

March 24, 1936.

F. L. TARLETON
REFRIGERATOR CABINET

Filed Jan. 30, 1932

2,035,103

2 Sheets-Sheet 1

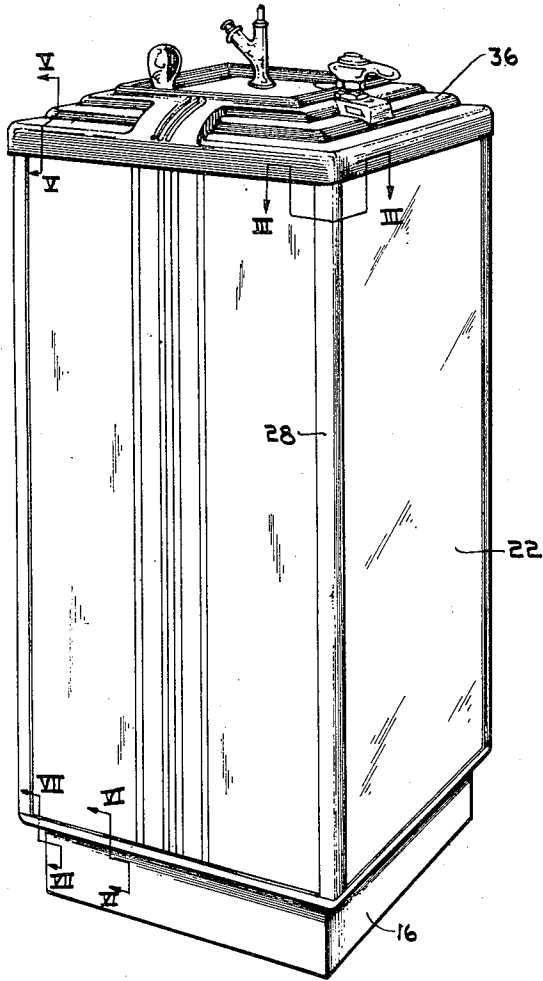


FIG. 1.

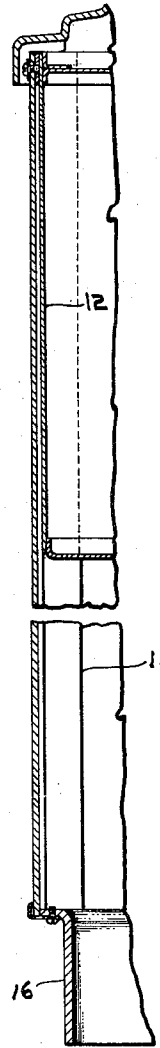


FIG. 2.

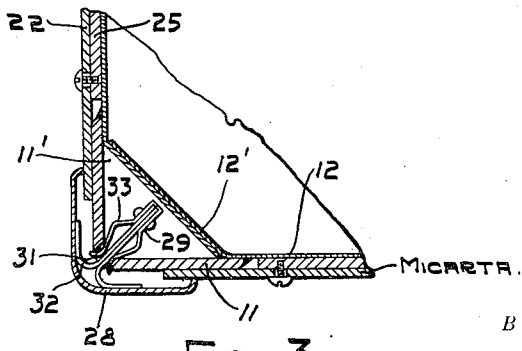


FIG. 3.

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2 Sheets-Sheet 2

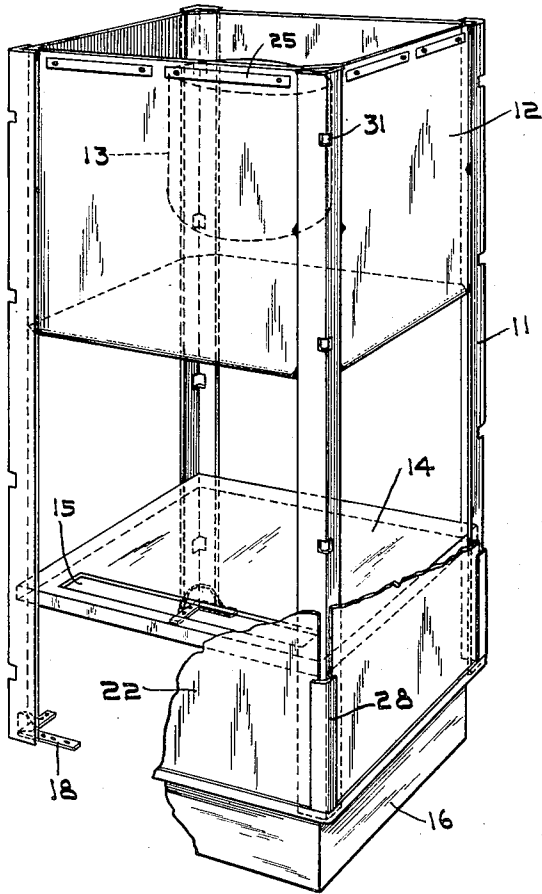


FIG. 4.

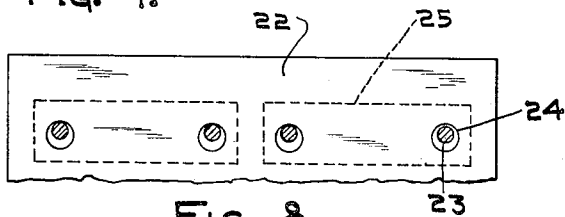


FIG. 8.

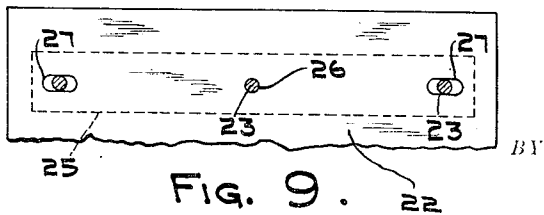


FIG. 9.

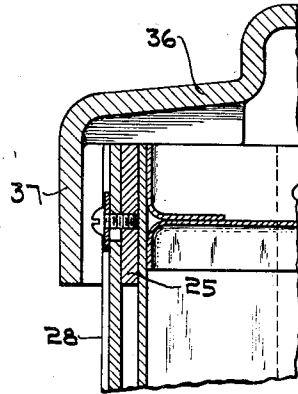


FIG. 5.

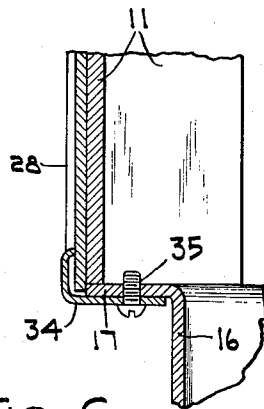


FIG. 6.

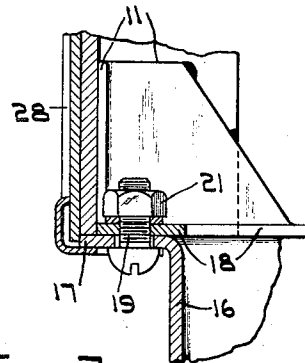


FIG. 7.

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2,035,103

REFRIGERATOR CABINET

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Company, a corporation of Pennsylvania

Application January 30, 1932, Serial No. 589,949

3 Claims. (Cl. 220—75)

My invention relates to a cabinet, more particularly to a construction of cabinet for refrigerators, including water coolers and the like, and it has for its object to provide an improved construction.

One object is to provide a cabinet construction which is inexpensive to manufacture.

A particular object is to provide a simple construction which may be readily constructed and assembled with minimum expense for tools.

A further object is to provide a cabinet construction presenting a pleasing appearance.

Another object is to provide a refrigerator cabinet having walls of a material which is substantially non-hygroscopic and a good heat insulator.

A further object is to provide a refrigerator cabinet embodying walls of a resinous material in which distortion of the walls due to temperature changes is avoided.

A further object is to provide a cabinet having panels and finishing strips retaining the edges or marginal portions of the strips, and having means which are not exposed to view for securing the finishing strips.

In accordance with my invention, I provide an internal frame or body structure which may be composed primarily of stock material, such as sheet metal and angle irons. I secure panels, which may be of a resinous material, metal, or any other suitable material, to the internal structure to form the outer walls thereof. I prefer to use panels of a resinous material, as they are substantially non-hygroscopic, good heat insulators, and present a very pleasing appearance. The panels are frictionally retained at their edges against the internal structure by retaining strips, and sufficient clearance is provided around the edges to permit the panels to expand and contract with temperature changes.

The retaining strips are formed on their inner sides with expansible members which are inserted in openings in the angle irons of the internal structure, to detachably secure the retaining strips.

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

Fig. 1 is a perspective view of a cabinet constructed in accordance with my invention;

Fig. 2 is a vertical sectional view;

Fig. 3 is a horizontal sectional view of the

corner construction, taken on the line III—III of Fig. 1;

Fig. 4 is a perspective view of the internal structure, with parts broken away;

Figs. 5, 6, and 7 are vertical sectional views taken along the lines V—V, VI—VI, and VII—VII, respectively, of Fig. 1, showing details of construction;

Fig. 8 is a fragmentary elevational view showing the means for attaching a panel to the internal structure; and

Fig. 9 is a view similar to Fig. 8, showing a modified securing means.

Referring now to the drawings in detail, I show, in Fig. 4, an internal structure including vertical angle irons 11 fixed in any suitable manner, as by tack-welding, or brazing to the corners of a box 12. The box 12 is preferably made of sheet metal, and includes a plurality of pieces formed to provide the side walls and a suitable bottom secured to the side walls. Adjacent side walls are joined by gusset wall portions 12' spaced from the corners of the angle irons 11 to provide triangular spaces 11' for the reception of attaching means for the retaining strips, hereinafter described. The gusset wall portions may comprise overlapping extensions of the adjacent side walls.

The box 12 may enclose the cooling apparatus, such as the evaporator 13, for cooling drinking water. The space between the evaporator and the walls of the box 12 may be filled with a suitable heat-insulating material, such as ground up cork. A shelf 14 is also secured to the angle irons 11, preferably by welding or brazing, and is adapted to support refrigerating apparatus, such as the motor compressor and condenser unit (not shown). The shelf 14 is preferably provided with an opening 15 to provide for the passage of cooling air.

The internal structure is mounted on a base member 16, which comprises vertical sheet metal walls arranged in rectangular form and each having a horizontal flange 17 at its upper edge. Each angle iron 11 is provided at its lower end with a corner piece or foot 18, secured thereto in any suitable manner, as by welding. The corner pieces 18 overlie the flanges 17 of the base member 16, and are secured thereto by means of bolts 19 and nuts 21.

To the above described internal structure, I provide, in accordance with my invention, outer panels of a resinous material or resinous condensation product, such as that commonly known in the art by the trade-mark name of "Micarta". This material is non-hygroscopic, and a fairly

good heat insulator, and I have found that it serves to provide a cabinet construction of exceptionally pleasing appearance. I have also found that a sheet of Micarta or other resinous condensation product of such thickness, for example, $\frac{1}{8}$ of one inch, that will not warp, is suitable for the purpose of providing the outer panel.

I have found that a panel of a resinous condensation product usually does not have the same coefficient of expansion as the metal used in constructing the frame. To avoid distortion of the panels in cabinets subjected to substantial temperature or humidity changes, such as water coolers and the like, I have devised a novel means of securing the panels to the internal structure. The panels are supported on the internal structure but are retained in such a way as to permit them to slide in the plane of the panel, so that they may expand and contract relative to the internal structure.

The panels 22 are supported on the internal structure by means of screws 23, which are inserted through openings 24 in the panels 22 and screw threaded in horizontally extending metal strips 25 which are fixed to the box 12 adjacent the upper edge. The openings 24 in the panels are of a larger diameter than the shanks of the screws 23, in order to permit relative movement between the panel and the internal structure in a direction parallel to the plane of the panel. The screws 23 and openings 24 are disposed in a straight line, in this case, horizontal.

An alternative form of supporting means is shown in Fig. 9 in which there are three screws 23. The opening 26 for the intermediate screw 23 is of the same diameter as the shank of the screw so that no relative movement is permitted at this point. The openings 27 on opposite sides of the opening 26 are elongated along a straight line connecting the three screws and openings, so that the panel is free to expand and contract relative to the internal structure along this line but the parts along this line are restrained against movement transversely of the line.

The vertical edges and marginal portions of the panels overlie the adjacent angle irons 11. The panels are retained against the angle irons by means of vertical retaining strips 28 provided at the respective corners. The retaining strips 28 are formed of sheet metal and are of the cross-section shown in Fig. 3. Each retaining strip frictionally and resiliently engages the adjacent marginal portions of the adjacent panels. As the engagement of the retaining strips for the panels is frictional rather than positive abutment, the panels may move relative to the strips 28 in a direction parallel to the plane of the panel. As shown in Fig. 3, a clearance is provided in the direction of the plane of the panel, between the edge of the panel and the adjacent portions of the retaining strip 28. Each panel is free, therefore, to slide past the engaging edge of the retaining strip so that it may expand and contract relative to the internal structure upon changes in temperature.

The retaining strips 28 are secured to the internal structure in a novel manner which conceals the securing means and thereby greatly improves the appearance of the cabinet. The securing means comprises expansible members 29 fixed to the retaining strips 28 on the inner side at the corner, and openings 31 in the angle irons 11 through which the expansible members 29 are inserted into the above-mentioned spaces 11'.

The expansible members 29 include relatively rigid elements 32, spot-welded or otherwise fixed to the strip 28 and having resilient parts 33 of the form shown in Fig. 3. The resilient parts 33 provide a width greater than the width of opening 31, so that after the expansible elements 29 are inserted through the opening 31, they resiliently resist removal thereof.

The lower marginal portions of the panels are retained against the internal structure by means of retaining strips 34, which are fastened to the flanges 17 of the base member by means of screws 35, as shown in Fig. 6. The strips 34 are also of sheet metal and, therefore, resilient, and resiliently engage the lower marginal portions of the panels. There is also a vertical clearance provided between the lower edges of the panels and the strips 34 to provide for relative expansion and contraction of the panels in vertical direction.

The cabinet is provided with a top 36, which is supported upon the top of the internal structure in any suitable manner, as by resting thereon. The top is provided with a vertical flange 37 around its periphery which overlaps the upper marginal portions of the panels 22 and conceals the screws 23.

It will be seen that I have provided a construction of cabinet which may be easily fabricated for the most part of standard structural material such as sheet metal and angle irons. The angle irons 11 are first tack-welded to the box 12 and the shelf 14. The corner pieces 18 are then welded to the lower ends of the angle irons and fastened to the base member 16. This provides the internal structure, to which the panels 22 are then fastened. The retaining strips 28 and 34 are then secured to retain the edges of the panels, and the top 36 is placed in position to complete the cabinet.

It will also be seen that the novel manner of securing the corner retaining strips 28 to the internal structure provides both an improved appearance and also a means for making the corner strips readily removable. The latter is of importance in obtaining access to the interior of the cabinet since, by removing the opposite retaining strips 28 of a panel, the lower end of the latter can be lifted up from the horizontal retaining strip 34 and bent forward while leaving the upper edge attached, whereupon convenient access to the interior of the cabinet may be had, for example, for adjusting the control mechanism.

It will be seen, therefore, that I have provided a novel construction of cabinet which is inexpensive to manufacture in that a minimum of tools are required, which is of pleasing appearance, and which is thermally efficient because of the panels of resinous condensation product and which will maintain such properties because of the non-hygroscopic properties of the panels and the internal structure.

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 imposed by the prior art or as are specifically set forth in the appended claims.

What I claim is:

1. In a cabinet, the combination of an internal structure including a box having truncated corners and angle corner posts secured to the box at the truncated corners, said corner posts having openings therethrough at their corners, panels on

the exterior of the internal structure, and angle retaining strips overlapping adjacent edges of adjacent panels and retaining the same against the internal structure, said retaining strips having 5 expansible attaching members on the inner side thereof extending through said openings in the corner posts and the truncated corners of the box for detachably securing the retaining strips to the internal structure.

10 2. A refrigerator cabinet subjected to substantial changes in temperature and including an internal structure and a panel of a resinous product, means disposed along a straight line for securing 15 the panel to the internal structure, said means including openings in the panel and members extending through said openings and secured to the internal structure, the openings being larger, in the direction of said straight line, than the portions of said members in said openings to provide 20 for expansion and contraction of the panel in said direction, and retaining strips overlapping edges

of said panel and retaining the panel against the body of the cabinet, said strips permitting movement of the panel in all directions in the plane of the panel.

3. A refrigerator cabinet subjected to substantial changes in temperature and including an internal structure and an outer panel, means disposed along a straight line for securing the panel to the internal structure, said means including 5 openings in the panel and members extending through said openings and secured to the internal structure, the openings being larger, in the direction of said straight line, than the portions of 10 said members in said openings to provide for expansion and contraction of the panel in said direction, and retaining strips overlapping edges of 15 said panel and retaining the panel against the body of the cabinet, said strips permitting movement of the panel in all directions in the plane of the panel. 20

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