance between said hydrator receptacle and said cover while the hydrator receptacle is being moved on said rails and for substantially reducing the clearance when the hydrator is in the closed position, said means comprising a substantially horizontal support on each slide rail for said hydrator cover and providing a close fit therewith, a hydrator receptacle-supporting track on each slide rail disposed below and inclined downwardly in a direction toward said access opening with respect to said hydrator cover supports, a substantially horizontal flange at the sides of said hydrator receptacle opening, said flanges being adapted to slide on said track and be positioned close to said cover at the rear thereof when the hydrator receptacle is in the closed position, and means for raising the front of the hydrator receptacle when in its closed position to position the remainder of said flanges close to said covers.

6 6. A hydrator assembly for disposition in the food-storage compartment of a refrigerator cabinet, said food-storage compartment having an access opening therein, said hydrator assembly comprising supporting means on opposite vertical walls of said food-storage compartment, a substantially imperforate hydrator cover, a hydrator receptacle movable on said supporting means to a closed position beneath said cover

and to an open position from beneath said cover by withdrawing said receptacle through said access opening, and means providing clearance between said hydrator receptacle and said cover while the hydrator receptacle is being moved on said supporting means and for substantially reducing the clearance when the hydrator is in the closed position.

7. The combination of an open topped substantially imperforate receptacle, a substantially imperforate cover for said receptacle, means for slidably supporting said receptacle between a closed position in which the receptacle is disposed beneath said cover and an open position in which said receptacle is withdrawn from beneath said cover, and means operable upon movement of said receptacle to said closed position for moving the same upwardly against said cover to minimize leakage into or out of said receptacle.

8. In a food-storage compartment of a refrigerator, said compartment having an access opening, the combination of a substantially rectangular receptacle, a cover for said receptacle, means for supporting said cover in a substantially horizontal position in said compartment, said receptacle having a front wall, a rear wall, two side walls, an outwardly turned flange on each of said side walls, and a downwardly-extending protuberance on each of said flanges adjacent the front end thereof, substantially straight slide rails in said compartment for engaging said flanges to support said receptacle immediately below said cover, said slide rails being inclined downwardly in a direction toward said access opening to engage the rear portions of said flanges and said protuberances when the receptacle is in position underneath said cover.

9. In a food-storage compartment for a refrigerator, said compartment having an access opening, the combination of a substantially rectangular

lar imperforate receptacle formed of sheet metal, an imperforate cover for said receptacle, means for supporting said cover in a substantially horizontal position in said compartment, said receptacle having a front wall, a rear wall, two side walls, and an outwardly turned flange on the upper edge of each of said side walls, said outwardly turned flanges each having a depression formed therein adjacent the front ends thereof, the flanges with the exception of said depressions being straight, substantially straight slide rails in said compartment for engaging said flanges to support said receptacle immediately below said cover, said slide rails being inclined downwardly in a direction toward said access opening to engage only the rear portions of said flanges and said depressions when the receptacle is in position underneath said cover.

10. In a food-storage compartment of a refrigerator, said compartment having an access opening, a cover supported in substantially horizontal position in said compartment, a substantially rectangular open-topped receptacle positioned below said cover and cooperating therewith to form a closed container, said receptacle having a front wall, a rear wall, and two side walls, the combination of means for slidably supporting said receptacle in said position comprising an outwardly-turned flange on the upper edge of each of said side walls, the lowermost surface of the front portion of each of said flanges being at a lower elevation than the lowermost surface of the rear portion thereof, and substantially straight slide rails engaging said lowermost surfaces of said flanges to slidably support said receptacle in said position, said slide rails being inclined downwardly in a direction toward said access opening.

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