May 11, 1937. C. P. ERICKSON 2,079,608

REFRIGERATOR CABINET

Filed June 27, 1933 2 Sheets-Sheet 1

Fig. 2.

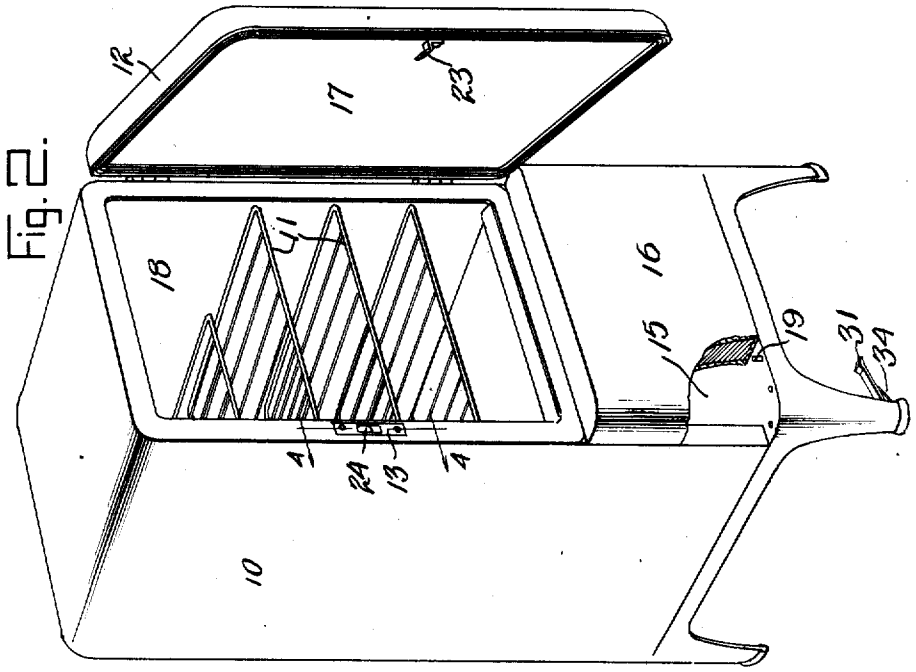
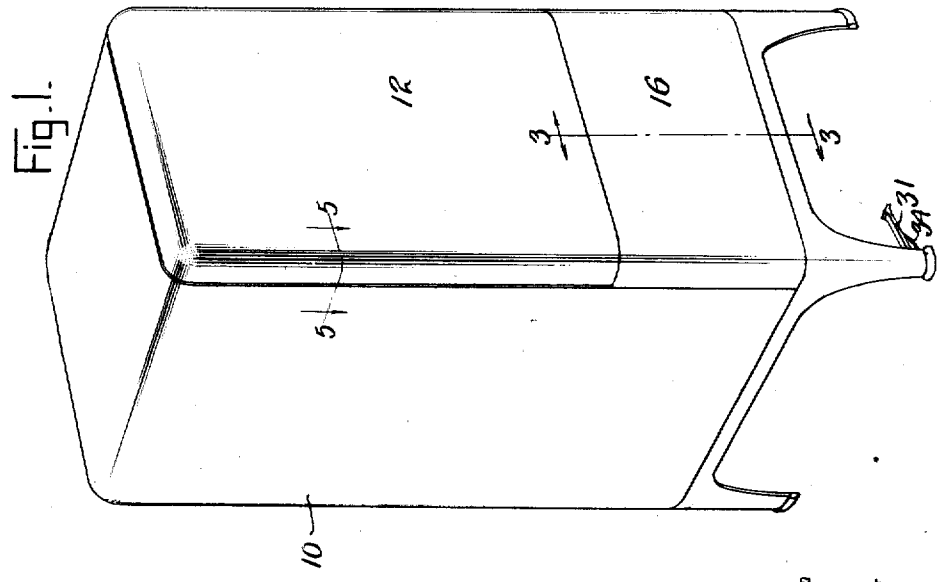


Fig. 1.



Inventor

Carl P. Erickson

By

Attorney

May 11, 1937. C. P. ERICKSON 2,079,608

REFRIGERATOR CABINET

Filed June 27, 1933 2 Sheets-Sheet 2

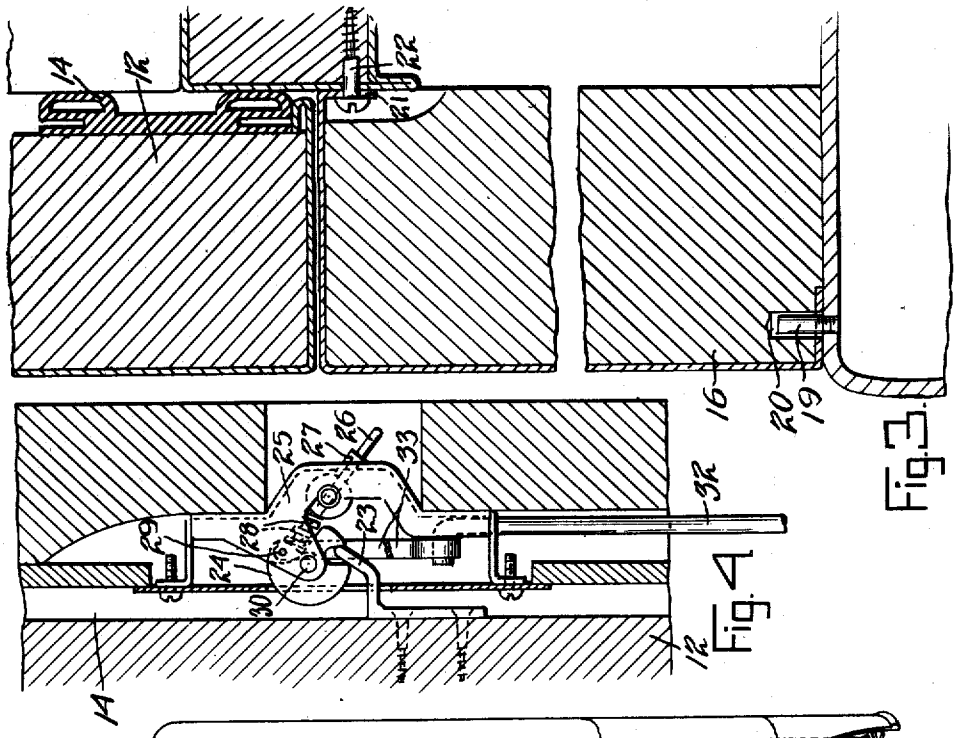


Fig. 3.

Fig. 4

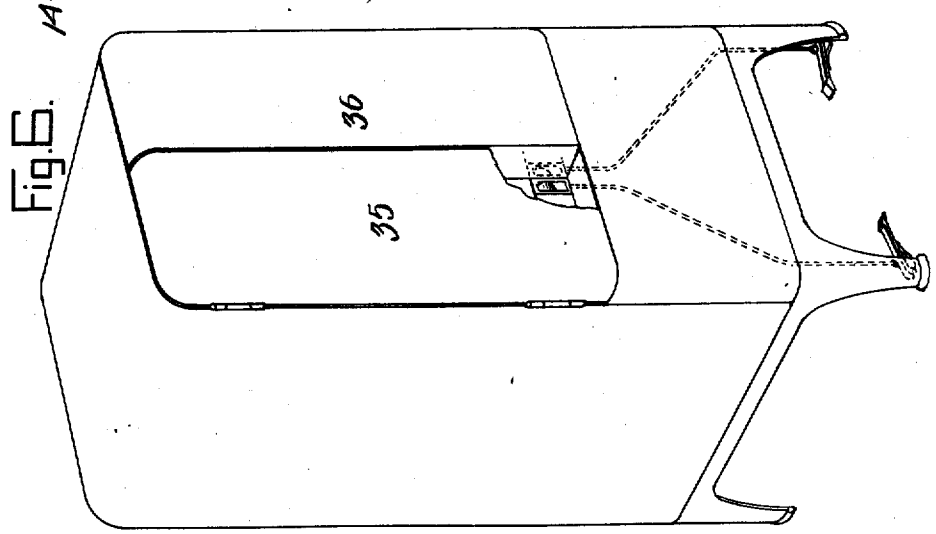


Fig. 6.

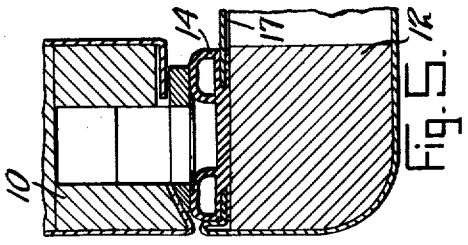


Fig. 5.

Inventor

Carl P. Erickson

By

Attorney

Patented May 11, 1937 2,079,608

UNITED STATES PATENT OFFICE

2,079,608

REFRIGERATOR CABINET

Carl P. Erickson, Connersville, Ind., assignor to Rex Manufacturing Company, Connersville, Ind., a corporation of Indiana

Application June 27, 1933, Serial No. 677,943

7 Claims. (Cl. 312—193)

Refrigerator cabinets as commonly constructed have doors of a thick insulated type which close into a recess within the cabinet opening, such opening being formed with edges within which the door closes. Such a structure necessitates positioning the front edges of the shelves back from the front, using a considerable portion of the interior for the door, and also makes necessary the displacement of a considerable volume of air, or the compression of air within the cabinet, when said door is closed.

The object of my said invention is to provide a refrigerator cabinet, the entire interior of which up to a plane flush with the faces of the edges surrounding the door opening will be available for use and in which the front edge of the shelves may be flush with the front face of the cabinet.

In carrying out my invention I provide a cabinet constructed as indicated with a door or doors adapted to close against the face of the edges of the cabinet which surround the door opening; and without any portion of the door projecting within the cabinet. By such a construction I provide a cabinet which when open presents an interior completely accessible and available for use to a point flush with its front face; and one wherein the opening and closing of the door or doors will cause a minimum of disturbance of the air within by reasons of compressing or displacing the same when the door is closed, or by permitting its expansion when the door is opened, and with a consequent undue inrush of warm air from without and loss of cold air from within. I also provide a cabinet with a smooth front unbroken by seams, joints or crevices, which presents a most attractive appearance and provides a structure easy to keep in a clean and sanitary condition, all as will be hereinafter more fully described and claimed.

Referring to the accompanying drawings, which are made a part hereof and on which similar reference characters indicate similar parts,

Figure 1 is a view in elevation of a refrigerator cabinet constructed in accordance with my invention,

Figure 2, a view in elevation showing the door of the cabinet in open position,

Figure 3, a section on line 3—3 of Figure 1,

Figure 4, a section on line 4—4 of Figure 2,

Figure 5, a section on line 5—5 of Figure 1, and

Figure 6, a modified form in elevation showing two-door construction.

In carrying out my invention a cabinet 10 is provided having a food compartment 18 in which are mounted suitable shelves or supports 11. These shelves extend forward flush with the front walls of the cabinet. The compartment of course may be cooled in any suitable way, either by mechanical refrigerating mechanism or by ice.

A door 12 is hinged to the side wall of the cabinet. In one form of the invention the width of the door is preferably the full width of the cabinet proper so that when the door is closed the sides of the door are flush with the outer walls and top of the cabinet. A fastening 13 is provided for locking the door which fastening will later be described more in detail.

In order to effect a perfect seal between the door and the walls of the cabinet against which it engages elastic packing strips 14 may be secured either to the door or to the adjacent faces of the edges of the wall of the cabinet. A refrigerator cabinet such as the one illustrated usually has a compartment 15 beneath the food compartment which compartment may contain the mechanical refrigerating mechanism when such a unit is employed. This compartment is closed by a removable panel 16. This panel is secured in position by pins 19 which are fixed in the lower portion of the cabinet proper and extend into sockets 20 in the lower portion of the panel. Several of these pins may be provided. Instead of having the pins secured in the cabinet and extending into the panel they may be fixed in the panel and seat in sockets in the lower portion of the cabinet. The upper rear portion of the panel is provided with slots at 21 which engage over screw heads 22 which are fixed in a portion of the cabinet. The panels 16 are positioned in the cabinet by sliding the slotted portion over the head of the screws and then allowing the panel to seat so that the lower portion is secured against forward movement by the pins 19. The panel of course is put in position while the cabinet door 12 is open.

The door 12 may be lined with a plate 17. This may be a flat plate which is secured to the inside of the door 12 proper. Such a plate is easily and inexpensively constructed. If preferred the door lining 12 may be indented so as to provide a slightly larger compartment. Whether flat or whether indented, however, closing of the door will not cause a compression of the air within the compartment nor force cold air from the compartment to the outside since the door will close flush against the outer edges of the walls of the cabinet.

Means for locking the door to the food compartment are shown in detail in Figures 2 and 4.

Attached to the side of the door is a striker

bracket 23 adapted to engage a notch in a cylinder 24. The cylinder is rotatably mounted on a shaft 30 mounted in a bracket 25 which is secured to the wall of the cabinet in any suitable way. A rod 26 is pivotally attached at 29 to the cylinder 24 and is slidable in a sleeve 27 which is pivotally mounted on the bracket 25. A compression spring 28 is mounted about the rod 26 between the sleeve 27 and the cylinder 24 and when the door is closed is under tension to urge the cylinder 24 in a counter-clockwise direction. When the door has been opened the cylinder 24 will be rotated clockwise to swing the pivot point 29 below the shaft 30 on which the cylinder 24 is mounted so that the spring will tend to urge the cylinder in a clockwise direction. The locking cylinder 24 may be rotated by means of a pedal 31 which is pivoted to the base of the cabinet and connected by means of a link 32 with a tie fork 33 which is pivotally secured to the cylinder 24 so that downward movement of the pedal 31 will rock the cylinder in a clockwise direction to open the door. A spring 34 tends to restore the pedal and the operating link 32 to its upper position when pressure has been released from the pedal.

In the modified form shown in Figure 6, two doors 35 and 36 are provided, these doors being hinged to each side of the cabinet. The locking mechanism for the doors and other features of the cabinet are the same as those described above.

From the foregoing description it will be apparent that I have provided a refrigerator cabinet having smooth exterior walls and a door which provides a neat seal between contacting portions of the door and cabinet; and one wherein the closing and opening of the door will cause a minimum of disturbance of the air within the cabinet since no portion of the door extends into the cabinet proper to cause compression of the air within the cabinet or forcing of the air which is in the cabinet out past the edges of the door.

It will be obvious to those skilled in the art that various changes may be made in my device without departing from the spirit of the invention and therefore I do not limit myself to what is shown in the drawings and described in the specification, but only as indicated by the appended claims.

Having thus fully described my said invention, what I claim as new and desire to secure by Letters Patent, is:

1. Refrigerator cabinet construction comprising walls having substantially smooth outer surfaces and defining insulated refrigerated food storage space and an apparatus compartment, said walls being provided with a door opening, closure means for said door opening, said walls having flat faces about the door opening substantially parallel to said closure means when in door closing position, said closure means being of a size that it overlaps said flat faces and is substantially coextensive with the top and sides of the cabinet whereby no part of the closure means projects to a considerable extent within the door opening, means for providing a double seal between the flat wall faces of the cabinet and said closure means about said door opening, and concealed means between the flat wall faces of the cabinet and closure means for fastening the closure means in position to close said door opening, a removable closure panel for the front of the apparatus compartment and of a width corresponding to the width of said closure means and forming with said closure means the complete plain front of the cabinet, and means for securing said panel in place in a manner to permit removal of the panel only when the closure means is open, said cabinet having its side, top and front surfaces connected by curved surfaces with a view to eliminating sharp angles and corners, said cabinet being without projections on its front.

2. Refrigerator cabinet construction comprising walls having substantially smooth outer surfaces and defining insulated refrigerated food storage space and an apparatus compartment beneath the same, said walls being provided with a door opening, closure means for said door opening, said walls having flat faces about the door opening substantially parallel to said closure means when in door closing position, said closure means being of a size that it overlaps said flat faces and is substantially coextensive with the top and sides of the cabinet whereby no part of the closure means projects to a considerable extent within the door opening, means for providing a seal between the flat wall faces of the cabinet and said closure means about said door opening, and concealed means between the flat wall faces of the cabinet and closure means for fastening the closure means in position to close said door opening, a removable closure panel for the front of the apparatus compartment and of a width corresponding to the width of said closure means and forming with said closure means the complete plain front of the cabinet, and means for securing said panel in place in a manner to permit removal of the panel only when the closure means is open.

3. Refrigerator cabinet construction comprising walls having substantially smooth outer surfaces and defining insulated refrigerated food storage space, said walls being provided with a door opening, closure means for said door opening, said walls having flat faces about the door opening substantially parallel to said closure means when in door closing position, said closure means being of a size that it overlaps said flat faces and is substantially coextensive with the top and sides of the cabinet whereby no part of the closure means projects to a considerable extent within the door opening, means for providing a double seal between the flat wall faces of the cabinet and said closure means about said door opening, and concealed means between the flat wall faces of the cabinet and closure means for fastening the closure means in position to close said door opening.

4. Refrigerator cabinet construction comprising walls having substantially smooth outer surfaces and defining insulated refrigerated food storage space, said walls being provided with a door opening, closure means for said door opening, said walls having flat faces about the door opening substantially parallel to said closure means when in door closing position, said closure means being of a size that it overlaps said flat faces and is substantially coextensive with the top and sides of the cabinet whereby no part of the closure means projects to a considerable extent within the door opening, means for providing an annular seal between the flat wall faces of the cabinet and said closure means about said door opening, and concealed means between the flat wall faces of the cabinet and closure means for fastening the closure means in position to close said door opening, said cabinet being without projections on its front.

5. Refrigerator cabinet construction comprising insulated walls defining a food storage compartment and an adjoining apparatus compartment, a door for the food storage compartment and a closure panel for the apparatus compartment, and means for securing said panel in place in a manner to permit removal of the panel only when the door is open.

6. Refrigerator cabinet construction comprising insulated top, bottom, and side walls defining a food storage compartment, said side walls being provided with a door opening affording access to said food storage compartment, closure means for said door opening of a size to completely cover said door opening and when closed to overlap the walls of the cabinet about said door opening on all sides and with no part of said closure means projecting to a considerable extent within said door opening but being disposed outwardly of and leaving the door opening unobstructed affording storage space within the cabinet and within said door opening, the overlap of the closure means on all sides about the door opening providing a relatively wide gap through which heat must flow in entering the cabinet through the door opening around the closure means, and annular sealing means between the closure means and the walls of the cabinet about said door opening for retarding heat flow.

7. Refrigerator cabinet construction comprising insulated top, bottom, and side walls defining a food storage compartment, said side walls being provided with a door opening affording access to said food storage compartment, closure means for said door opening of a size to completely cover said door opening and when closed to overlap the walls of said cabinet about said door opening on all sides and with no part of said closure means projecting to a considerable extent within said door opening but being disposed outwardly of and leaving the door opening unobstructed affording storage space within the cabinet and within said door opening, shelving in said cabinet extending within the door opening substantially flush with the exterior cabinet wall, the overlap of the closure means on all sides about the door opening providing a relatively wide gap through which heat must flow and enter the cabinet through the door opening around the closure means, and spaced annular sealing means between the closure means and the wall of the cabinet about said door opening providing a multiple seal for retarding heat flow.

CARL P. ERICKSON.

DISCLAIMER

2,079,608.—*Carl P. Erickson*, Connersville, Ind. REFRIGERATOR CABINET. Patent dated May 11, 1937. Disclaimer filed November 29, 1938, by the assignee, *Servel, Inc.*

Hereby makes disclaimer of such parts of the thing patented by claim 6 except:

Refrigerator cabinet construction as defined by claim 6 in which the insulated top and side walls adjacent the closure means are outside walls of the cabinet and the outer surface of the closure means and the outer surface of said top and side walls adjacent the closure means form the outer substantially smooth surface continuity of the cabinet.

[*Official Gazette December 20, 1938.*]

5. Refrigerator cabinet construction comprising insulated walls defining a food storage compartment and an adjoining apparatus compartment, a door for the food storage compartment and a closure panel for the apparatus compartment, and means for securing said panel in place in a manner to permit removal of the panel only when the door is open.

6. Refrigerator cabinet construction comprising insulated top, bottom, and side walls defining a food storage compartment, said side walls being provided with a door opening affording access to said food storage compartment, closure means for said door opening of a size to completely cover said door opening and when closed to overlap the walls of the cabinet about said door opening on all sides and with no part of said closure means projecting to a considerable extent within said door opening but being disposed outwardly of and leaving the door opening unobstructed affording storage space within the cabinet and within said door opening, the overlap of the closure means on all sides about the door opening providing a relatively wide gap through which heat must flow in entering the cabinet through the door opening around the closure means, and annular sealing means between the closure means and the walls of the cabinet about said door opening for retarding heat flow.

7. Refrigerator cabinet construction comprising insulated top, bottom, and side walls defining a food storage compartment, said side walls being provided with a door opening affording access to said food storage compartment, closure means for said door opening of a size to completely cover said door opening and when closed to overlap the walls of said cabinet about said door opening on all sides and with no part of said closure means projecting to a considerable extent within said door opening but being disposed outwardly of and leaving the door opening unobstructed affording storage space within the cabinet and within said door opening, shelving in said cabinet extending within the door opening substantially flush with the exterior cabinet wall, the overlap of the closure means on all sides about the door opening providing a relatively wide gap through which heat must flow and enter the cabinet through the door opening around the closure means, and spaced annular sealing means between the closure means and the wall of the cabinet about said door opening providing a multiple seal for retarding heat flow.

CARL P. ERICKSON.

DISCLAIMER

2,079,608.—*Carl P. Erickson*, Connersville, Ind. REFRIGERATOR CABINET. Patent dated May 11, 1937. Disclaimer filed November 29, 1938, by the assignee, *Servel, Inc.*

Hereby makes disclaimer of such parts of the thing patented by claim 6 except:

Refrigerator cabinet construction as defined by claim 6 in which the insulated top and side walls adjacent the closure means are outside walls of the cabinet and the outer surface of the closure means and the outer surface of said top and side walls adjacent the closure means form the outer substantially smooth surface continuity of the cabinet.

[*Official Gazette December 20, 1938.*]