Feb. 18, 1936. T. J. SCOFIELD 2,031,283

REFRIGERATOR

Filed May 18, 1933

Fig-1.

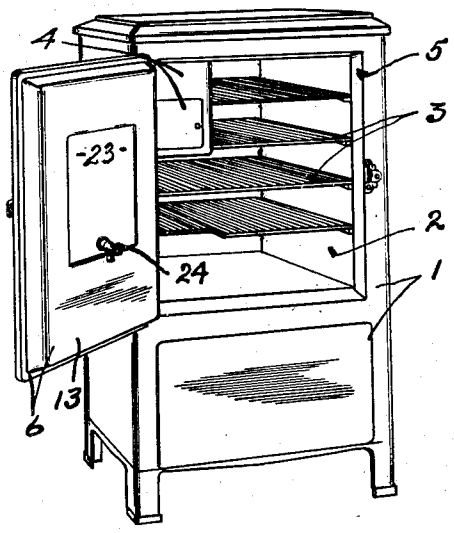


Fig-2.

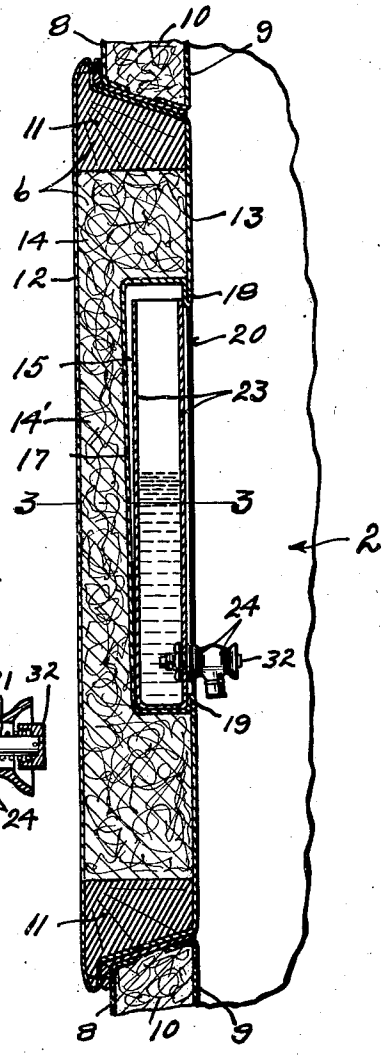


Fig-4.

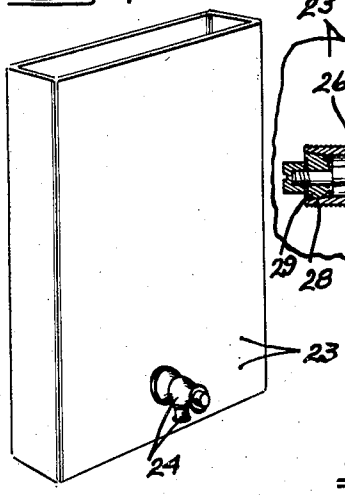


Fig-5.

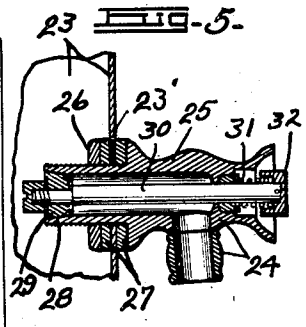
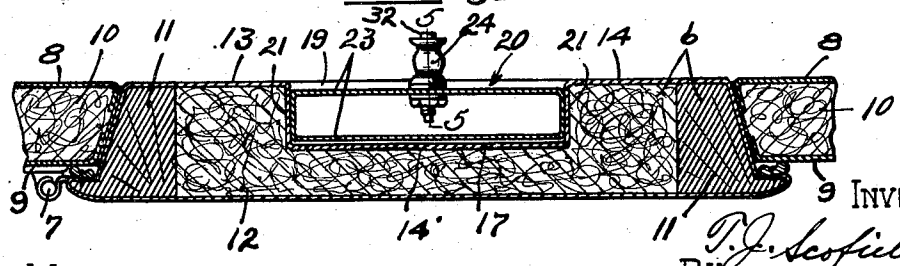


Fig-3.



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2,031,283

REFRIGERATOR

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Application May 18, 1933, Serial No. 671,687

3 Claims. (Cl. 62—89)

This invention relates to certain new and useful improvements in refrigerators.

The main object of my improvement is to provide a refrigerator or cooling cabinet having incorporated therein a simple inexpensive container adapted to maintain a relatively large quantity of liquid such as drinking water, in a cold sanitary condition.

Another object is to so position a liquid container in a refrigerator door and exposed to the temperature within the refrigerator cabinet in such a manner that said container will occupy little or no space within the food chamber and which may be quickly and easily removed from the refrigerator for filling and cleaning, and will be moved to a position where a faucet or the like, with which the container is provided, will be positioned where it is readily accessible to one desiring to draw off water, by the mere opening of the refrigerator door.

Other objects and advantages pertaining to the structure of the container and the manner of mounting the same within the cabinet will more fully appear from the following description taken in connection with the accompanying drawing in which:—

Figure 1 is a perspective view of the refrigerator or cooling cabinet having incorporated therein my novel liquid container, and illustrating the door of the cabinet in the open position to more clearly show the position of the container.

Figure 2 is an enlarged detail vertical sectional view through the front part of the cabinet with the door in the closed position, taken in a plane passing substantially through the center of the door.

Figure 3 is a transverse sectional view of the cabinet door and adjacent portion of the cabinet taken on line 3—3, Figure 2.

Figure 4 is a perspective view of the container.

Figure 5 is an enlarged detail sectional view taken on line 5—5, Figure 3.

The cooling cabinet as 1, illustrated in the drawing, is of the electric refrigerator type having a food or cooling compartment or chamber 2 provided with the usual shelves 3 and a cooling unit 4. The front opening as 5 of the cabinet is closed by a door 6 which may be hinged at one side to the cabinet in any suitable manner as indicated at 7, Figure 3.

The cabinet 1 may be constructed in any well-known manner and as shown, is provided with an outer wall 8 and inner wall 9 arranged in spaced relation and having suitable insulating material as 10 interposed therebetween. The door 6, in this instance, consists of a rectangular marginal frame 11, preferably composed of wood or similar material, and a front panel 12 and rear panel 13 composed of sheet metal such as steel treated with porcelain or lacquer in a manner well-known to those skilled in the art, to provide an inner and outer surface having a smooth hard finish as is customary in articles of this nature, said panels and frame being secured together in any well-known manner to form a sturdy door structure of considerable thickness.

The space within the frame 11 between the panels 12 and 13 is filled with insulation 14 composed of composition of cork or other suitable insulating material. The door 6 has the inner face thereof provided with a substantially rectangular recess or chamber 15 which is formed by pressing the central portion of the inner panel 13 inwardly. The thickness of the chamber or recess 15 is considerably less than that of the door 6 so that a layer as 14' of insulating material of substantial thickness is positioned between the outer wall 17 of the chamber and the outer panel 12 of the door, as clearly illustrated in Figures 2 and 3.

The upper and lower end walls of the chamber 15 are preferably formed so as to be positioned a slight distance outwardly from the adjacent upper and lower edge respectively of the opening 20 leading to the chamber 15 so as to provide retaining walls 18 and 19 across the upper and lower ends of the chamber, as clearly illustrated in Figure 2.

The side walls as 21 of the chamber may extend inwardly in the plane of the adjacent side edges of the opening 20, as illustrated in Figure 3. The container as 23, in this instance, is a relatively thin rectangular member which may be composed of sheet metal, glass or the like. If the container is composed of metal, it is to be understood that the wall of the container may be treated with porcelain, lacquer or other suitable material both outside and inside to produce a receptacle conforming in appearance to that of the interior of the cabinet and which may be readily maintained in a clean sanitary condition.

The width of the container is preferably slightly less than that of the chamber or recess 15 in the door 6, while the height of the container is preferably slightly greater than that between the bottom of the chamber and the upper edge 18 of the opening 12, as illustrated in Figure 2, so that the container will be maintained within the chamber 15 by the engagement of the re-

taining walls 18 and 19 with the upper and lower ends of said container and at the same time, permit the ready removal of the container from the chamber by merely lifting the container until the upper end thereof contacts with the upper end of the chamber 15, whereupon the lower end of the container may be swung outwardly over the lower retaining wall 19.

In order to freely permit this outward swinging movement of the lower end of the container, the upper end of the recess 15 is made, as shown in Figure 2, slightly deeper than the container while the depth of the recess at the lower end thereof is substantially equal to that of the container for maintaining the container in close proximity to the retaining walls 18 and 19 so that the opening 20 of the recess is maintained substantially closed by the container which thus assists in preventing the conductivity of cold and heat through that portion of the door where there is provided the least amount of insulating material.

The container 23 preferably has the upper end thereof open to permit the ready filling of the container and the cleaning of the interior thereof. The container is also provided with an aperture 23' in one of the side walls adjacent the lower end thereof for the reception of a suitable faucet as 24. This faucet may be of any suitable construction and, as illustrated in the drawing, consists of a tubular body portion 25 having one end reduced in diameter and externally threaded and extended into the opening 23' and clamped to the container by means of a nut 26 screw-threaded on said threaded end of the body and a pair of packing washers 27 positioned on said threaded end at opposite sides of the wall of the container.

The inner end of the body 25 is provided with a tapered valve seat 28 in communication with the inner chamber of the body 25. A valve 29 is mounted upon the inner end of the valve stem 30 which extends outwardly through the chamber of the body 25. The valve is yieldingly maintained in contact with the valve seat 28 by means of a spring 31 positioned on the outer end of the valve stem 30 between a shoulder provided on the body 25 and a push button 32 secured to the outer end of the stem 30.

From a consideration of the above, it will be apparent that while the container or receptacle 23 is located outside of the cooling chamber 2 of the cabinet, the contents of the container will be as readily maintained in a cool sanitary condition as though the container were positioned wholly within the cooling chamber and without the disadvantage of occupying space in or limiting the capacity of the food or cooling chamber.

Further, it will be observed that by mounting the container in the door 6, as illustrated, the contents of the container may be very readily withdrawn when the door is in an open or partial open position into a pitcher, drinking glass or other receptacle without it being necessary to disturb the contents of the cooling chamber, and although I have shown and described specific constructions of cooling cabinet and container as constituting illustrative embodiments of my invention, I do not wish to restrict myself to the details of the form of the construction or arrangement, as various changes and modifications may be made without departing from the scope of the appended claims.

I claim:

1. A device of the class described including a cabinet provided with a cooling chamber, a door for the chamber hingedly connected to the cabinet, said door having a recess in the inner face thereof, a liquid container having an inlet opening mounted in said recess, a faucet connected with the container whereby the contents of the container may be readily withdrawn when the door is in an open position, and means associated with said door for removably securing the container in the recess, a wall of said recess and said latter means forming a closure for said inlet opening.

2. A refrigerator cabinet having a cooling chamber provided with insulated walls defining a door opening, an imperforate door for said opening having insulated walls, said door being provided with a recess therein having one side open and in communication with the chamber and the remaining sides thereof surrounded by insulating material, a liquid container mounted wholly within the recess, said recess being of greater length than the liquid container and having the open side thereof of less length than said container for releasably maintaining the container in said recess.

3. A device of the class described including a cabinet provided with a cooling chamber, a door for the chamber having a recess in the inner face thereof in communication with the cooling chamber, and a liquid container mounted in the recess, said recess being of greater dimensions than the container and having opposite walls at the open side thereof extended beyond the corresponding side of the recess toward each other for engagement with the adjacent side of the container whereby said container is releasably maintained in the recess.

THEODORE JOHNSON SCOFIELD.